

5.2

Whitehead, J. (1982) *A Dialectician's Guide for Educational Researchers*. Mimeo,
Booklet presented at a Roundtable Discussion at BERA'82, St. Andrews University,
1982.

A Dialectician's Guide for Educational Researchers

Jack Whitehead

School of Education
University of Bath

TO THE READER,

This work is the summary of fourteen years of educational research. In its present form it is unlikely to be of value to many educational researchers. It makes too many assumptions about the background of the reader. I offer this report to the following researchers in the hope that the ideas may be of some use in our attempts to improve the quality of education.

FOR,

David Hamilton, Department of Education, University of Glasgow.

Tom Popkewitz, Teacher Education Building, University of Wisconsin.

Stig Lindholm, Institute of Education, University of Stockholm.

Stephen Kemmis, School of Education, Deakin University.

For contributors to the networking newsletter " THE CENTRIPAED " ,
and for the members of the 'British Educational Research Association'
who intend to join me at the 1982 Annual Conference at the University
of St. Andrews for a " ROUND TABLE " discussion.

© Jack Whitehead

2/6/82.

ABSTRACT

One of the primary functions of educational research is to produce educational theory. The past twenty years have seen the emergence, dominance and partial decline of an approach to educational theory which has become known as the 'disciplines' approach. In this approach educational theory is presented to students of education in terms of the disciplines such as the philosophy, sociology and psychology of education. In recent years many academics have pointed out the inadequacies of this approach in terms of a gap between educational theory and practice. Teachers and administrators have expressed dissatisfaction with an approach to educational theory which does not appear to have a direct relationship to the process of sustaining or improving educational practice.

In my guide for dialectical researchers I present a thesis on a dialectical approach to educational research which attempts to bridge the gap between theory and practice. In this approach I insist that the production of an educational theory, which will be directly related to practice, will require each one of us to produce this theory by explaining how we are attempting to answer questions of the form, 'How do I improve this process of education here?'

CONTENTS

ABSTRACT

INTRODUCTION

PART ONE

SOME PROBLEMS IN EDUCATIONAL RESEARCH

| | | |
|---------------|------------------------------------------------|----|
| INTRODUCTION | | 8 |
| CHAPTER ONE | THE GENERATION OF EDUCATIONAL THEORY | 14 |
| CHAPTER TWO | THE DISCIPLINES APPROACH TO EDUCATIONAL THEORY | 18 |
| | A) THE PHILOSOPHY OF EDUCATION | 19 |
| | B) THE PSYCHOLOGY OF EDUCATION | 33 |
| | C) THE SOCIOLOGY OF EDUCATION | 40 |
| CHAPTER THREE | EDUCATIONAL RESEARCH METHODOLOGIES | 47 |

PART TWO

MY OWN IN-SERVICE EDUCATIONAL DEVELOPMENT - AN EDUCATIONAL ENQUIRY

| | | |
|--------------|------------------------------------------------------------|----|
| INTRODUCTION | | 54 |
| CHAPTER ONE | THE SCIENTIFIC FORM OF LIFE IN MY EDUCATIONAL DEVELOPMENT. | 61 |

CHAPTER TWO THE ETHICAL FORM OF LIFE IN MY EDUCATIONAL DEVELOPMENT. 68

CHAPTER THREE THE AESTHETIC FORM OF LIFE OF MY EDUCATIONAL DEVELOPMENT. 78

CHAPTER FOUR THE UNIT OF APPRAISAL AND THE STANDARDS OF JUDGEMENT USED IN THE CLAIM TO KNOW MY OWN IN-SERVICE EDUCATIONAL DEVELOPMENT. 93

PART THREE

SOME IMPLICATIONS FOR EDUCATIONAL RESEARCHERS 97

BIBLIOGRAPHY. 120

BIBLIOGRAPHY AND NOTES. 130

APPENDIX. A SUMMARY OF TEN RESEARCH REPORTS. 147

INTRODUCTION

I have written this guide for those educational researchers who are exploring the implications of asking themselves questions of the kind, 'How do I improve this process of education here?'. In particular I have in mind those teacher/researchers who are attempting to improve the quality of education with their pupils in a way that is both systematic and reflective.

The ideas in this book have emerged over a period of fourteen years from my practical and theoretical activities in education. I began my research and teaching simultaneously. In 1967 I began to teach in the employment of the Inner London Education Authority. My background, at the age of twenty three had included a grammar school secondary education, a degree in the physical sciences and a Postgraduate Education Course. When I say that my research and teaching began simultaneously I mean that I was conscious of asking myself questions of the kind, 'How do I improve this process of education here?', in the first lesson I taught.

In my first six years in education (1967-73) I worked as a teacher in the science departments of three London Comprehensive Schools. I also worked for four years of part time study in the Institute of Education of the University of London (1968-72). I studied the philosophy and the psychology of education for the award of the Academic Diploma in Education (1970) and the psychology of education for the award of M.A. (Education).

I was conscious, as I attended the lectures and seminars at the Institute of Education, of a lack of relationship between what I was told about education at the Institute and what I experienced in education in schools. In order to introduce my 'dialectical' approach to education I will characterise this lack of relationship in terms of 'contradiction'.

My 'dialectical' approach developed out of my practical activities as I struggled to work out a solution to my practical educational problem, 'How do I improve this process of education here?'. A basic experience in my attempt to solve this problem was that 'I' (in the problem) was a conscious living contradiction. By this I mean that I could observe myself, (on video tape) as I experienced and formulated my problem, as a person who was experiencing the tension of holding in his 'I' both the experience of the negation of some of his educational values

and the values themselves in his struggle to overcome their negation.

It seems to me that there is a crucial problem to overcome in learning how to present a dialectical claim to know an individual's educational development. As an educational researcher, faced with the problems of developing explanations for the educational development of individual human beings, it seems to me to be a reasonable starting point to look at one's own educational development, to offer a description and explanation for this development and to examine the epistemological assumptions in such an explanation.

If you think of yourself as a conscious living contradiction in a practical educational problem of the kind, 'How do I improve this process of education here?', and you believe that any explanation for your educational development must include such a conscious living contradiction, how do you formulate, present and criticise such an explanation? A problem arises when you try to formulate your description and explanation within a logical form which excludes the existence of two mutually exclusive opposite statements in a correct description and explanation.

Another problem which emerges, as soon as you attempt to formalise your description and explanation within a linguistic form, is that you experience yourself in your practical educational problem as matter of value. How do we hold up for public criticism a claim to knowledge which contains 'I' as a matter of value?

A third problem concerns the kind of theory which can adequately explain an individual's educational development. If we take such a development to be a life long process we can characterise the development as a process of transformation. It is usual in theoretical forms of discourse to present theories in terms of structures ie; in terms of self-regulating transformatory wholes. Yet, in terms of our educational development we are not 'whole' until we die. I think that this is a fundamental point because it means that we need an explanation for an individual's educational development which shows how that individual can balance a tendency to impose a structure (in the explanation for his/her development) with a tendency to remain open to the possibilities for development which life itself permits.

This 'Dialecticians Guide' begins with an examination of some of the problems of generating educational theory. I suggest that educational researchers in general are tinkering with 'puzzles' rather than testing the dominant theory and generating alternatives. This is followed by an

examination of some of the assumptions in the philosophy, psychology and sociology of education. These assumptions are related to a question of the form, 'How do I improve this process of education here?'. I suggest that there are serious problems in characterising 'educational theory' in terms of the disciplines of education because of the nature of an individual's educational development and the nature of the explanations given for human action in the disciplines of education. I then move on to examine the characteristics of a number of research methodologies which are commonly used in educational investigations and suggest that these are inappropriate for investigating questions of the kind, 'How do I improve this process of education here?'.

Part Two examines my own in-service educational development over a period of fourteen years. I present a claim to know this development in terms of a scientific, methodological, ethical and aesthetic form of life. The unit of appraisal and the standards of judgement which I use in this claim to knowledge are compared with those used by Popper, Lakatos, Kuhn, Polanyi and Feyerabend.

In Part Three I examine some of the implications of my dialectical approach in relation to the work of other academics in education, to the articles in the British Educational Research Journal and to the work of professed dialecticians in educational research.

What I hope to achieve in publishing this work is the communication that there is a way of generating educational theory which retains a direct link to educational practice and which places the responsibility for its generation on every individual in education. In this way I hope to show how educational research can make a direct contribution to the process of improving the quality of State Education.

PART ONE

SOME PROBLEMS IN EDUCATIONAL RESEARCH

INTRODUCTION

The past twenty years have seen the emergence, dominance and partial decline of an approach to educational theory which has become known as the 'disciplines' approach. This approach was derived from the idea of R.S.Peters(1964) that Educational Theory must be presented to students of education in a differentiated form in terms of the disciplines of education.

The central purpose of this thesis is to establish a dialectical alternative to the disciplines approach and to explore some of the implications of this alternative for in-service education.

My reason for proposing an alternative can be found in the work of R.S.Peters on the principles for the selection and presentation of educational theory (Peters 1964/1977). The reason is related to the first of the three principles, listed below, which Peters claims determine the selection and presentation of educational theory;

- "
- 1) Though it must be presented in a differentiated way the different disciplines must also mesh in with and be seen to mesh in with each other in relation to matters of educational policy and practice.
 - 2) Selection from the content of the basic disciplines must, in the main, be determined by what is relevant to the practical problems and interests of teachers in training.
 - 3) The differentiated modes of thought about education, though harnessed to practical issues, must also be presented in a way that they intimate, and are seen to intimate, problems, at a more fundamental level in the disciplines themselves, and the forms of enquiry necessary for their solution.
- "

I shall draw a sharp distinction between the principles of differentiation used in the two approaches. In Peters' approach there is an identification between 'it', ie, 'educational theory' and the disciplines of education. This identification is assumed in the first principle above.

In the 'disciplines' approach the principle of differentiation is expressed in terms of the different disciplines of education. As an alternative 'dialectical' principle I will be suggesting that the principle of differentiation can be expressed in terms of the explanations (or claims to know) which individuals give for their own educational development.

I will then substitute this 'dialectical' principle in Peters' third principle and explore the implications for the philosophy, psychology and sociology of education. These enquiries should be understood as explorations which do no more than intimate problems at a fundamental level in the disciplines of education and intimate the nature of the forms of enquiry which are necessary for their solution.

One of the advantages of the dialectical approach is that it can show how to achieve a relationship between 'integration' and 'differentiation'. Peters(1977) was most careful to point out that 'integration' is inseparable from 'differentiation';

" In brief we must make an end to the undifferentiated mush that is often perpetrated under the heading of educational theory before the different types of question have been distinguished; but we must make sure that the research and training carried out under the aegis of the different disciplines is brought together again in an integrated conversation on matters of common concern. In fact I am making in a concrete way the logical point that 'integration' is inseparable from 'differentiation'. "

Where I think that the 'disciplines' approach to educational theory has been successful is in 'making an end to the undifferentiated mush'. Where I think that it has been unsuccessful is in bringing the different disciplines together in the solution of practical educational problems. In his discussion of the nature of educational problems Peters says;

" Logically speaking all questions of educational policy and practice are hybrid questions, a crossing of value-judgments with different forms of empirical enquiry. So the first step towards answering such questions must be the breaking down of the questions into their logically distinct components..... But once the various voices that speak about education, emanating from the different disciplines, have been separated out and trained, they need to join together in an orderly and coherent conversation about matters of common concern to teachers and practical administrators....."

Where I will be taking issue with Peters is at the point where he says that the first step towards answering

educational problems must be the breaking down of the questions into their logically distinct components. I will be suggesting that this is the point where the 'disciplines' approach fails to point out that an individual's imagination or creativity is required for the integration of the contributions of the disciplines into the solution of a practical educational problem.

I share Peters' concern that educational theory should not degenerate into an undifferentiated mush. This concern should not however prevent a researcher from embracing those creative episodes which initially lack clarity, and which are grounded in a looseness and woolliness of thought as an individual struggles with a difficult problem.

Let me say in this introduction why I think that a dialectical approach to educational theory could have some significance. In August 1981 (Guardian 1981) fifty four Nobel Laureates appealed for a dramatic change of political will in the world.

" We cannot stand idly by and watch as disaster approaches. Our knowledge tells us that the whole of humanity is increasingly in danger of death and that we must use this knowledge to create hope and salvation to give substance to our beliefs and opinions. "

In this appeal there is the implication that we must learn to integrate and apply in life the knowledge which will help us to improve the world. In learning how to integrate and apply in life this knowledge I am assuming that we are engaged in a process of our own educational development. I am also assuming that in coming to understand this process we are engaged in educational research and that in claiming to know our own educational development(in a way that is amenable to public criticism) we are constituting educational theory.

On reading the words of the Nobel Laureates I recalled Kilpatrick's (1951) point in the first issue of 'Educational Theory', that Educational Theory is a form of dialogue which has serious implications for the future of humanity. In offering an explanation for my own educational development within the claim to know that educational development I wish to present a thesis which does have some significance for the future of humanity. I say this with the genuine humility of an educator who believes that the future of humanity rests in the decisions through which individuals give form to their own lives .

In the explanation I offer for my own educational development you will find a number of disparate explanations. For example you will find an explanation which analyses my educational development as a scientific form of

life. In this explanation I will be attempting to solve my problems in a systematic and disciplined way. The approach I adopt is:-

- 1) I experience a problem because some of my educational values are negated.
- 2) I imagine a solution to my problem.
- 3) I act in the direction of the solution.
- 4) I evaluate the outcomes of my actions.
- 5) I modify my problems, ideas and actions in the light of my evaluations.

If asked for my reasons for choosing this form of enquiry I answer that it has emerged from my research as a disciplined form of enquiry which was appropriate for the exploration of my problem, 'How do I improve this process of education here?'. To avoid unnecessary repetition I will simply refer to the above form as the 'dialectical' form.

I will be explaining my educational development in terms of a struggle to live a form of life in which the experiences of the negation of the values of freedom, justice, consideration of interests, worth-while activities, respect for persons, and democratic forms of social organisation, are overcome in the struggle to realise these values in practice. In my claim to know an ethical form of life I will be suggesting that it is necessary to point directly to the text in my research reports in order to communicate the meaning of my value-words by direct reference to my valued-practice.

You will also find an aesthetic form of explanation for my educational development. This explanation is contained within my claim to know my own educational development. I think that this claim holds the key to the integration in the dialectical approach. You will recall my point that the 'disciplines' approach could not show how the integration of the different components occurred in the solution of a practical problem. I think that there is a very good reason why the logic of the disciplines approach does not allow the approach to show how the integration occurs. I will be arguing that this reason is focussed upon the exclusion of contradiction from the logic of the disciplines approach. In the dialectical approach contradiction forms a central category. Let me clarify the importance of the logic and the art of a dialectician in my claim to know my own educational development.

In his seventh letter Plato explains why his philosophy cannot be properly stated in words. He shows how the defects of all our ways of representing reality, through naming, giving examples and definitions are all defective and may lead to error. This does not mean, says Plato, that we must acquiesce in the imperfection of thinking, but that we must test all our thought by a process of dialectic. By dialectic he means the process of asking and answering questions. If we do this, after a long and difficult process of "rubbing our conceptions and perceptions together, then suddenly insight and reason flash out and we know reality as it is". He says that this reality cannot be described, simply because our apprehension of it is immediate, but that we can explain the necessary means towards that apprehension.

In the Phaedrus Plato describes, through the words of Socrates, the art of a dialectician;

"Soc. There are two forms of method which would well repay our attentions...the first consists of comprehending at a glance, whenever a subject is proposed, the widely scattered particulars connected with it, and bring them together under one general idea.

Phaedrus. And what is your other method Socrates?

Soc. That, on the other hand enables us to separate a general idea into its subordinate elements, by dividing it at the joints as nature directs and not attempting to break any limb in half, after the fashion of a bungling carver..... And to all those who are possessed of this power (of apprehending the 'One and the Many' as they are in nature) I have been in the habit of giving the name of dialecticians. "

The logic of the dialectician is the logic of the process of question and answer in which the art of the dialectician contains the capacity to apprehend the 'One and the Many' as they are in nature.

Marcuse(1964) makes the point that the Platonic dialectic has an open horizon which is gradually structured in the process of communication itself, but which is never closed. What I intend to do in this thesis is to show you the separate scientific, methodological and ethical enquiries in my educational development. These separate enquiries exist within the one enquiry, 'How do I improve this process of education here?'. In claiming to know this

enquiry I am making an aesthetic claim to know the art of education in the sense of a struggle to give a form to one's own existence in a way which does not violate the integrity of humanity as a whole.

I will also be including 'I', as a living contradiction in the dialectical approach to educational theory. I will be offering what I term a 'living' form of theory. In this form of theory the individual 'I' experiences the negation of his or her educational values and the negation of this negation in the struggle to live the values in practice. the 'I' exists as a dialectical unity in the sense that the 'I' holds together mutually exclusive opposites. I will be giving a direction to my own educational development by showing how my attempts to live a scientific, methodological and ethical form of life are integrated within an aesthetic form of life.

I hope to show that the strength of the dialectical approach lies in its capacity to show how an individual's educational problem can be broken down into components which relate directly to the disciplines of education and also how the components can be held within the dialectical approach to the solution of the practical problem.

There is of course in my analysis a crucial distinction to be drawn between description and explanation. In describing my educational development in terms of scientific, methodological and ethical forms of life, which are integrated within the aesthetic form of life, I am also offering an implicit explanation for my educational development. The nature of the explanation is illustrated in the following example. In describing my educational development as an ethical form of life I used the value-words, freedom, justice, consideration of interests, respect for persons etc;. The process of my educational development can be understood as an attempt to overcome the experience of the negation of some of my educational values.

I am saying that it is sufficient to offer this as a reason for my educational development for it to constitute an explanation. In other words in offering an explanation in terms of human purpose I am attempting to communicate the nature of the reasons I am giving for my own educational development. These may of course be contested and challenged. I am saying that the explanation I will offer for my own educational development will be communicated in terms of a scientific purpose, an ethical and an aesthetic purpose.

CHAPTER ONE

THE GENERATION OF EDUCATIONAL THEORY

The generation of educational theory and its testing through public criticism appears not to be in the ascendancy in the Journals of Educational Research. There is an emphasis on verification and criticism which is not balanced by a concern with the creation of alternative forms of theory. It is not that I do not assign a fundamental place to criticism in educational research. My concern is simply that educational research may be degenerating to a point where researchers are tinkering with puzzles rather than tackling fundamental problems which could generate alternative theories and methodologies to those which dominate the literature.

Glaser and Strass (1967) suggest that the dominance of quantitative data gathering techniques has led to an emphasis on verification rather than on theory generation. Like Medawar (1969) they draw a sharp distinction between verification and generation;

" The position of the logico-deductive theorists also became subordinated to the rhetoric of verifications. Since they did not use data for generating theory anyway, they support quantitative verifications as the best way to reformulate and modify their theories. This meant, of course, that they supported the trend in sociology that pointed toward the perfection of their own theories by other men. They could not lose. As we have remarked earlier, they never mentioned the lost emphasis on generating theory, since perhaps they wanted their work to be tested and only slightly modified rather than replaced. "

I do not wish to be understood as saying that I reject quantitative data gathering. I am sure that in many instances both forms of data are necessary. I do not however think that it is a matter of qualitative data providing quantitative researchers with a few substantive categories and hypotheses which they take over and explore further in the discovery of facts and in the testing of current theory. I do think that both forms can be used to supplement each other as mutual verifications and, as Glaser and Strass say, ' as different forms of data on the same subject, which when compared will each generate theory '. At the present time we appear to be in a context where verification has become so paramount that it has curbed generation.

" Currently (1967) students are trained to master great-man theories and to test them in small ways, but hardly to question the theory as a whole in terms of its position or manner of generation. As a result many potentially creative students have limited themselves to puzzling out small problems bequeathed to them in big theories."

The emphasis on qualitative data in my own research programme is perhaps due to my concern with theory generation rather than verification. I am concerned primarily with the generative aspects of educational theory. By educational theory I am meaning an explanation for educational practice which can be subjected to public criticism. My anxieties about the state of educational theory may not of course be shared by other researchers. I would suggest however that a review of the literature in the educational research journals over the past decade will show a plethora of criticisms of the disciplines approach but no coherent alternative.

In Part Two I will present an alternative base for educational theory to the principles used in the disciplines approach. I will be suggesting that individuals should offer explanations for their own educational practice and that these explanations should form the basis for the generation of educational theory. I will present the example of my own educational practice to show some of the implications of this alternative basis for the generation of educational theory.

I will be suggesting that the basis for an alternative form of educational theory could be the existence of 'I' as a living contradiction in the question, 'How do I improve this process of education here?'

I will be renouncing, for reasons to be discussed in Part Two, the position held by many researchers that matters of fact and matters of value are held in a logically independent form within statements of value and statements of fact. I will be showing how an individual can produce a matter of fact from a matter of value in a logically coherent way within a dialectical form of enquiry. I will be explicating what I mean when I say that 'I' becomes a concept in the dialectical form of the enquiry and when I say that the quality of the educative relationship actually prevents the imposition of a structure upon the practical decisions concerning my own educational development.

In the presentation of my research programme I am aware that my assumptions conflict with those of the majority of senior academics in education in this country. My justification for offering the programme as an original and

substantial contribution to knowledge of my subject 'education', is that I am attempting to replace one theory by another which I claim gives a more adequate explanation for my own educational development. I recognise that I am asking you to face a problem of theory-choice. As Lakatos (1972) has said;

" Up to the present day it has been the scientific norms as applied instinctively by the scientific élite in particular cases which have constituted the main yardstick of the philosopher's universal laws. Methodological progress still lags behind instinctive scientific verdicts in the sense that the main problem is to find, if possible, a theory of rationality which would explain actual scientific rationality rather than to bring legislative interference by the philosophy of science to the most advanced sciences. "

As I am proposing a logic of educational enquiry which differs markedly from Popper's logic of scientific discovery, I would ask you to bear the following points in mind. I will be pointing out in Part Two that Medawar (1969) believes that Popper's Schema for the growth of scientific knowledge suffers from a serious defect, because it disavows any competence to speak of the generative aspects of a scientific enquiry. For Popper, the ' Logic of Scientific Discovery ', consists merely of a set of (tentative and far from mechanical) rules for the appraisal of ready articulated theories (Lakatos 1970). All the rest he sees, according to Lakatos, as a matter of an empirical psychology of discovery, outside the normative realm of the logic of discovery.

My own research programme is concerned with the generation of educational theory. I am saying that the logic of my educational research programme has excess content over Popper's ' Logic of Scientific Discovery '. It shows the creative process in action and says something about this process in a way that is not completely outside the logic of the creative process itself. I will be arguing that problems do not, as Popper says, emerge autonomously from the field of new relationships which we cannot help bringing into existence with every action, however little we intend to do so. I will be saying that new problems are in general created by us in the sense that they emerge from a struggle to live an aesthetic, ethical and scientific form of life in one's own educational development within the division of labour.

I will now discuss a number of problems in the assumptions of the disciplines approach to educational theory and in the conceptual frameworks of the disciplines themselves when the assumptions are encountered in a dialectical form of educational enquiry. I will also point out a number of limitations in educational research

methodologies which bring into question their appropriateness as ways of investigating a practical educational problem of the kind, 'How do I improve this process of education here?'

These concerns are however subordinate to the general thrust of the thesis in which I am exploring the implications of an alternative educational theory for in-service education. In my own case I am exploring the possibility of generating educational theory from my own attempts to integrate and apply in life the knowledge which helps to improve the world in my own in-service educational development.

In the development of a dialectical approach to educational theory I have integrated some contributions from the different disciplines in the solution of a practical educational problem. In the work which follows I wish to draw your attention to a number of assumptions within a number of the different schools of thought in the disciplines of education which I think can be shown to hinder our understanding of how the integration can occur in the solution of a practical problem.

I do not wish to be misunderstood. I am not saying that the assumptions are mistaken when they are taken as the basis for the development of the disciplines themselves. I simply wish to draw your attention to a number of difficulties which emerge when we try to see how to integrate the disciplines in the solution of a practical educational problem. In other words it is the 'disciplines approach' to educational theory I wish to criticise, not the disciplines themselves.

CHAPTER TWO

THE DISCIPLINES APPROACH TO EDUCATIONAL THEORY

My intention is to describe the essential characteristics of the disciplines approach to educational theory and to draw your attention to some of the problems in this way of thinking when it is viewed from a dialectical perspective. I will present a number of passages from the work of R.S. Peters and P. Hirst to illustrate the fundamental assumptions on which the disciplines approach is based. This will serve the functions of defining the disciplines approach and of providing a basis for the discussion of four problems which are raised when the linguistic philosophy of education is viewed from a dialectical perspective. This will be followed by an examination of the assumptions in a number of schools of thought in the sociology and psychology of education and a consideration of the appropriateness of existing educational research methodologies for investigating problems of the kind, 'How do I improve this process of education here?'

My starting point is the statement made by R.S. Peters(1964/1977), on the 'Principles for Selection and Presentation of Theory', in his work on 'Education and the Education of Teachers';

"'education' is not a distinct discipline but a field where a group of disciplines have application. In this respect it is rather like politics. 'Education', as a legitimate and fruitful field of study has suffered too much from people who cannot distinguish the sort of questions they are asking and who are not equipped in the disciplines relevant to answering them. Talks that go down well at speech days and conferences are too often mistaken for the sort of thing which could count as a contribution to educational theory. Logically speaking all questions of educational policy and practice are hybrid questions, a crossing of value-judgments with different forms of empirical enquiry. So the first step towards answering such questions must be the breaking down of the questions into their logically distinct components. If, for instance, we want to know whether we ought to punish children, the ethical issues of principle must be distinguished from the psychological and social questions about causes and consequences. But once the various voices that speak about education, emanating from the different disciplines, have been separated out and trained, they need to join together

in an orderly and coherent conversation about matters of common concern to teachers and practical administrators...."

I have presented, in the introduction, the three principles which clearly identify educational theory with the disciplines of education. What I now wish to do is to discuss four problems in the philosophy of education, which have emerged in the course of my enquiry, concerning contradiction, facts and values, structures and practical decisions, and 'I' as a concept.

A) THE PHILOSOPHY OF EDUCATION

Hirst and Peters(1970) state that philosophy is an activity which is distinguished by its concern with certain types of second order questions. These questions are of a reflective sort which arise when activities like science, painting pictures and making moral judgments are going concerns. They say that it is concerned with questions about the analysis of concepts and with questions about the grounds of knowledge, belief, actions and activities. Conceptual analysis plays an important part in their philosophy. They have this to say about what it means to have a concept.

" As, however, our understanding of what it is to have a concept covers both the experience of grasping a principle and the ability to discriminate and use words correctly, which is observable in the case of others as well as ourselves, there is, amongst philosophers generally a tendency to rely on this publicly observable criterion of having a concept. For it is possible to say more about it than it is about the subjective side. This public criterion is necessary to identify having a concept, but having a concept is not identical with it. "

One of the ways in which Peters has used conceptual analysis can be seen in his work , ' Ethics and Education ' (Peters 1966). In this work Peters investigated what was implied for a person who was seriously asking himself a question of the form, 'What ought I to do?'. What is clear from his analysis is that the concrete singular 'I' is subsumed under the linguistic concept 'person' and is not considered in the linguistic form of the analysis. This brings me to the first problem with a linguistic philosophy of education when the practical problem, 'How do I improve this process of education here?', is viewed from a dialectical perspective. The problem is focussed upon the nature of concepts. I will be suggesting that in a dialectical analysis, the 'I' becomes a materialist, as distinct from a linguistic, concept. I will discuss this distinction later in the chapter.

My second problem concerns the issue of contradiction. Peters is committed to the 'Law of Contradiction', which states that two mutually exclusive statements cannot both be true simultaneously. This Law is so much a part of our common - sense way of speaking that, as Peters says in his 'Ethics and Education',

" If, for instance, a person failed to observe the principle of non-contradiction it would be difficult to conceive how he could ever string together terms in an intelligible way. "

I will be suggesting that the 'I' in my practical problem exists as a 'living contradiction', in the sense that I hold within myself, as a dialectical unity, two mutually exclusive experiences. These experiences are the experience of the negation of some of my educational values and the negation of this negation in my struggle to live the values in my educational development. I am thus faced with the problem of finding a way of presenting an explanation for a form of life which is grounded in contradiction ; a living contradiction.

My third problem is concerned with the principle of the autonomy of ethics. This principle holds that statements of fact and statements of value form independent realms of discourse. Peters' commitment to the principle of the autonomy of ethics can be inferred from his statement;

" Logically speaking all questions of educational policy and practice are hybrid questions, a crossing of value-judgments with different forms of empirical enquiry. So the first step towards answering such questions must be the breaking down of the questions into their logically distinct components. "

The principle raised a problem for my own enquiry because when I formulated my practical educational problem, 'How do I improve this process of education here?', I found that the first step in answering the question was to imagine a solution.

My fourth problem, with the assumptions in the disciplines approach, is concerned with the relationship between 'structures' and practical decisions in education. On one page (15) of their 'Logic of Education', Peters and Hirst (1970) state their purpose and use the word 'impose' three times:-

"1) It is the purpose of this book to show the ways which such a view of education must impose such a structure on our practical decisions.

2) The thesis of this book, therefore, has relevance at a time when there is much talk of 'integrated studies'. For one of the problems about 'integration' is to understand the way in which 'wholeness' can be imposed on a collection of disparate enquiries.

3) This book, however contains no such exhaustive treatment of the issues raised by the analysis put forward, though it does contain suggestions for further reading put forward for those who wish to explore them. All it attempts to do is to sketch the ways in which this conception of education must impose its stamp on the curriculum, teaching, relationships with pupils, authority structure of the school or college community. "

In the light of these statements I think that it is reasonable to assert that the linguistic philosophy of R.S.Peters and P. Hirst has led them to the conclusion that their view of education must impose a structure upon practical decisions, must impose wholeness on a collection of disparate enquiries and must impose its stamp on the curriculum.

It is true that both Peters and Hirst have modified their ideas over the past twenty years. Peters (1970) for example, in the 'Logic of Education', says that he is well aware that his analysis fastens on certain features of the concept which seem to him to be of particular significance—especially its connection with knowledge and understanding. In a later work Peters (1978) acknowledges that his earlier concept of development, which confined education to the development of knowledge was too limited. He now stresses that we are persons as well as democrats and that our lives will be impoverished if we have no sense of beauty of the world or of man's striving to give concrete embodiment to intimations about the human conditions which we cannot explicitly articulate.

Hirst (1978) is consistent in his attempts to show how his conceptual view of education must impose its stamp on the curriculum. In the following passage Hirst is claiming that it is only in learning, by the human powers becoming structured and organized through the agency of, what is called by Popper the 'Third World', that what we mean by education takes place. It must be said that Hirst, in the passage, does appear to be taking seriously some of the criticisms which have been made of his work from a dialectical perspective. The crucial point about the passage, from my own point of view, is the last sentence where Hirst is claiming that it is only in learning, by the human powers becoming structured and organized through the agency of the 'Third World', that what we mean by education takes place.

" In other words, what is crucial for the development of concepts, knowledge, understanding, patterns of human behaviour, is the creation in society of symbolic systems that exist as deposits within that society. The development of beings into human beings as we know them is dependent on those beings progressively constructing what Popper, in his book 'Objective Knowledge', has called the 'Third World'; a world of symbolic constructions that can exist only within the network of social relations. The development of a child, in this day and age, into a human person, takes place by his being involved in some dialectical exchange between his given human powers and his environment only if that environment is understood as including a complex, socially constructed system of public symbols in which concepts, knowledge and so on are encapsulated - Popper's 'Third World'... To describe the child's learning of a public language and his thus coming to terms with the 'Third World' as it already exists in society, as a process of dialectic seems to me misleading. The child is not in an equal relationship of dialogue with the other members of society who have already incorporated elements of the 'Third World' into themselves. Nor is he in any reciprocal relationship with that 'Third World' in any other form.

From these considerations I conclude that, though education is very much concerned with the exercise of human powers, it is not characterized at all adequately in terms of the the exercise or development of those powers, even dialectically. It is only in learning, by the human powers becoming structured and organized through the agency of the 'Third World', that what we mean by education takes place."

Hirst's commitment to the imposition of structures on practical decisions is unmistakable;

" It is by their (human powers) being organized and structured in ways determined from without that the individual's powers ever result in achievements of a human character. "

I have acknowledged that the views of Hirst and Peters have been modified over the past twenty years. I would claim however that these modifications are matters of detail and that they have not changed the structure of their thought in any fundamental way. Peters, for example, still supports the principles for the selection and presentation of educational theory, the Law of Contradiction and the Principle of the Autonomy of Ethics. Hirst and Peters still believe that a structure must be imposed on practical decisions.

I will now take the four problems discussed above and examine them in more detail from a dialectical perspective.

It may assist the clarity of my communication if I take the issue of contradiction as my first point. This will enable me to offer a further clarification of the way I am using the term 'dialectical'. I will then discuss the possibility that statements of fact and statements of value can be logically related in a dialectical form of enquiry and the possibility that there is a quality of human relationship, within an educative relationship, which prevents the imposition of a structure upon practical decisions in education. Finally I will investigate the possibility of 'I' becoming a materialist concept, whose essence is the individual's personality, in a dialectical analysis of an educational enquiry, 'How do I improve this process of education here?'

THE PROBLEM OF CONTRADICTION

The problem of contradiction is a focus of debate between dialecticians and other logicians. According to Ilyenkov (1977), dialecticians, metaphysicians, materialists and idealists do not deny the point that contradiction in the theoretical determinations of an object is above all a fact that is constantly being reproduced by the movement of science. They do however dispute the relationship of contradiction, in thought, to the object. In other words the dispute is about whether there can be contradiction in correct thought. For example, when Peters (1966) says that if a person fails to observe the principle of non-contradiction it would be difficult to conceive how he could ever string together terms in an intelligent way, he is taking the position that there cannot be contradiction in correct thought. The problem of contradiction has a long history. Popper (1963) is the most influential of modern philosophers to have dismissed the claim of dialecticians, that contradiction can exist in correct thought. He states that the most important misunderstandings and muddles arise out of the loose way in which dialecticians speak about contradictions. The extracts below are rather long. I have included them because of their importance in relating my problem of contradiction, in a precise way, to the thoughts of other writers.

" Having thus correctly observed that contradiction—especially, of course the contradiction between a thesis and an antithesis, which produces progress in the form of a synthesis—are extremely fertile, and indeed the moving forces of any progress of thought, dialecticians conclude—wrongly as we shall see—that there is no need to avoid these fertile contradictions. And they even assert that

contradictions cannot be avoided, since they occur everywhere in the world.

Such an assertion amounts to an attack upon the so-called 'Law of Contradiction', of traditional logic, a law which asserts that two contradictory statements can never be true together, or that a statement consisting of the conjunction of two contradictory statements must always be rejected as false on purely logical grounds. Appealing to the fruitfulness of contradictions, dialecticians claim that this law of traditional logic must be discarded. They claim that dialectic leads in this way to a new logic, a dialectical logic. Dialectic, which I have presented as a merely historical doctrine—a theory of the historical development of thought would turn out in this way to be a very different doctrine—it would be at the same time a logical theory and a general theory of the world.

These are tremendous claims, but they are without the slightest foundation. Indeed they are based on nothing better than a loose and woolly way of speaking.....Thus we must tell the dialectician that he cannot have it both ways. Either he is interested in contradictions because of their fertility; then he must not accept them. Or he is prepared to accept them—then they will be barren and rational discussion, criticism, and intellectual progress will be impossible.....For it can easily be shown that if one were to accept contradictions then one would have to give up any kind of scientific activity; it would mean a complete breakdown of science. This can be shown by proving that if two contradictory statements are admitted any statements whatever must be admitted; for from a couple of contradictory statements any statement whatever can be validly inferred. "

Popper's rejection of contradiction in correct thought is in marked contradiction to the views of Kant, Hegel and Marx. Because the issue of contradiction is so very important to my own thesis I will quote in full the passages from their work which bear directly upon it. In his 'Logic', Hegel says that the following passage in Kant's, 'Critique of Pure Reason', forms one of the most important steps in the progress of Modern Philosophy because it establishes the existence of contradiction in Reason.

" ANTITHETIC OF PURE REASON

Thetic is the term applied to every collection of dogmatical propositions. By antithetic I do not understand dogmatical assertions of the opposite, but the self-contradiction of seemingly dogmatical cognitions, in none of which can we discover any decided superiority. Antithetic is not therefore occupied with one-sided statements, but is engaged in considering the contradictory nature of the general cognitions of reason, and its causes....

A dialectical proposition or theorem of pure reason

must, according to what has been said, be distinguishable from all sophistical propositions, by the fact that it is not an answer to an arbitrary question, which may be raised at the mere pleasure of another person, but to one which human reason must necessarily encounter in its progress. In the second place, a dialectical proposition with its opposite, does not carry the appearance of a merely artificial illusion, which disappears as soon as it is investigated, but a natural and unavoidable illusion, which, even when we are no longer deceived it continues to mock us, and, although rendered harmless, can never be completely removed.

This dialectical doctrine will not relate to the unity of understanding in empirical conceptions, but to the unity of reason in pure ideas. The conditions of this doctrine are- inasmuch as it must, as a synthesis according to rules, be conformable to the understanding, and at the same time as the absolute unity of the synthesis, to the reason - that, if it is adequate to the unity of reason, it is too great for the understanding, if according with the understanding, it is too small for the reason. Hence arises a mutual opposition, which cannot be avoided, do what we will. "

Hegel acknowledges the importance of Kant's, 'Dialectical Doctrine', and then goes on to criticise Kant's solution to the problem of contradiction as trivial, before offering the following solution.

" In the attempt which reason makes to comprehend the unconditioned nature of the World, it falls into what are called Antinomies. In other words it maintains two opposite propositions about the same object, and in such a way that each of them has to be maintained with equal necessity. From this it follows that the body of cosmical fact, the specific statements descriptive of which run into contradiction, cannot be a self-subsistent reality, but only an appearance. The explanation offered by Kant alleges that the contradiction does not affect the object in its own proper essence, but attaches only to the Reason which seeks to comprehend it.

In this way the suggestion was broached that the contradiction is occasioned by the subject-matter itself, or by the intrinsic quality of the categories. And to offer the idea that the contradiction introduced into the world of Reason by the Categories of Understanding is inevitable and essential was to make one of the most important steps in the progress of Modern Philosophy. But the more important the issue thus raised the more trivial was the solution ... the recognition (of the antinomies) helped largely to get rid of the rigid dogmatism of the metaphysic of understanding, and to direct attention to the Dialectical Movement of thought. But here too, Kant, as we must add, never got beyond the negative result that the thing-in-itself is unknowable, and never penetrated to the true and positive meaning of the

antimonies -which is this; that every actual thing involves a coexistence of opposed elements. Consequently to know, or, in other words, to comprehend an object is equivalent to being conscious of it as a concrete unity of opposed determinations. "

Hegel worked out the implications of the 'Dialectical Movement', in his 'Phenomenology'. Following Hegel's line of attack on Kant, Marx first acknowledges the contribution Hegel has made to the problem of contradiction before mounting his own attack on Hegel's ideas.

" The great thing in Hegel's 'Phenomenology' and its final result—the dialectic of negativity as the moving and productive principle—is simply that Hegel grasps the self-development of man as a process, objectification as loss of the object, as alienation and transcendence of this alienation; that he thus grasps the nature of work and comprehends objective man, authentic because actual, as the result of his own work. " (Bernstein 1971).

Colletti(1974) points out that Marx accuses Hegel of inverting the relationship between subject and predicate. Hegel, says Marx, takes the universal or concept, which ought to express the predicate of some real object and so be a category of function of that object, and turns it instead into an entity existing in its own right. By contrast, the real subject, the subjectum of the judgment (the existing empirical world) becomes for him (Hegel) a manifestation or embodiment of the Idea- in other words a predicate of the predicate, a mere means which the Idea uses to vest itself with reality:-

" Hegel makes the predicate, the objects, autonomous, but he does this by separating them from their real autonomy, viz, their subject. The real subject subsequently appears as a result, whereas the correct approach would be to start with the real subject and then consider its objectification. The mystical substance therefore becomes the real subject, while the actual subject appears as something else, namely as a moment of the mystical substance. Because Hegel starts not with an actual existent (subject) but with predicates of universal determination, and because a vehicle of these determinations must exist, the mystical Idea becomes that vehicle. "

Now I accept the approach to the problem of contradiction which starts with the real subject. In relation to my own research I take it that the real subject is my own 'I' in the question, 'How do I improve this process of education here?'. Given this starting point I am still however faced with the problem of contradiction as

posed by Ilyenkov(1977).

" Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics, its central category. On that score there cannot be two views amongst Marxists; but no small difficulty immediately arises as soon as matters touch on 'subjective dialectics' on dialectics as the logic of thinking. If any object is a living contradiction, what must the thought (statement about the object) be that expresses it? Can and should an objective contradiction find reflection in thought? If so, in what form? "

I will leave this discussion of the issue of contradiction with Ilyenkov's problem in mind. You will recall that in this Chapter I am simply attempting to clarify the nature of a number of problems in the disciplines approach to educational theory. I will now turn to the issue of the relationship between matters of fact and matters of value in statements of fact and statements of value.

2) THE PROBLEM OF RELATING STATEMENTS OF FACT AND STATEMENTS OF VALUE.

In the experience of formulating my practical educational problem, 'How do I improve this process of education here?' , matters of fact are integrated with matters of value. In my research I have been faced with the problem of relating this integration of matters of fact and value to statements of value and fact. As a value-laden activity education contains both matters of fact and matters of value. It is commonly held however that statements of fact and statements of value form logically distinct forms of discourse. The original formulation of the problem of relating statements of fact to statements of value is generally attributed to Hume (1888) in the following passage from his 'Treatise'.

" In every system of morality which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes some observations concerning human affairs; when of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but it is, however, of the last consequence. For as this ought or ought not, expresses some new relation or affirmation, 'tis necessary that it should be observ'd and explain'd; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be

a deduction from others, which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to the readers; and am persuaded that this small attention wou'd subvert all the vulgar systems of morality, and let us see, that the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceiv'd by reason. "

MacIntyre (1969) says that the standard interpretation of this passage (and I would certainly say that it is the one taken by Peters) takes Hume to be asserting that no set of non-moral premises can entail a moral conclusion. It is usual to hold to the view that statements of fact and statements of value form logically independent realms of discourse. Hudson(1969) holds that the Is/Ought question, 'How is what is the case related to what ought to be the case?' , is the central problem of moral philosophy.

I think that you will appreciate my problem when I say that I hold that education is a value-laden practical activity. If I wish to make a statement which contains both evaluative and empirical components it appears that I cannot connect them in a logical way. I am thus faced with a dilemma. In my practical educational problem, I experience my problem in a holistic way. In my experience of my problem matters of fact and matters of value are internally related. I do not experience them as logically distinct. In Part Two I will be attempting to outline a dialectical claim to knowledge which may be of some use in showing how statements of fact and statements of value can be logically related within a dialectical enquiry.

3) THE PROBLEM OF IMPOSING A STRUCTURE UPON PRACTICAL DECISIONS IN EDUCATION.

My problem with 'structure' concerns the assertions of both Hirst and Peters (1970) that their purpose (in 'The Logic of Education') is to show how their view of education must impose a structure upon practical decision. I do not want to give the impression that I am against structures. Indeed I find the idea of a self-regulating, transformatory whole (Piaget 1972) a particularly attractive way of thinking about my own form of life in education. What I am concerned about is the idea that a 'structure' must necessarily be imposed upon practical decisions in education. I have presented the statements in which Peters and Hirst use the word impose three times on one page of their 'Logic of Education'. They talk of 'imposing a structure', 'imposing wholeness on a collection of disparate enquiries', and of 'imposing' the stamp of their conception

of education on the curriculum etc.

As I have said I am attracted to the idea of a self-regulating transformatory whole as a way of thinking about an individual's form of life. Where I find myself in difficulties is in imagining that the educator should impose a structure upon the practical decisions which affect the form of life of his pupils. In my own educative relationships I attempt to encourage my pupils and students to construct their own forms of life. I acknowledge that my view of educative relationships has been influenced by the work of Martin Buber(1957) where he discusses the nature of the educative relationship in a way which appears to rule out the possibility that the educator should impose a structure (implied in a hierarchical view of the world) upon his pupils.

" If this educator should ever believe that for the sake of education he has to practise selection and arrangement, then he will be guided by another criterion than that of inclination however legitimate this may be in his own sphere; he will be guided by the special humility of the educator for whom the life and particular being of all his pupils is the decisive factor to which his 'Hierarchic' recognition is subordinated. "

I will be approaching the problem of the imposition of a structure upon practical decisions in education with the suggestion that these decisions are concerned with the giving of form to an individual's existence. I will be suggesting that this is of central importance for the Art of Education. In this Art I believe that structures exist, not in a way that they are imposed upon practical decisions, but in a way that emerges from practical decisions which involve the Art of Education. I will be attempting to show that this Art denies the imposition of structures both from within and from without. The Art of Education allows both structures and transformatory action to be present in the individual's attempt to give form to his or her own educational development.

4) THE PROBLEM OF CONCEPTUALISING 'I'

'I' exists in the question, 'How do I improve this process of education here?', as a concrete living individual. My own investigation of this question has lasted some fourteen years. I am still investigating the question. In the fourteen years the 'I' has changed. In any attempt to understand my analysis of my educational development it is important to comprehend that 'I' has become a materialist concept whose essence is my personality. By personality I am meaning the total system of activity which forms and

develops throughout my life and whose evolution constitutes the essential components of my biography (Seve 1978).

I will attempt to clarify the nature of my problem of conceptualising 'I' by reference to the work of Hegel and Seve. Hegel says;

" 'I' is in essence and act the universal; and such partnership is a form, though an external form of universality. All other men have it in common with me to be 'I'; just as it is common to all my sensations and conceptions to be mine. But 'I' in the abstract, as such, is the mere act of self-concentration or self-relation, in which we make abstraction from all conception and feeling, from every state of mind and every peculiarity of nature, talent and experience. To this extent, 'I' is the existence of a wholly abstract universality, a principle of abstract freedom. Hence thought viewed as a subject, is what is expressed by the word 'I'; and since I am at the same time in all my sensations, conceptions and statements of consciousness, thought is everywhere present, and is a category that runs through all these modifications. "

I take it that the above statement is referring to 'I' as an abstract universal. In contrast to this idea I posit myself in my enquiry as the concrete singular 'I' who as the materialist 'I', is asking the question, 'How do I improve this process of education here?'. That is, I am looking at the subject of my enquiry as my own 'I' in the process of investigating my problem.

In looking upon 'I' as a materialist concept I need to distinguish my materialist use of the term 'concept', from the term as it is used by linguistic philosophers. Consider the statement made by Peters and Hirst (1970) that understanding what it is to have a concept involves both grasping a principle and the ability to use words correctly. Contrast this statement with the idea of a concept used by Seve (1978).

According to Seve the task of conceptual thought is to express the logic of the essential processes through which the development of the object is brought about. Doing which, he says, the concepts absolutely do not tell us how the singular concrete is in general but in general how the singular concrete is produced. He says that in this way the essence can then be reached in its concrete reality, the singular grasped in the generality of the concept.

In dialectical forms of abstraction the essence is not what appears common to the object and to others which are compared to it. It is the necessary internal movement of the

object grasped in itself (ie:- it is the essence of this object). The generality of the concept is not constituted by eliminating the singular but by raising the singular to the level of its internal logic (ie:- it constitutes the 'specific logic of the specific object').

I would distinguish my materialist use of the term 'concept' from its purely linguistic use by contrasting having a concept in the linguistic sense with being a concept in a materialist sense. As Peters and Hirst (1970) say, we can look upon understanding what it is to have a concept in the sense of grasping a principle and the ability to use words correctly. In my materialist view, understanding what it is to be a concept involves a reflection upon the process through which one's own concrete singularity was produced and the struggle to live correctly. In other words we can contrast;

- 1) Having a concept with Being a concept.
- 2) Grasping a principle with a reflection upon the process through which one's own concrete singularity was produced.
- 3) The ability to use words correctly with the struggle to live correctly.

The point about my dialectical view of 'I' as a materialist concept is that I am attempting to show how in general the concrete singular is produced. I am not accepting Hegel's point that 'I' is the existence of a wholly abstract universality, a principle of abstract freedom. I am taking 'I' as a wholly concrete singular which is a principle of concrete freedom.

I would also distinguish my materialist 'I' from the 'I' of Hegel at the point where Hegel says;

" And when the individual 'I', or in other words personality, is under discussion(of a personality in its own nature universal) such a personality is a thought and falls within the province of thought only. "

When I use 'I', I am using the word to mean my personality as a single concrete person with actual corporeal existence as a thinking body.

I am raising the issue of 'I' as a materialist concept, as a problem to be worked through in the course of my analysis. I am conscious that in a linguistic form of conceptual analysis my 'I' would be treated as inessential to the analysis as it would be subsumed under the concept

'person' or 'teacher'. These concepts would be used in a propositional form of discourse which would conform to the Law of Contradiction. In my dialectical enquiry, 'I' is a concept which exists as a living contradiction in the sense that it is constituted by mutually opposite determinations. In my work the 'I' becomes a materialist concept in the sense that it is raised to the level of its internal logic and shows how in general the concrete singular is produced.

I will return to these problems at the end of Part Two in an attempt to show how they may be overcome in a dialectical approach to educational research. I will now examine some of the assumptions in the psychology and the sociology of education from a dialectical perspective in order to isolate the precise points at which the assumptions create problems for their integration into the solution of practical educational problems.

B) THE PSYCHOLOGY OF EDUCATION

In this discussion of the psychology of education I am not attempting an exhaustive treatment of the problems. My purpose is to indicate a number of problems in the work of exemplars of different schools of thought in the psychology of education when their work is considered from a dialectical perspective. I have selected the work of Skinner, Piaget and Rogers as exemplars of the behaviourist, cognitive theorist and humanist schools of psychology respectively.

What I am looking for, as I examine the work of the different theorists, are their statements on the nature of the explanations which they offer for human action. In particular I am looking to see if they include the 'I' of the concrete individual in their explanations. I am also looking to see in what way they include human values in their explanations, what sense they give to their definition of psychology as a science and in what way dialectical and formal logic are related in their explanations of human action.

I will discuss the behaviourism of B.F. Skinner in terms of his treatment of 'I' in explanations for human behaviour, his analysis of human values and his definition of psychology as a science.

Skinner(1979) says that he has always believed in some kind of determinism, and that it has never bothered him in the least to accept himself as a completely determined system. He does say that there is a kind of intellectual suicide in his position in the sense that his analysis of behaviour moves towards a conception in which there is no functional 'I', no capital 'I'.

Teaching for Skinner(1968) is simply the arrangement of contingencies of reinforcement, in which making a value judgment is to classify behaviour in terms of its reinforcing effects. He distinguishes a pre-scientific view from a scientific view. In the pre-scientific view Skinner says that one views a person's behaviour at least to some extent as his own achievement. It is believed, in this view that the individual is free to deliberate, decide and act, possibly in original ways and he gives himself credit for his successes and blames himself for his failures. In Skinner's scientific view a person sees his behaviour as determined by a genetic endowment which is traceable to the evolutionary history of the species and to the environmental circumstances to which, as an individual, he has been

exposed. Skinner accepts that neither view can be proved but, he asserts, that it is in the nature of scientific enquiry that the evidence should shift in favour of the second view.

Skinner says that things in themselves are studied in physics and biology, usually without reference to their value, but the reinforcing effects of things are the province of behavioural science, which, to the extent that it is concerned with operant reinforcement, is a science of values. As Kolbe(1978) says, a project undertaken to discover the causes of behaviour, is of course a science of behaviour. The business of a science of behaviour is to analyse the functional relations between behaviour and the reinforcers or values which control it. In seeking a valid basis for a science of values, therefore, we must turn to a science of behaviour.

It is possible to take the behaviour which is my educational practice and to consider the value of freedom which is embodied in this practice. If a behaviourist wishes to analyse my behaviour in terms of the reinforcing effect of the value of freedom I have no objection. In the case of my own educational development there are aspects of my behaviour in which I assert that 'I am the cause of my actions'. I have said that 'I' exist as a living contradiction in my educational development, in the sense that I experience the negation of some of my educational values and the negation of this negation in my struggle to live the values in my practice.

Skinner and the radical behaviourists are quite correct when they say that the value of freedom can be understood in terms of its reinforcing effects. I am attempting to move my behaviour and my circumstances in a particular direction. I do find my behaviour reinforced when I find that this behaviour has produced circumstances in which my values are realised. In that sense I do not find any conflict with behaviourist explanations. They can be incorporated without any difficulty within my own explanation for my educational development, in the sense that I experience the negation of some of my educational values and the negation of this negation in my struggle to live the values in my practice. I have avoided (in Part Two) what Skinner accepts as intellectual suicide by refusing to remove my own 'I' from the explanation for my educational development . My own 'I' appears in both my practice and its theory as a living contradiction.

When I consider psychology as a science I do dispute Skinner's view of the nature of science. I would suggest that the evidence from my own research does shift the view of the nature of science of psychology towards what Skinner calls the pre-scientific view.

In the analysis of my research programme in Part Two I will be explicating the methodological, scientific, and ethical forms of enquiry within the one enquiry, 'How do I improve this process of education here?'. These enquiries can be classified and understood in terms of their reinforcing effects. I may of course be mistaken in taking these to be contingencies of reinforcement. If I am correct then you would expect to see me moving in my development in particular ways, confronting the circumstances which prevent me from experiencing the reinforcing effects of my values, my scientific form of life and the art of education. I am not sure that we have added anything to our understanding of this particular individual's educational development by classifying his values, his aesthetic and scientific enquiries as reinforcing effects. Surely the interesting issues, which will lead to a greater understanding of this individual's educational development, concern the way in which the individual 'I' has selected a particular set of criteria which characterise his many enquiries and his one enquiry.

My own view of Skinner's work is that the intellectual suicide of removing 'I' as a causal factor in the explanation of human behaviour leads to a limited view of the nature of that behaviour. It seems to me to exclude some crucial areas of human experience which are necessary in developing a science of the individual.

Science is a particular form of disciplined enquiry which is guided by a search for truth. If we find that human behaviour can be explained by including the element of freedom in that behaviour, and that this explanation accords most completely with the nature of the phenomena, then surely the evidence moves to what Skinner calls the pre-scientific view. In my own case the evidence from a process of self-observation, which is discussed in Part Two, points towards the pre-scientific view.

I recognise that there are differences between behaviourists in their view of human behaviour. As Ulman(1979) says it is of paramount importance to differentiate radical behaviourism from conventional methodological behaviourism. Vargas (1977) points out that methodological behaviourists believe that we can only study that behaviour which can be measured by two independent observers (this excludes our inner behaviour). Radical behaviourists include inner behaviours such as 'thoughts' and 'dreams' as valid behaviour to investigate. B.F. Skinner is held by Vargas to be the leading spokesman for radical behaviourism. Radical behaviourists do not dismiss internal behaviour as subjective, they simply question the nature and reliability of the observations. I will be pointing out that a process of self-observation, with the aid of video-tapes of one's own actions(Reports 6&7) draws attention to the fact that if you are attempting to answer questions of the form, 'How do I improve this process of

education here?', then you cannot think of yourself in your practice, in any form of understanding of what you are doing, without reference to 'I'. In other words your very perception of what you are seeing cannot be disassociated from your original enquiry. In this sense I think that Skinner's 'intellectual suicide' was rather premature. I will present evidence in Part Two which claims to show that the individual 'I' does come into an explanation for an individual's educational development in a scientific form of living. I will argue that the existence of 'I' in the sense of a living contradiction and a causal agent of behavioural change is a fundamental conceptual and methodological requirement of a science of the individual.

As I have said I do not have any problems in incorporating Skinner's views into my own dialectical conception, in terms of the content of what he says. I simply do not find that his views help to give a comprehensive explanation for my behaviour. I will be suggesting that the form and content of the explanation which I present in Part Two will give you a greater understanding of the nature of my behaviour than a view which insists on removing 'I' from the explanation, which treats my values in terms of their reinforcing effects and which claims that my view of myself as an individual with freedom is a pre-scientific view.

The points I wish to raise in my discussion of cognitive psychology are different from those raised above. I am particularly interested in the way Piaget(1972) discusses the subject's consciousness, in his explanations for human action, and the way he discusses the relationship between dialectical and formal logic in his explanation for human development.

The fundamental assumptions in Piaget's Cognitive Psychology include his concepts of cognitive action, operation and structure. Cognitive Actions are defined as classes of similar action sequences. When these actions are arranged into close-knit totalities he calls them operations. He describes the mental development of an individual in terms of a number of Cognitive Stages which he distinguishes in terms of the logical operations the person can perform. He uses the concept of structure in the sense of a self-regulating, transformatory whole. Piaget(1972) relates his concept of Cognitive Structure to a person's immediately lived experience in the following way;

" There are thinkers who dislike the subject and if the subject is characterised in terms of its lived experience we admit to being among them....the lived can only have a very minor role to play in the construction of cognitive structures for these do not belong to the subject's consciousness but to his operational behaviour. "

In his analysis of structuralism Piaget(1972) makes the

important point that there are perhaps two attitudes which reason can employ. On the one hand we have analytic reason and on the other hand synthetic reason. Analytic reason is grounded in formal logic. Synthetic reason is grounded in dialectical logic. He sees dialectical logic as the logic of creativity and analytic logic as being employed in testing the formalised propositions which have been created in the dialectical form of the enquiry.

The relationship between the dialectical and formal logics is not fully explicated in Piaget's work. On the one hand they are separated and allocated to different attitudes, 'which reason may adopt', and on the other hand we are left with the idea of an 'immanent dialectic', as if formal logic can be incorporated within a dialectical enquiry.

Piaget (1972) admits that he is a thinker who dislikes the subject when the subject is characterised in terms of its lived experience. He states, in the quotation above, that the lived can only have a very limited role to play in the construction of cognitive structures for these, he says, do not belong to the subject's consciousness but to his operational behaviour. I think that something significant is being lost in this analysis of cognitive structures. What I suggest is being lost is the 'I' of the active subject who is attempting to structure his own form of life on the basis of his aesthetic experiences and his ethical values. By assigning such a minor role to consciousness and omitting a conscious 'I' of the individual, from his explanation for the changes in the development of logical thinking, it could be that Piaget's Cognitive Psychology misses a vital element in the explanation for the development of an individual as a self-regulating transformatory whole.

Piaget (1958), in his analysis of the growth of logical thinking, explains the movement through the Cognitive Stages in terms of a need to unify nascent formal thought. It could be that Piaget's view of mental development is too limited precisely because he focuses upon the form and content of propositional logic as the logic of logical thinking. In the development of the concrete individual it could be that both formal and dialectical logic are involved in the growth of logical thinking. In his analysis of structuralism Piaget recognises the need to relate formal and dialectical logic. The problem to be resolved, in the course of my enquiry, concerns the nature of the relationship between these two logics. Is it simply that dialectical logic is the logic which is appropriate for the creative episodes of thinking and formal logic the logic which is appropriate for the critical episodes of thinking? Is it a matter of understanding that in the growth of an individual's logical thinking the growth of the formal logic exists within an immanent dialectic of the form of the enquiry, or is it a matter of seeing the relationship in a different way?

In the following discussion of humanistic psychology I will focus specifically upon the way 'I' is included in explanations of human action.

Carl Rogers(1972) says that one of the most impressive things that he has learnt from working with individuals in psycho-therapy, and with groups run on the basis of therapeutic relationships, is that every individual hungers for relationships in which he can be himself. Rogers says that when such an experience occurs, as it does with some frequency in therapy, but also in other life situations, it partakes of the characteristics which Martin Buber has so well described as the 'I-You' relationship. As Buber (1947) points out this relationship has no concern with time, with practicalities, with differences of status or role, not even a concern with consequences. It is simply the deep mutual experience of speaking truly to one another as persons. This experience is not one which can be maintained but Rogers says that unless it occurs from time to time the individual is cheated of his full potential development. It is, says Rogers, one of the experiences which makes a man truly human.

In his 'Humanistic Conception of Man', Rogers(1972) holds the view that the direction of a scientist's work and research, the theories and ideas that he develops are all very definitely related to his view of man. He believes that the behavioural sciences would make great advances if, as individuals we were more willing to make explicit our assumptions, our hypotheses, regarding those characteristics of man which we deem to be primary. Rogers then lists the following principles which he says constitute his own conception of Man. The point I want to make concerns the description which Rogers offers for the 'I-You- relationship and the form in which he lists his principles for constituting his conception of Man.

MAN: -

- 1) Is a species.
- 2) Exhibits an actualising tendency.
- 3) Is wiser than his intellect.
- 4) Has the potentiality for awareness.
- 5) Has the capacity for relationship.
- 6) Has the capacity for sound choice.
- 7) Lives subjectively.
- 8) The more fully functioning the more trustworthy.

The tendency to draw up linguistic lists against which explanations can be criticised is not peculiar to Rogers (Bruner 1966,1975). I will be suggesting that this method is too limited to produce a humanistic psychology of the individual. In Part Two I will be outlining a way of overcoming the limitation by producing what Seve (1978) called for but failed to produce himself. That is a science of the individual which is grounded in the division of

labour.

I can identify with Roger's list in an idealist way. That is I can detach myself from my practice and think in idealist terms. For example, in terms of man's capacity for relationship, I can identify with what Rogers is saying about Buber's notion of the 'I-You' relationship. This kind of identification takes me forward in terms of a humanisation of psychology in the sense that it is a psychology which can include experiences such as the 'I-You' relationship. Where I think that it is limited is in its characterisation of this relationship, (in 'every individual hungers for relationships in which he can be himself'), within the terms of the abstract generality, 'Man has the capacity for relationship'.

I am concerned with my own educational development. In describing this development I will not abstract in an idealist way, the principles which structure my concept of Man. What I will be attempting to show is what it means to struggle to be a humanist who holds the 'I-You' relationship at the centre of his capacity for relationship. I will be directing your attention to my educational practice in which I am attempting to reveal what it means to produce a humanistic psychology in the political and economic realities of the division of labour.

In the following discussion of the Sociology of Education I shall adopt the approach I used in the discussion of the philosophy and the psychology of education. I am making no claim to an exhaustive treatment of the assumptions in the different schools of thought which constitute the Sociology of Education.

C) THE SOCIOLOGY OF EDUCATION

My approach to the discussion is to take the work of exemplars of a particular school of thought and to clarify the nature of the problems which have arisen when the assumptions are encountered in a dialectical form of educational enquiry. I will be considering the work of Musgrave, Bernstein, Schutz and Young.

Musgrave(1972) describes the essential features of his Sociology in terms of the working of a motor car engine. He says that just as we look at the engine and say what each part does so we may examine the educational system as a whole or one part of it, for example, one individual school, and decide what functions it is performing. Furthermore, he says, in the same way that machines do not always run smoothly so it may be that social institutions do not fulfil their functions in an efficient manner.

Musgrave explains the content of the social system both as a system, of functionally interrelated variables, and as a process in a state of dynamic equilibrium which responds to any disturbance by opposing the factors which produced the disturbance. This statement corresponds to a principle of dynamic equilibrium known as Le Chatelier's Principle. In Musgrave's view the education system is seen in terms of its functioning relative to a similar subsystem such as the family and the economy. In this view of sociology, teachers function in support of a central value system and in response to it.

This view of sociology is certainly helpful in organising our understanding of the various functions of different institutions and how they are organised. For example, when I needed financial assistance, in organising a local curriculum development project, it was helpful to understand the relationship between the Schools Council and the Local Education Authorities. It was also useful to understand the functions of the various committees and the procedures to adopt to obtain the funds.

Where I think that the view is too limited is in the nature of the explanation it gives for an individual's social(educational)practice. In treating the nature of social explanations in the same form as explanations for motor car engines, or a process of chemical equilibrium, individuals are treated as dependent or independent variables in a set of determinate relations. I reject this view on the grounds that an explanation for this individual's social practice requires some form of freedom to be ascribed to the practice. By all means postulate that

the individual is the result of multiple determinations, one of which is the way he chooses to use his own freedom to choose and act in a particular set of circumstances. What I do find unacceptable, in the light of my own analysis of my educational development, is that I can be satisfactorily explained in the same terms as a mechanical system. My own analysis for my educational development will include aesthetic, ethical and scientific components. The analysis, grounded in 'I' as a living contradiction, cannot, for reasons to be given, be embodied in the same kind of explanation as that for a motor car engine.

Bernstein (1971) acknowledges that he uses Durkheim's (1933) 'Division of Labour in Society', as a point of departure for his own theories. A cornerstone of Bernstein's theory is the form of his analysis in which he attempts to produce a dynamic relationship between what he calls, 'situated activities of negotiated meanings' and the 'structural relationships' which the former presuppose. The analysis developed by Bernstein is based upon the concepts of classification, frame and code. He says that classification tells us something about the relationship between the categories which set the context of the school and that framing tells us something fundamental about the content in the process of its transmission.

Bernstein introduces the concept 'code' as a basic message structure of the school. He says that the acquirer tacitly infers the 'codes' which are given by the principle of the relationship between classification and frame. He states that an educational code is determined by the values of classification and framing, that it is a regulative principle, tacitly acquired, which integrates relevant meanings, the form of their realisation and their working contexts.

The formulation of the concept 'situated activities of negotiated meanings' is, I contend, an idealist concept in the sense that it is a purely abstract generality. It is, I suggest, too limited to be allowed to be a basic concept in explanations of an individual's social practice (educational development). The materialist concept 'I' does not appear in Bernstein's presentation of his analysis of educational transmission.

Rosen (1972) has criticised Bernstein's method of theory construction on the grounds that it fails to develop a sensitive awareness of the lives of the individuals which the explanation was produced to explain. Rosen asserts that to acquire this awareness we would need the active informed help of the very people whose language is being studied, and, says Rosen, this presupposes a very different approach to research altogether.

I would agree with Rosen's criticism in the following way. Durkheim(1933) says that to ask what the function of the division of labour is, is to seek for the need which it supplies,

" What is important for our purposes in describing and explaining the division of labour is not to enquire whether there has been a prior presentiment of social change nor even if it has been sensibly felt afterwards. "

In Part Two I will present an analysis for my own social practice which shows that there is a prior presentiment of the social change (in my intention to change a social formation in a particular way), and also, for the purposes of self-evaluation, that the change has been sensibly felt afterwards. I believe that the analysis of my own form of life in my social practice exposes the limitations of a theory of educational transmission which takes the concept of 'situated activities of negotiated meanings' (rather than the existential meanings which the individuals give to their own social practice within the division of labour), as its central concept for use in explanations for social forms of life.

I would say that my analysis of my educational development shows the struggle of an individual who is taking part in the restructuring of society. Instead of looking for the structural principles, which are presupposed in the concept 'situated activities of negotiated meanings', I suggest that we should be looking for the ways in which individuals are producing the social formation in a self-conscious and publicly criticisable form. I would say that Bernstein's logic and basic concepts miss the essential nature of an individual's dialectical enquiry which helps to produce a social formation in which his educational values can be fully realised.

The phenomenological contribution to the sociology of education has been largely built upon the work of Alfred Schutz (1967) in 'The Phenomenology of the Social World'. Whilst there are variations in the phenomenological approaches they have in common a view of the social world which is constituted in the activities of human beings. In this perspective human beings are seen as intentional beings who intersubjectively confer meaning and thereby constitute sustain and reconstitute the social world.

The method of gaining insights into the construction of the social world is through the phenomenological reduction. This reduction involves the abandonment of prejudgments, a suspension of belief in what appears to be given and a return to the phenomena themselves. It is a decision not to suppress but to place in suspense, or out of action, all the spontaneous affirmations by which we live, not to deny them

but rather to understand them and to make them explicit.

In the phenomenological perspective teaching can be seen as an activity whose form is negotiated and produced in interactions between teachers and pupils. Teaching is not seen as the consequences of how a teacher responds to a predetermined and static notion of teacher role and pupil role, as laid down by the needs of society. It is rather seen as the product of particular definitions and interpretations which teachers and pupils bring to the interactions. These definitions and understandings are to a large extent culturally defined. The perspective is clear that teaching is influenced but not determined by the cultural understandings which teachers and pupils, in their interactions, legitimate or attempt to transcend.

My own attempt to understand my social practice has involved the phenomenological reduction. I made the starting point for my interpretation of my educational development, my experience of the phenomena of education. I have also used the concept of adequacy, derived from the work of Schutz, in the way described below. The two issues which exposed for me the limitations of the phenomenological approach related to my power to change existing social formations and my claim to know my form of educational development as a scientific form of life.

I used the phenomenological reduction in attempting to understand the way I attempted to improve my practice within a secondary school classroom. This helped me to develop the illusion that I had the power to create the social world by choosing to confer particular meanings. I see that this distorted the way in which this creative process may be accomplished. As Whitty(1974) has pointed out it did give the illusion that the possibilities for the transcendence of existing definitions through action are more easily attainable than is actually the case.

The second critical comment I would make is that Schutz holds the view that even when social science is dealing with the action of a single individual, it must do so in terms of types. He says that all scientific knowledge of the social world is indirect . It is knowledge of the world of contemporaries and the world of predecessors, never the world of immediate social reality. He states that the social sciences can understand man in his everyday life, not as a living individual with a unique consciousness, but only as a personal ideal type without duration and spontaneity.

I would say that the phenomenological reduction was useful in revealing the dialectical nature of my social practice, and, through the concept of adequacy, offered me a

way of subjecting my explanations for the lives of other individuals to public criticism. The concept of adequacy states that each concept in the model of action must be constructed so that an act actually performed in the world in the way indicated by the construct would be understandable for the actor himself and for his fellow men in terms of common-sense schemes of interpretation.

I found the approach limited in that it created the illusion that actual social practices could be explained in a way which did not account for the political constraints to practical redefinitions. It was also limited in its view that social science could not understand man in his everyday life as a living individual person with a unique consciousness.

Michael Young (1972) in, 'Knowledge and Control', and in his later writings, has attempted to synthesise the strengths of phenomenologies insistence upon the importance of intentionality, with Marxism's insistence upon the primacy of the ensemble of social relations as constitutive of the forms of life of classes and individuals. Before raising a number of problems with the epistemology of Michael Young I will discuss a number of assumptions in the work of Marxist writers who have considered the problems of educational change.

Marxist Sociologists have in common a view of the State which is in the control of particular interest groups. These groups have access to power through their control of Capital. There are disagreements between sociologists about the nature of the relationships between the political, economic and ideological practices of these interest groups. They present their arguments in the research journals in the traditional form of the academic community in this country. The form of presentation conforms to the laws of propositional logic.

Marxist Sociologists argue about the nature of the structural relationships between the political and economic structures and the forms of life in educational contexts. Althusserian Marxists locate their explanations for educational change within a contradiction between the functions of education in a capitalist economy and the relations of production. In Althusser's (1971) view the majority of teachers do not suspect that their own attempts to improve education contribute to the maintenance of the system they are trying to transform.

Bowles and Gintis(1976) say that the economy produces people in a way which is dominated by the imperatives of profit and domination rather than by human need. They explain the present state of the educational system in

terms of a structural correspondence between the social relations of education and those of production. In terms of change in Higher Education they acknowledge that some analysts have located the roots of crisis in Higher Education itself. They assert, however, that the origins of crisis can be traced not so much to Higher Education as to the fundamental contradictions in the political and economic relations in the wider society.

Other Marxists would criticise the above models of education and economy relations as over mechanistic and simplistic on the grounds that they do not directly confront the liberal ideology which supports the idea of meritocratic inequality. Bates(1980) commends the work of Bourdieu for allowing a more indirect association between the political and economic changes and the ideological changes which are represented in the education system. Erben and Gleeson (1977) point out that Althusser, although describing education as reproduction, does not explain this phenomenon as transcendable. They say that this problem is neglected in Althusser's thesis.

A number of Marxists have contributed to the New Sociology of Education. Whitty(1976) exemplifies the approach of a critical theorist. He analyses the work of other theorists and attempts to unmask the social relations which are unexplicated in their work. For example he criticises the work of Esland on the grounds that his use of the term paradigm, to characterise supposed changes in teachers' pedagogical and subject perspectives, in effect, blinds us to essential continuities in these perspectives and thus enables us to present minor modifications in the school curriculum as evidence of the 'open human possibilities of change'. Whitty also says that Esland's stress upon the day to day activities of epistemic communities, in developing and sustaining particular conceptions of knowledge, may obscure the significance of the parameters, whether logical, material, or social, within which adjustments to subject knowledge or teacher perspective may conceivably take place.

I find the presentations of Marxist Sociologists in general, too limited because they present their results in a way which accepts the dominant values of the very class which they, as Marxists should be committed to overthrowing. They do not even point out the difficulties, as Althusser did, of communicating the nature of their findings in a dialectical materialist's form. What I mean is that a Marxist in Education must surely risk his or her own concrete singularity in revealing what it means to be a Marxist in Education.

My central criticism of Marxist Sociologists of Education is that they do not appear to have a Marxist

Psychology of Personality on which to base the presentation of their Sociology of Education. By presenting their analyses within the logic of propositions they are sustaining the very ideological structures which, as I have said, their Marxism should make them committed to overthrowing. I am saying that the limitations of the Marxist Sociologists are exposed in their language. They do not use a materialist form of presentation. They do not use a materialist view of concepts nor do they demonstrate a commitment to showing that the coincidence of the change of circumstances and self-change can only be comprehended in revolutionary practice.

The gap between Theory and Practice can be seen between Michael Young's form of life and his writings in the Sociology of Education. If Young had bridged the gap then there would be no logical gap between his sociological practices and his sociological theorising. At the moment there is no way of relating Young's sociological practices to the language and logic of his theorising. As Freeman(1980) points out the writings of Young lead to a relativism which does not exist in his practice. I suggest that Young has consistently done what Marcuse says happened when he thought about individuals in a social context. Marcuse(1964) says that he began to think in terms of general concepts .

My point is that if the individual is asking questions about his own form of life and about problems of human betterment, in a particular social context, the 'I' appears in the discourse in the form of a living contradiction. I will be suggesting in Part Two that the logic which can be used in an explanation for the real life of such an individual holds formal logic within the dialectical logic of the enquiry. I am saying that Young's epistemology is stuck in the logic and language of the dominant forms of thinking which he is trying to overthrow. I am saying that these forms are overthrown in practice by challenging the very linguistic and logical forms, which structure claims to knowledge, as well as the political and economic forms in which they are embedded.

The above reservations about the disciplines approach to educational theory can be applied to different forms of educational research methodologies. In the discussion which follows the reservations are not focussed upon the appropriateness of the methodologies in relation to the problems described in the literature. My reservations are concerned with the use of the methodological approaches in the investigation, ' How do I improve this process of education here? '.

CHAPTER THREE

EDUCATIONAL RESEARCH METHODOLOGIES

I am conscious that the way I enter the discussion of the problems of educational research methodologies carries with it a number of assumptions. Assumptions, for example, such as those of Englehart(1971) when he says, in his analysis of methods of inquiry in educational research;

" Both facts and generalizations are necessary to decision making in the practice of education. But, in addition, the making of decisions involves the making of value-judgements. Our discussion of methods of inquiry will conclude with a look at this aspect of educational research.

Scientific educational research deals with educational problems concerning 'what is' and 'what will be'. In contrast philosophical educational research concerns itself, for the most part with problems of the goals or objectives of education; in other words with problems of 'what should be'. "

The assumptions which underlie this analysis of methods of inquiry is that there is a sharp division between scientific research which deals with matters of fact and philosophical research which deals with matters of value. If I entered my discussion of research methodologies assuming this division then I would find that it had implications for the way I investigated educational problems. It leads, for example, to Peters' position that logically speaking the first step in solving a practical educational problem is to break it down into its logically distinct components. In Peters' case the logical distinctions are between the statements containing value-judgements and the statements with empirical content.

The firmness with which this distinction is upheld in current publications in educational research can be seen in Dyer's (1979) work on 'Understanding and Evaluating Educational Research'. Dyer says that he has two goals. The first is to help his readers to understand and comprehend the nature of the research process, especially as it is conducted within the field of education and described in research reports. Only after this first goal of understanding has been achieved, says Dyer, can we attain the second goal of evaluation. Not all studies are of equal merit and studies may be excellent for different reasons. It is important he says, in defining his second goal, that we can recognise such distinctions and thereby be able to evaluate the quality of research studies.

Dyer points out that one method of acquiring knowledge is through scientific investigation. He says that the primary advantage of this method is that it is self-correcting. 'Scientists do not blindly accept a statement as true'. They check its accuracy, he says, with methods that can be examined, critiqued and repeated by others. Dyer goes on to ask the question. Can moral or ethical questions also be scientific questions?

" Can science answer such problems as :- Should the school system adopt textbook A, Should more elementary teachers be men? and should physical punishment be prohibited in the schools? The prevailing point of view is that such problems are beyond the scope of direct scientific inquiry because 'an empirical science cannot tell anyone what he should do- but rather what he can do'. Any recommendations made by educational researchers are based not only on research findings but also on their philosophy of education and their personal values. "

As a scientist investigating an educational problem, 'How do I improve this process of education here?' , I am faced with an immediate conflict. As far as I understand the nature of education it is a value-laden practical activity. I am told by Dyer that scientific problems are value-free. How can I therefore investigate my educational problem in a scientific way whilst still retaining the essential characteristics of the problem as an educational problem?

My point of entry, for the discussion of educational research methodologies, is to take a classification of methodological approaches to educational research(as a social science) and to examine the assumptions of each approach from the perspective of the dialectical enquiry, 'How do I improve this process of education here?'

Mitroff and Kilman (1978) distinguish four methodological approaches to social science in terms of criteria which include the modes of enquiry and preferred logics of four groups of researchers; the Analytic Scientists, the Conceptual Theorists, the Conceptual Humanists and the Particular Humanists. I will take an example of research from each group and discuss its relationship to my own enquiry. My purpose is to examine the example in order to reveal some of my anxieties about the appropriateness of the approach for the investigation of the problem, 'How do I improve this process of education here?'

The first group of researchers, the Analytic Scientists, use the methodology of the controlled experimental design. My own introduction to this approach was through Lewis' (1968) 'Experimental Design in Education'. The assumptions in the book are contained on the book cover;

" As its title suggests, this book provides an account of the principles that underlie the design of experiments in education. Its purpose is to enable those undertaking original investigations to devise a suitable design and properly to analyse and interpret their results.

The reader is introduced to the basic concepts of statistical error, randomization and hypothesis-testing, and the t and F ratios are described. The designs that follow are those which are most frequently used in educational research. They include those of randomized blocks and the nesting, factorial and covariance designs. In each case the purpose of the design is first explained, then the method of computation, and finally the theoretical model upon which it is based. All the illustrations are taken from the field of education. "

My anxiety about this approach lies in the idea that the principles that underlie the design of experiments in education can enable those undertaking original investigations to devise a suitable design and properly to analyse and interpret their results. I think that this approach suffers from the same defect which Medawar(1969) pointed out as a defect of the hypothetico-deductive system as a formulary of scientific behaviour. This defect was its disavowal of any competence to speak about the generative or original episodes of thinking in a scientific enquiry. Medawar points out (arguing in a way that conforms to propositional logic) that these episodes are outside logic. Lewis compounds the creative and critical episodes in a scientific enquiry .

Lewis is saying that original investigations require the principles of experimental design, 'properly to analyse and interpret their results'. Now I accept that in the critical phase of an enquiry it is useful to have a clearly defined methodological approach. As Ryle points out efficient practice precedes the theory of it; methodologies pre-suppose the application of the critical investigation of which they are the products.

My anxiety is centred on a point discussed by Popper(1972) in his work on 'Normal Science and its Dangers'. In an earlier work, 'Logic of Scientific Discovery', Popper(1959) points out that a scientist engaged in a piece of research, say in physics, can attack his problem straight away. He can go at once to the heart of the matter; that is, to the heart of an organized structure. For a structure of scientific doctrines is already in existence; and with it a generally accepted problem-situation. This, says Popper, is why he may leave it to others to fit his contribution into the framework of Scientific Knowledge. Popper accepts that 'Normal Science' in Kuhn's sense exists. It is the activity of the non-revolutionary, or more precisely, the not-too-critical professional; of the science

student who accepts the ruling dogma of the day; who does not wish to challenge it; and who accepts a new revolutionary theory only if almost everybody else is ready to accept it- if it becomes fashionable by a kind of bandwagon effect. To resist a new fashion needs perhaps as much courage as was needed to bring it about.

" The 'normal' scientists as described by Kuhn, has been badly taught. He has been taught in a dogmatic spirit: he is a victim of indoctrination. He has learned a technique which can be applied without asking for a reason why. As a consequence, he has become what may be called an applied scientist. He is, as Kuhn puts it, content to solve 'puzzles'. The choice of this term seems to indicate that Kuhn wishes to stress that it is not a really fundamental problem which the 'normal' scientist is prepared to tackle; it is, rather a routine problem, a problem of applying what one has learned: Kuhn describes it as a problem in which a dominant theory is applied. The success of the 'normal' scientist consists, entirely, in showing that the ruling theory can be properly and satisfactorily applied in order to reach a solution of the puzzle in question. "

The danger, as I see it, in the approach advocated by Lewis is that it could lead to a group of educational researchers who were content to solve puzzles. By compounding the idea of applying principles with the idea of original investigations there is the danger that 'normal' educational researchers will be produced who are not prepared to tackle really fundamental problems. I have discussed the point earlier in Chapter One.

The second group of researchers are described by Mitroff and Kilman(1978) as Conceptual Theorists. The work of Piaget would fall into this group. A characteristic of Conceptual Theorists is that their theoretical systems conform to the logic of Piaget's Stage of Formal Operations. They relate linguistic propositions(within structures) that conform to the Law of Contradictions. My problem with the methodology used by the Conceptual Theorists is related to the existential status of the structures within their conceptual forms of understanding. By existential status I am meaning the relationship between the structures of their conceptual frameworks and the conscious practices of individuals in education. Piaget(1972) accepts that his cognitive structures are not grounded in consciousness. He says that he would reject any attempt to explain the cognitive structure of human action from the base of the 'lived experience' of the human subject. Perhaps the most striking illustration of the nature of my concern is in the conclusion of Smedslund's paper(1978) on 'Piaget's Psychology in Practice '.

" I probably owe more to Piaget than to any other single psychologist, yet I have become increasingly critical of his theoretical system. Working with children during my

Piagetian period I felt constrained to be detached, one-sidedly cognitive and entirely focused upon certain abstract aspects of performance. What mattered to me then were the formal logical structures rather than the concrete living children in their total life situations. I tended to ignore the artificiality of the tasks and I was oblivious of the political implications of my work as supporting a one-sidedly intellectualistic and school-centred ideology. I doubt that a practitioner can be a useful psychologist if he remains wholly within that tradition. Piaget has contributed a wealth of brilliant and penetrating insights, but they must be incorporated into a view of psychology which can be lived and practised rather than merely written and talked about in academic settings. "

My own anxiety about the methodology of the Conceptual Theorists is that they do not show how to relate their conceptual structures directly to the 'lived and practised' forms of life of individuals within education. Like Smedslund I doubt that a practitioner can be a useful educational researcher if he remains wholly within the tradition of conceptual theory.

The third group of researchers are referred to as Conceptual Humanists. The work of Argyris and Schon (1974) is placed by Mitroff and Kilman in this category. Argyris and Schon argue that the design of professional education should not be based on such factors as, 'the demands of society, the cost of education and the students' changing demands'. They suggest that we explain or predict a person's behaviour by attributing to him, 'theories of action' which determine practice. They define a 'theory of action' as;

" .. a theory of deliberate human behaviour which is for the agent a theory of control, but which, when attributed to the agent, also serves to explain or predict his behaviour. "

Within each person's theory of action two components may be distinguished; 'espoused theories', and 'theories in use'. The former are those which justify or describe behaviour, the latter are what a person does, or how he operationalises his espoused theories. Professional practice is made up of a number of inter-related theories of action that specify, for the situations of the practice, the actions that would, under the relevant assumptions, yield intended consequences. In his research with teachers, Day (1980) claims to have provided empirical evidence in support of the views of Argyris and Schon on contradiction between espoused theories and theories in use:-

" My own work provides empirical evidence in support of this, and initially sought to make these discrepancies between espoused theories and theories in use explicit. Having done this, it was possible for the teachers to devise and operationalise new theories of action in which their theories-in-use were compatible with their espoused

theories. For example, one teacher's view of himself as a teacher who encouraged independent enquiry was disconfirmed by both the nature of his task and the prescribed category system of analysing magazines which he had given to his pupils. As a result of seeing the contradictions the teacher modified his espoused theory and his theory in use. "

Day goes on to state;

" It follows that to learn about our own theory of action or that of others we must investigate and make explicit our espoused theories(what we say about teaching) and our theories-in -use(the behavioural world of the classroom). Only by evaluating the compatibilities or incompatibilities which exist between these two elements of our theory of action may we be enabled to increase our professional effectiveness. It is not enough to talk about teaching, we must also observe ourselves in the act of teaching. "

My own concern about this approach is that there is a contradiction in Day's assertion that "it is not enough to talk about teaching, we must also observe ourselves in the act of teaching". Day is actually talking about the work of other teachers. He does not offer his own observations on his own teaching. Whilst offering crucial insights into the importance of contradictions in the movement of professional practice I think that the site of contradiction is misplaced. The contradictions are held up as if they exist between theories. I will be presenting evidence in Part Two which claims that contradictions exist within the individual's form of practical life in education.

The fourth group of researchers are referred to as Particular Humanists. Mitroff and Kilman quote Torbert's account of a 'Community of Inquiry'(1976) as an example of this style.

Torbert has proposed four axioms for the personal practice of an action oriented science. He is not using the notion of axiom as the impersonal theoretical formal statement of an Analytic Scientist. An axiom is rather a representation of the complete personalization of every aspect of science. Torbert holds the view that a person must undergo an unimaginable amount of self-development before becoming capable of valid actions. This is his first axiom. The second holds that such higher-thought-feeling patterns cannot be accomplished without other people.

The third axiom holds that even the first steps on the path toward action science have unavoidable, immediate, and strong social consequences, even if the researcher is not ready to take social action and does not intend to change others. The fourth axiom of social science holds that 'objective timing is of the essence for rationally valid action'. This axiom directly contradicts the efforts of reflective academic science to develop a theory which is

generalizable to all times and places. It also contradicts most persons' tendencies to settle into, or try to justify, one particular style of social behaviour as more effective than others.

My concern with Torbert's account of the Particular Humanist's methodological approach is with the question, 'Can the Particular Humanist's style of reasoning be captured by formal methods, that is, represented within some abstract formal system?' (Mitroff and Kilman(1978)).

" The first difficulty in constructing such a formal logic has to do with the relationship of the parts, of the Particular Humanist's world, to the whole. Another difficulty arises in making sense of the logical operators between parts and wholes, which the Particular Humanist sees as identical -leads us to the second difficulty- how to operate or work on the elements of this logic. Actually since the elements(parts) can at least be distinguished by referring them back to their whole, the first difficulty is not insurmountable. The second however, has no current or foreseeable solution. Even worse, the authors know of no logicians who are currently working on the problem, let alone sensitive to it. If the very heart of a PH methodology is a rendering of unique particulars in extreme detail, how can one combine the unique particulars of for example, a single researcher into a generalizable whole(not to mention the particulars of diverse researchers)? In short, if at the core of science is the concept of generalization, is a science(or logic) of the unique possible ? "

I will now re-present my claim to know my own educational development in a way that I hope moves us towards some tentative solutions to the problems posed in Part One.

PART TWO

MY OWN IN-SERVICE EDUCATIONAL DEVELOPMENT
AN EDUCATIONAL ENQUIRY.

INTRODUCTION

The previous discussion has focussed upon a number of problems concerned with the generation of educational theory, the disciplines approach to educational theory and the difficulties of finding an appropriate methodological approach for investigating a question of the form, 'How do I improve this process of education here?'. My aim in Part Two is to communicate the meaning of my claim to know my own in-service educational development. I also want to show how such a claim can offer some possible solutions to the problems posed in Part One.

Given that my thesis has some original pretensions it may be wise to begin with some familiar ideas rather than risk the possibility of alienating the reader by sharing some of my more intractable problems at the start of Part Two.

The first step in my communication is to break my claim to know my own educational development into four components. I will discuss these components in terms of a claim to know my educational development;

- 1) as a scientific form of life.
- 2) as a methodological form of life.
- 3) as an ethical form of life.
- 4) as an aesthetic form of life.

I will be characterising these components in terms of criteria used by acknowledged authorities. For example, in characterising the scientific form of life I will use Popper's Schema for the description for the growth of scientific knowledge and Medawar's classification of the creative and critical phases of a scientific enquiry. To characterise the methodological form of life I will use Mitroff and Kilman's(1978) classification of methodological approaches to the social sciences. To characterise the ethical form of life I will use the ideas of R.S.Peters (1966) in his 'Ethics and Education' in his discussion of freedom, justice, consideration of interests, worth-while activities, respect for persons and democratic forms of social organisation. To characterise the aesthetic form of

life I will use Martin Buber's characterisation of the 'I-You' relationship and his use of the word 'trust' in his description of the educative relationship.

My second step is to examine my educational development in terms of an 'immanent dialectic'. Because this form of examination may be unfamiliar I will explain how I intend to proceed.

In the course of my educational enquiry I have studied educational theory, planned, implemented and evaluated a number of educational changes in schools, and passed a number of examinations which were designed to test my understanding of the philosophy, psychology and sociology of education.

For the past fourteen years I have worked in education in the sense that I was employed as a teacher for six years in London Comprehensive Schools and as a Lecturer in Education for the past eight years. I am claiming to know my own in-service educational development as this development occurred in the course of my enquiry, 'How do I improve this process of education here?'. When I use the words 'in-service' I am simply pointing out that I am in work and that I am making a claim to know my educational development in my work in education.

Let me say how I see the relationship between my educational development and my knowledge - producing activities in my research. I certainly see that they are closely related. Yet I do not want to give the impression that I identify education solely with the transmission or the generation of knowledge. For me education is also concerned with the integration and application in life of the knowledge which helps to improve the world.

I also think that education can be seen as a life-long activity in which we are learning as long as we live. I draw back from a total identification between education and knowledge because of the way history shows that knowledge has been used. I shall never forget seeing a copy of the order form which used the knowledge in 1939 to design a better lift to take the bodies of the victims of the Nazi concentration camps from the gas chambers. I still cannot bring myself to acknowledge that actions such as these even though the perpetrators included some of the most knowledgeable minds in the world could be acknowledged as the actions of educated human beings. There is something so horrific in the extermination of human life that I insist upon education being concerned with the integration and application, in life, of knowledge which helps to improve the world.

Let me also say that I recognise the difficulty of communicating profoundly held beliefs in a way that does not sound pretentious. I want to give an account of what I see moves me in my educational development in a way that can be held up for your critical scrutiny. I do not think that words alone can communicate the nature of my meanings. I think that you will find it necessary to study the work itself in the context where the meanings emerged.

I also suffer from the disadvantage that my own educational development has not exercised my literary capacities to any great extent. You will recall that the formalised part of my educational development included a degree in the physical sciences, an academic diploma in the philosophy and psychology of education, and a Masters Degree in the psychology of education. The content of these courses did not emphasise the development of any literary capacity in the descriptions and explanations of what it means to be human.

The problem I face is how to communicate the nature of my claim to know. My claim to know is directed at the ten research reports (Appendix One) which do not represent my educational development they 'embody' that development. The distinction between 're-presenting' and 'embodying' is important. The nine research reports embody my knowledge producing activities. In these reports I am struggling to produce knowledge of my investigation, 'How do I improve this process of education here?'

What I am attempting to do below is to communicate the nature of my claim to know. I will ask you to follow my educational development in terms of an 'immanent dialectic'. What I mean by this is that the form of my educational development is emerging from my struggle to overcome the experience of the negation of some of my educational values. This point is of fundamental importance to the expression of my meaning. If I expressed my meaning in a purely propositional form which denied that two mutually exclusive statements could both be true simultaneously I would be in danger of masking the contradictory nature of my educational development.

I will begin on a dialectical basis of negation and attempt to communicate the nature of my claim to know my own in-service educational development by trying to communicate the nature of the immanent dialectic which characterises both my educational development and my claim to know this development.

How do I share with you a claim to know which has emerged out of a process of immanent dialectic? I do not wish to give the impression that I knew where I was going

before I arrived. I do not 'know' in that sense. I think that an understanding of a process of 'becoming' more closely corresponds to my claim to know my educational development. I do not want to convey the impression that there are ideal forms which I struggle to realise in my practice. I do however value freedom, justice, consideration of interests, worth-while activities, respect for persons and democratic forms of control. My problem is how do I communicate the meaning of educational values such as freedom in my educational development.

There is a way of thinking about these value-words which treats them as abstract, linguistic concepts whose meaning can be clarified through a linguistic form of conceptual analysis. The meaning of freedom for example can be discussed in terms of a person being able to do what he wants to do without restraint. When I use the term freedom to refer to my educational development I am not conveying the meaning of my practice simply by applying a linguistic concept to this practice.

I am using the value-word freedom to direct your attention to my experience of the negation of freedom. The meaning I give to the negation of freedom is part of my struggle to overcome its negation. I cannot dissociate the meaning of freedom from the struggle to attain freedom. I will discuss this point further, in relation to Feyerabend's, 'anarchist epistemology' (when I consider the unit of appraisal and the standards of judgement which may be used to criticise my claim to 'know'), later in Part Two.

The meaning of freedom is embodied in my struggle to overcome its negation. I can point to the texts where I am struggling to overcome the negation of freedom. In a similar way I can point to my struggle to overcome the negation of democratic forms of organisation. We can look for the meaning in the language used, to clarify the concept of freedom or democracy, and/or we can look for the meaning in the practice of freedom and its negation. I do not believe that these are mutually exclusive. I use the linguistic concepts to assist in the communication of my meaning of the practice of freedom. If you look for the meaning solely in the words I use rather than seeing that the words are used in the struggle to overcome the negation of freedom then I am afraid that you will misunderstand me.

The problems of communicating the meaning of my claim to know the 'one form of life' have proved intractable to propositional forms of discourse. How do I communicate the aesthetic nature of my struggle to give form to my life in a way that is both amenable to public criticism and accurately portrays the nature of the emergent form? I know that the meaning I give to the term, 'Unity of Humanity', is related to the feeling of mutuality I experienced in reading

Martin Buber's 'I and Thou'. The poetic quality of the contents of this work so moved me that I could feel a profound communion with the inspiration which moved Buber in writing this work.

I feel at a loss when I consider how to communicate the meaning of my claim to know my educational development as a struggle to give form to my existence in a way that does not violate the unity of humanity. David Holbrook, (1980) in his unpublished work, 'What it means to be Human', has provided me with a way forward. In his work on, 'Creative Reflection; the self and the world', he quotes from Buber's (1923) 'I and Thou',

" The inborn Thou is realised in the lived relations with that which meets it.

Through the Thou a man becomes an I . "

and in a note on philosophical anthropology draws on the work of Polanyi (The Tacit Dimension 1967) . The concept of INDWELLING in the sense of 'an entering into a work of art and thus dwelling in the hand of its creator' is of fundamental importance to my communication;

" At the turn of the century ,German thinkers postulated that indwelling, or empathy, is the proper means of knowing man and the Humanities. I am referring particularly to Dilthey and Lipps. "

Holbrook points out that Dilthey thought that the mind of a person could be 'understood only by reliving its workings' while Lipps represented aesthetic appreciation as 'an entering into a work of art and thus dwelling in the hand of its creator'.

" I think that Dilthey and Lipps described here a striking form of tacit knowing as applied to the understanding of man and of works of art, and that they were right in saying that this could be achieved only by INDWELLING. "

In the development of his 'Humanistic Conception of Man' Carl Roger's acknowledges his debt to the work of Buber. Rogers talks of what it means to be truly human. He talks of truly speaking to one another as human beings . He affirms that individuals struggle to be in relationships in which they can be themselves. Other writers, e.g. Rogers, who have been profoundly moved by Buber's 'I and Thou', acknowledge that the 'I - Thou' relationship cannot be sustained but that unless it is experienced from time to time then individuals miss out on what it is to be fully human.

I will try to communicate what I am meaning through the word 'trust'. Buber holds that trust is the most inward achievement of the relationship in education. He says, "Trust, Trust in the world because this human being exists this is the most inward achievement of the relationship in education". I will ask you to look for the negation of trust in my work and its gradual emergence in the immanent dialectic which moves me in my relationships with the researched. In this attempt to communicate my meaning to you I ask you, in the words of Bertrand Russell, to use your delicate intuitions, imagination and respect.

I think that these qualities are of paramount importance in judging my claim to know my struggle to give form to my life in education in a way that does not violate the integrity of humanity as a whole.

In order to see what I am claiming to know I wonder if the reader has to move through the conception of knowledge held by Polanyi(1958) in 'Personal Knowledge'. For me, the crucial section in 'Personal Knowledge' is where Polanyi says that his purpose was not to construct a theory of science. He says that his purpose was rather to strip away the crippling mutilations which centuries of objectivist thought had imposed upon the minds of men. Polanyi wanted to enable individual researchers to trust their own creative and critical powers in coming to understand the world. In my own experience I can testify to the power of the illumination which I derived from attempting to understand Polanyi's thought.

In retrospect however I am aware that the holistic vision, which it is possible to create on the base of 'Personal Knowledge', must be treated with caution. Kierkegaard warns us of creating a unity in the imagination which loses contact with the practical world. Kierkegaard (1941) ultimately bears witness to the idea that the crucial test of his thinking is that his ideas are lived in a 'practical Christian life'. In my own case I remain deeply indebted to the work of Polanyi for helping to strip away the 'crippling mutilations' of objectivist thought. In the course of testing my ideas in practice I have had to acknowledge that the holistic vision I produced on the basis of Personal Knowledge(Reports 6&7) has had to give way to a dialectical base in which 'I' exist as a living contradiction. I am faced with the difficulty of communicating the nature of what I think it means to be human in a way which both bears witness to the holistic vision which exists in my imagination and also to the negation of this vision in my practice.

The point of entry for my discussion is important. Because my work does have some claim to originality I am conscious that the assumptions on which my presentation is based are fundamentally important. I do not want to begin my presentation on a basis which will deny my conclusions.

As I have said above I will start with the familiar approach of breaking down the problem, of communicating the meaning of my claim to know my own in-service educational development, into its separate components. These separate components will be discussed in terms of a scientific, methodological, ethical and aesthetic form of life. When I discuss the ethical and aesthetic forms of life I will be trying to communicate the nature of the immanent dialectic which unites the 'many' enquiries in the 'one' enquiry. I hope to demonstrate the art of the dialectician in which the 'one and the many' are held together in the process of coming to 'know'. By starting with an analysis of my research programme which attempts to establish the scientific nature of the form of my educational development I have no intention of ascribing a primary position to this form of life. I simply wish to begin with this part of the analysis because I think that my readers will be more familiar with the criteria I use and the way I apply them in justifying my claim to know my educational development as a scientific form of life.

Following the re-presentation of my claim to know my educational development I will discuss how such a claim helps to overcome the problems I raised in Part One concerning the generation of educational theory, the disciplines approach to educational theory, and the nature of the appropriate methodology for investigating a problem of the form, 'How do I improve this process of education here?' I will also examine the nature of my claim to know my own educational development in terms of the unit of appraisal and the standards of judgment which may be used in the public criticism of such a claim.

CHAPTER ONE

THE SCIENTIFIC FORM OF LIFE IN MY EDUCATIONAL DEVELOPMENT

The following analysis, involves the application of three 'scientific' classifications to the nine reports. The first classification is that used by Mitroff and Kilman(1978) in their analysis of methodological approaches to the social sciences. The second is Popper's Schema (1959) for the description of the growth of scientific knowledge. The third is Medawar's classification of a scientific enquiry (1969).

My intention is to demonstrate that my educational development can be understood as conforming to Popper's Schema for describing the growth of scientific knowledge, to Medawar's classification for describing the creative and critical phases in a scientific enquiry and to Mitroff and Kilman's classification for describing the methodological approaches of four groups of social scientists. As well as demonstrating that my educational development can be described in a way that conforms to three 'scientific' classifications I want to explain my educational development in terms of a scientific form of life. In this latter sense of 'scientific' I will be using the term in a 'dialectical' sense.

Let me present a summary of the analysis which shows that my educational development conforms to the three separate characterisations of a 'scientific' enquiry.

I will briefly describe the criteria used by Mitroff and Kilman, Popper and Medawar, in their separate classifications, before presenting in a tabular form the patterns which emerge when the criteria are applied to the research programme.

Mitroff and Kilman (Reason1981) believe that science in general is in serious need of methodological and epistemological reform and that the crisis is particularly serious in the social sciences where these sciences have given a fragmentary and incomplete account of the nature of man. The reason for this, say Mitroff and Kilman, is that the social sciences have themselves been conceived and practised in a largely fragmentary and incomplete manner. They say that this is due to the fact that science has been

largely created and practised in terms of one particular psychological style. In their view alternative forms of science are possible. They say that these forms of science are based on alternative psychological styles. The cornerstone of their analysis is derived from the two dimensional classification of psychological styles proposed by C.G.Y. Jung (1971).

The way Mitroff and Kilman base their classification of methodological approaches to the social sciences upon a Jungian framework can be understood by looking at the two diagrams below. In Fig.1, the Jungian framework, of Thinking (T), Feeling (F) Sensing (S) and Intuiting (N), describes the information gathering and the decision making dimensions of the psychological styles of the individual. In Fig.2, Mitroff and Kilman superimpose their classification of the Analytic Scientist, the Conceptual Theorist, the Conceptual Humanist and the Particular Humanist, on the Jungian Framework:-

Fig.1.

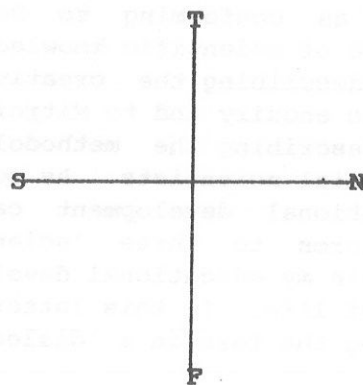
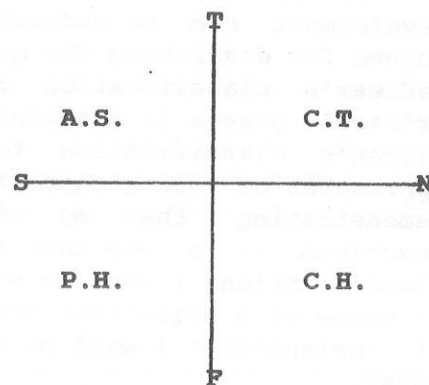


Fig.2.



The mode of enquiry of the Analytic Scientist is that of a controlled experimental design in which subjects are viewed in terms of dependent or independent variables. Hypotheses are tested by manipulating the independent variable and attempting to detect the effects on the dependent variables. In cases where empirical controls cannot be applied then the experiment is designed with statistical controls. The logic of the Analytic Scientist is Aristotelian in the formal sense that the laws of correct reasoning are held to include the Law of Identity, the Law of Contradiction and the Law of Excluded Middle.

The mode of enquiry of a Conceptual Theorist is to treat innovative concepts from multiple perspectives and it is concerned with the invention of new schemas. As an example of this approach Piaget treats his innovative

concepts such as 'constructivism' from a number of different perspectives(Piaget 1972). These perspectives include the logical, the psychological and the sociological. The new schemas he has invented include the Cognitive Stage Theory. The logic of the Conceptual Theorist is dialectical. The laws of dialectical logic are often given as the Identity and Conflict of Opposites, the Transition from Quantitative into Qualitative Change and the Negation of the Negation (Corney 1972). For the Conceptual Theorist the logic is dialectical in the sense of exposing contradictions in existing conceptual frameworks and with negating these frameworks through the invention of new schemas.

The mode of enquiry of the conceptual humanist is similar to that of the conceptual theorist in that it is a conceptual enquiry involving the analysis of innovative concepts. It differs from that of the conceptual theorist in that there is maximal co-operation between researcher and researched so that 'both may better know themselves and one another', (Mitroff and Kilman 1978). The logic of the conceptual humanist is also dialectical but it is not solely concerned with exposing contradictions in existing conceptual frameworks or with the invention of new schemas. The concept of dialectical behavioural logic is used to characterise the preferred logic of the conceptual humanist. This logic (Argyris and Schon 1974) is based upon the explicit confrontation between what an individual says or thinks (the espoused theory of action) and what he or she actually does(the actual theory in use).

The mode of enquiry of the Particular Humanist is the in-depth case study of a particular individual. The preferred logic is the logic of the unique or singular . All Mitroff and Kilman say about this logic, without giving its characteristics, is that at present they are not aware of any mathematician who is working in this area. The omission of clear criteria for the logic of the singular is an obvious defect in this part of the classification.

The nine reports in the series can be classified as follows:-

| REPORT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------------------------------|------|---|------|---|------|---|------|---|---|
| METHODO- LOGICAL APPROACH | A.S. | | C.S. | | C.H. | | P.H. | | |

" Scientists are usually too proud or shy to speak about creativity and creative imagination. They feel it to be incompatible with their concept of themselves as 'men of facts' and rigorous inductive judgments. The role of creativity has always been acknowledged by inventors because inventors are often simply unpretentious people who do not give themselves airs, whose education has not been dignified by courses on scientific method. "

Medawar makes his point that the fact that a scientific enquiry can be resolved into creative and critical episodes points towards a serious defect in the Popperian Schema:

" The major defect of the hypothetico-deductive scheme, considered as a formulary of scientific behaviour, is its disavowal of any competence to speak about the generative act in a scientific enquiry, 'having an idea' for this represents the imaginative or logically unscripted episode in scientific thinking, the part that lies outside logic. The objection is all the more grave because an imaginative or inspirational process enters into all scientific reasoning at every level: it is not confined to 'great discoveries', as the more simple-minded inductivists have supposed. "

The application of the Medawar classification to the reports reveals the following pattern;

| REPORT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------|------|-------|------|-------|------|-------|------|-------|------|
| EPISODE | crit | creat | crit | creat | crit | creat | crit | creat | crit |

In the analysis of the reports in Report Nine I claim that reports 2,4,6&8 have no explicit structuring principles yet provide the 'creative' basis for the 'critical' reports 3,5,7&9. These 'creative' reports are separated, by a logical gap (in analytic reason) from the immediately preceding report.

What I think that the above analysis establishes (Appendix One) is that my educational development can unambiguously be 'described' as a scientific form of living. I want to go further and establish that my educational development can be 'explained' as a scientific form of living. When I use the word explain I am meaning that I can give reasons for my development which can be subjected to critical scrutiny. The reasons I want to give for the

scientific form of life in my educational development is that it offers a systematic way of investigating my problem, 'How do I improve this process of education here?'. I say that I investigate my practical educational problem in the following way;

- 1) I experience a problem because some of my values are negated in my practice.
- 2) I imagine a solution to my problem.
- 3) I act in the direction of this solution.
- 4) I evaluate the outcomes of my actions.
- 5) I modify my problem in the light of my evaluations.

If asked why do you adopt this scientific approach to the investigation of your practical educational problem, I answer that it seems to me to offer a systematic way of approaching my problem where I learn to solve my problems in a process of trial and error. In other words I am making an appeal to the nature of rationality itself in giving reasons for acting in a scientific way as I investigate my practical educational problem.

I return to the point I made earlier about the nature of the aesthetic judgment in which the different ethical, scientific and methodological components will be integrated in 'seeing' the nature of my claim to know my own educational development as it developed in the course of my enquiry, 'How do I improve this process of education here?'. I have stressed to the point of becoming pedantic the importance of your delicate intuitions, imagination and respect in making the holistic aesthetic judgment which is necessary to comprehend the nature of the 'one' enquiry, 'How do I improve this process of education here?'.

I am also appealing to your critical faculties as I distinguish the ethical, scientific, methodological, psychological, sociological and philosophical components, within the 'one' enquiry.

In what sense can I claim that my claim to know my own educational development can form a basis for an alternative principle of differentiation to that proposed by Peters? I am saying that there is an alternative to presenting, to teachers in training, a view of educational theory which explicitly presents educational theory in terms of the different disciplines of education. I am saying that it is possible, in the way I have outlined in Part Two, to present a claim to know an individual's educational development which includes the integration and application in life of the contributions from the different disciplines

but which, in offering an explanation for an individual's educational development, presents a more adequate explanation than that provided by the disciplines approach.

I will explore some of the implications of this alternative basis for the generation of educational theory for in-service education, when I have considered my educational development in terms of my ethical and aesthetic forms of life.

CHAPTER TWO

THE ETHICAL FORM OF LIFE IN MY EDUCATIONAL DEVELOPMENT

I think that there is some agreement amongst educational researchers that education is a value-laden practical activity. For a researcher to distinguish a phenomena as education he must be ascribing value to the practical activity. I accept that in my educational development 'I' am a matter of value. In my conversations I talk about the ethical principles in my educational development in terms of the value-words, freedom, justice, consideration of interests, respect for persons, worth-while activities and democratic forms of social organisation (Peters 1966). My problem is how to communicate the nature of my claim to know the ethical form of life in my educational development.

I have found Feyerabend's(1977) statement, in his 'Against Method', useful in helping me to resolve my problem;

" We must expect, for example, that the idea of liberty could be made clear only by means of the very same actions which were supposed to create liberty. Creation of a thing, and creation plus full understanding of a correct idea of the thing, are very often parts of one and the same indivisible process and cannot be separated without bringing the process to a stop. "

In attempting to communicate the nature of my claim to know my own educational development I have brought the process of this development to a stop. In order to communicate the 'correct idea of the thing', ie; the claim to know , I am separating the 'Creation of a thing and creation plus full understanding of a correct idea of the thing'.

I will use three approaches to communicate the nature of my claim to know the ethical form of life in my educational development. The first approach is to use familiar value-words to direct your attention to particular points in my research reports. The second approach is related to the 'ostensive definition' implied in the words 'direct your attention'. I am not using the familiar value-words, freedom, justice, consideration of interests, respect

for persons, worth-while activities and democratic forms of social organisation as the sole conveyors of my meaning. I will use these words to direct your attention to the research reports at the points where the dialectical materialist's meaning of my valued practice is emerging from the practice itself. As my third approach to the communication of my meaning I will use the idea of an immanent dialectic. By an immanent dialectic I mean that I will discuss the nature of my claim to know the ethical form of life in my educational development in terms of the meanings which are emerging from the practice itself.

I will communicate the meaning of the immanent dialectic by pointing to the process, in my research programme, where I am struggling to overcome the experience of the negation of some of my educational values. The meaning of the valued-practice that is my educational development, emerges from my struggle to live my values in this practice.

I will use the three approaches, of linguistic definition, of ostensive definition and of the immanent dialectic, in the following way. I will present the linguistic definitions of the value-words as they are used by R.S.Peters. I will use these definitions to point to the locations in the text where I am saying that the materialist meaning of the value-word is negated in my practice. I will then describe the immanent dialectic, which I claim shows the materialist meaning of my claim to know my educational development, as it emerges from the practice itself.

FREEDOM

Peters(1966) says that there is a paradox of freedom. I agree when he says that in realms which are not either those of indifference or those where interference is almost impossible(if people are allowed to do what they like), what tends to happen is that the strong impose arbitrary constraints on the weak. In such spheres, says Peters, individuals are only in fact free to do or say what they like if they are protected from arbitrary interference by law or public opinion.

I am predisposed to the practice of freedom in which individuals can do what they like. I also recognise the paradox of freedom and accept the personal and social necessity for forms of social organisation which prevent the violation of the integrity of an individual by other individuals or groups.

Within the context of my research I will begin my discussion of freedom by pointing to the location in my research programme where it is negated. I will then discuss the immanent dialectic in which this negation is being

overcome.

The negation of freedom can be located in the whole of Report One where I apply a true experimental design in my investigation. These designs, derived from agriculture and botany, assume that the objects in the investigation are part of a system of determinate variables. In Report 1 (p.3) I talked of isolating causal variables in the transmission process in the same sense as I attempted to isolate causal variables in my studies for a physical sciences degree. My view of educational theory was identical to the view of a theory in the empirical sciences;

" Theory means in all empirical sciences the empirical formulation of determinate relations between a set of variables in terms of which a fairly extensive class of empirically ascertainable regularities can be explained. "

In my research I was assuming that 'I', as a researcher, could produce knowledge of a process of education of the same theoretical form as a theory in the empirical sciences. I did not ascribe to the teachers or the pupils any causal agency of the form, "in this case 'I' am the cause of my actions ".

The emergence of the materialist meaning of freedom, in the sense of, 'I am the cause of my actions', can be understood by reference to Reports 2 and 7. In the introduction to Report 2, I state my assumption that improvements in the pupil's learning will require a creative and critical response from the participants in the research.

" The process of evaluation described on page 10 requires the co-ordinator to make available details of your intentions, the learners' responses, the resources produced and transcripts of evaluation sessions. This process was accepted on the assumption that improvements in learning situations would require a creative and critical response from us all. We believed that this response would develop in trusting relations and that we should express faith in each other's capacity to evaluate our questions, activities and products in critical dialogues between ourselves. "

(p.2)

At this point in my research programme there is no explicit understanding of the significance of 'I' as a causal agent in the exploration of the question, 'How do I improve this process of education here?'

The explicit understanding was revealed in Report 7 at the point where I reflected on my own attempts to improve the quality of education for my pupils.

" I CAUSED THESE IMPROVEMENTS.

In this assertion, that I caused these improvements, there is the unjustified assumption that I am sometimes the cause of my actions. In the earlier part of this chapter I discussed the implications of using 'I' in the form of explanation I gave for my life and the view of Wittgenstein that names were explained in terms of 'I', 'this' and 'here'. Bernstein(1972) has considered the problem of personal agency and has this to say;

In law, morals, politics, social behaviour and psychological disorders, and in many ordinary contexts we do not make the distinction between doing and suffering or undergoing; we assume that we are genuine agents capable of causal efficacy. Post Wittgensteinian philosophers argue that not only is it impossible to reduce or to analyse this concept of agency in terms of the regularity of events, we cannot even conceive what it would mean to abandon such a concept in the understanding of ourselves and others.

I am asserting that I caused these improvements in the sense that I decided to carry out a programme of actions which was designed to enable me to live my values as an educator in practice, and that I did in fact implement this programme in a way which enabled me to live my values in practice.

In Report 1 I treated the teachers in the same way as mechanical objects, as functionally determined variables within a set of determinate relationships. This violated not only the principle of freedom but also the principle of justice. I treated other human beings as essentially different to myself when there were no good reasons for doing so.

JUSTICE

Peters (1966) says that the principle of justice embodies the formal demand that distinctions shall only be made when there are relevant differences.

I have given an example above, from Report 1, where I violated the principle of justice by treating other human beings as essentially different to myself, in their lack of personal, causal agency, when there were no good reasons for doing so.

A further example from my research programme, which demonstrates an ethical component in my educational development, can be drawn from my work in The Schools Council Mixed Ability Exercise (Reports 2,3,4 & 5).

In this work I was moved by the formal demand of justice that distinctions shall only be made when there are relevant differences. In my own teaching (Tape 1 Report 6), and in my observations of other teachers (Report 4, p.4-6), I could see that the pupils were being treated the same when there were good reasons, in terms of their aptitudes, abilities and interests, for treating them differently. Our struggle to produce a form of learning in which we could organise our resources in a way that enabled us to treat the individual pupils differently, when there were good reasons for doing so, was based on our experience of injustice. We were negating the value of justice in our practice. An example of the immanent dialectic which reveals the materialist meaning of the struggle to achieve justice can be seen in Report 4.

The example below is also related to the principle of the consideration of interests. The teachers believed that some of the children were capable of following their own lines of enquiry in a science lesson, and that they should be allowed to do this where the teacher thought it appropriate.

PAUL SWANSTON

" I think that I need some trolleys and trays and cabinets in the classrooms. If I was following a certain theme on the combined sciences, then I would like to have in my classroom all the core apparatus necessary for maybe a month's work so that the basic stuff is inside the room. There would be cards, workbooks etc. which would relieve the teacher of class teaching and I'm certain, well I know that I and many other teachers could train the children to work through a basic core of work, get their own apparatus, start off their own experiments and work along their own lines of enquiry, when and where that came in and at the end of the lesson, when the bell went, they could put it all back in some form of order. "

Some eight months later (Report 4 p.21-23) there is some evidence that pupils can follow up their own enquiries when it is thought to be appropriate by the teacher.

CONSIDERATION OF INTERESTS.

Peters(1966) says that the concept of 'interests' is ambiguous because there are both normative and psychological uses of 'interests'. He says that in the psychological sense we speak of what people are interested in, meaning what they are disposed to attend to or take notice of; we also speak of interests in a more dispositional sense when we wish to refer to people's hobbies, or those activities in which they will tend to be interested in a more permanent sort of way.

In the normative sense, 'interests', says Peters is used both in a legalistic sense, to speak of spheres of action or activity in which a person has a right and, in a more general sense, to speak of those things which are both worth-while and in some way appropriate for the individual in question, ie:- beneficial to him. Peters uses the notion of considering a person's interests in the 'normative' sense.

I will use 'interests' in the normative and general sense to speak of those things which are both worth-while and in some way appropriate for the individual in question. Speaking for myself I have chosen the field of education as my career and have been fortunate, given the present economic conditions, to have been free to pursue my chosen vocation. As an educational researcher I have been occupied for fourteen years with the problems of producing or discovering knowledge of my subject, education. I am asserting that I value educational research and that it is in my interests to pursue it in the sense that it is worth-while to me as part of my educational development and appropriate for me, as a lecturer in a school of education.

I will use the term 'interests' to refer to my attempts, as an educational researcher, to produce knowledge of my subject, education. In Report 1 (p.4) , I discuss my problem in terms of 'discovering knowledge of the process of education'.

" Educative processes may be distinguished as involving the transmission of something worth-while to those who are committed to it, some degree of cognitive perspective which is not inert and certain procedures of transmission are ruled out on the grounds that they lack wittingness on the part of the pupil. When a process has been distinguished as likely to be educative the researcher has the problem of discovering knowledge of the process. "

At this point in my research I saw myself as a 'Normal' scientist in that I assumed that I would discover knowledge by applying ideas from other researchers.

" How this knowledge may be discovered may be understood by considering what is meant by normal science and the methodologies of two major theoretical orientations in psychology, the cognitive theorists and experimentalists... Normal science means research firmly based upon one or more past scientific achievements. This fact-gathering research makes a claim to empirical knowledge partly because it involves discovery through processes of controlled inference. The facts gathered may be classified as those which past achievements have shown to be particularly revealing of the nature of things, facts concerned with the direct comparison with prediction from theory and those which attempt to articulate theory. "

You will recall (p.77 of this thesis) Popper's critique of the 'Normal' scientist;

" The 'normal' scientist as described by Kuhn has been badly taught . He has been taught in a dogmatic spirit: he is a victim of indoctrination. He has learned a technique which can be applied without asking for a reason why. "

My research programme can be understood in terms of an immanent dialectic in which I am moving away from the 'dogmatic' spirit of the 'normal' scientist towards the expression of the 'creative' spirit of the 'revolutionary' scientist, of the researcher who sees his 'interests' in making an original and scholarly contribution to knowledge of his subject, education (This Thesis).

WORTH-WHILE ACTIVITIES

I hold a view of worth-while activities in which I take Peters'(1966) point that some activities are more worth-while than others on the grounds that they extend our cognitive range and concern.

In my research I am attempting to produce knowledge of my subject, education. My research activities have extended my cognitive range and concern in the following way. In my original investigation (Report 1) there is no evidence to show that I had any understanding of the different schools of thought in the sociology of education. There is little evidence to show that I had any understanding of the epistemological assumptions in my work. There is no evidence to show that I had thought about the methodological assumptions I was making in assuming that I could use a controlled experimental design in the investigation of my problem.

In Report 8, I demonstrate that I have examined some of the fundamental assumptions in the linguistic philosophy of education and in three different schools of thought in the

psychology and sociology of education (p.88-152). I also demonstrate some understanding of the units of appraisal and the standards of judgement which can be used in criticising my claim to know my own educational development (p.186-194). Finally I examine the assumptions in the modes of enquiry of four distinct methodological approaches to the social sciences and explain why I think that these approaches are inappropriate for the investigation of my practical educational problem, 'How do I improve this process of education here?' (p. 15-61).

RESPECT FOR PERSONS.

Peters'(1966) view of being a person is that of an assertive point of view, of judgements, appraisals, intentions and decisions that shape events. He says that the shaping of a pattern of life in this way is constitutive of what we call an individual person. I take 'respect for persons' to be a decision to place oneself under certain regulations of laws which serve to protect persons as centres of valuation, decision and choice.

As a researcher I value rational discourse in which the central power, which defines the acceptability of a claim to knowledge, is the power of the argument rather than an individual's institutional power. In Report 1, I imposed my research methodology on the teachers I worked with. I failed to respect them as centres of valuation, decision and choice.

In the introduction to Report 2 (see above), I corrected this error and placed myself under the process of democratic evaluation described below .

DEMOCRACY

Peters uses democracy in a procedural sense to mean that people should have had some relevant experience by reference to which they can apply its abstract principles. He says that a man determined to conduct his life by reason, must seek the co-operation of others in working out what there are reasons for doing.

The example of my commitment to democracy in my work, was where I moved from the denial of any involvement of the participants in the research, < in the construction of the explanations I developed for their activities (Report 1)>, to the development of a democratic form of evaluation (Appendix 1, Reports 2,3&4). As I explained above, in this form of evaluation I submitted my explanations for the lives of the participants, to the participants for their criticisms.

Report 3, p. 52-54 'An emerging model of democratic

evaluation'.

" The democratic evaluation study is an emerging model not yet substantially realised but one which embodies some recent theoretical and practical trends. The criteria used to distinguish this form of evaluation from other forms are;

- 1) The evaluator acts as broker in exchanges of information between groups who want knowledge of each other.
- 2) The evaluator's main task is the collection of definitions of and reactions to the programme.
- 3) Key concepts are confidentiality, negotiation, accessibility and the right to know. "

As a result of the criticisms I received from the participants, when I presented Report 3 to them, I reconstructed my report of their activities in Report 4. This was accepted by the participants as an adequate portrayal of their activities. I describe the process of democratic evaluation in report 5.

Report 5, p.2-3;

" In my attempt to explain the data I was concerned that the explanation conformed to the following scientific and dialectical criteria. In a scientific enquiry a person imagines a Possible World, a world which is invented criticised and modified as the person lives so that it ends up by corresponding to life as it is immediately lived. The generative act in this enquiry is the asking of a question, the experience of a problem or the creation of an idea. Once an idea is formed it can be subjected to criticism. In science this usually involves the experimental transformation of the phenomena under investigation. Details of the problems, imagined solution, actions in the direction of the improvement, self-criticisms and modified actions are summarised below and given detailed treatment in the booklet (Report 4). The construct validity of the explanation in the booklet rested upon the report fulfilling the following criteria of adequacy and objectivity.

I take an adequate account to be one in which the terms used by the researcher are understandable for the actor himself and for his fellow man in terms of the meanings they give to their own lives. The objectivity of the report lies in the fact that its contents were rationally controlled by critical discussion in the following way;

My first attempt to explain the data was given in terms of models of curriculum innovation, evaluation and change in the teaching learning process. This was rejected by the teachers and a committee appointed by the sponsors of the

research on the grounds that it omitted their own experiences, problems and efforts to change and evaluate their practices.

I reconstructed the form and content of my explanation into the booklet on "Improving Learning for 11-14 Year Olds". This explanation was accepted by the teachers and consultative committee for the project as corresponding to their own. It was this criticism followed by the acceptance which established the adequacy and objectivity of the account. "

In communicating the meaning of my claim to know the ethical form of life in my educational development I have used linguistic definitions of the value-words, freedom, justice, consideration of interests, worth-while activities, respect for persons and democracy. I used these words to direct your attention to the points in the text where I experienced the negation of some of my educational values. I have stressed the importance of this 'pointing to practice' ie:- ostensive definition, in communicating the nature of my claim to know the value-laden nature of my own educational development.

I have also stressed the idea that the clarification of the meaning of the value-laden nature of my educational development requires an understanding of an immanent dialectic. This meaning was gradually revealed in the practical activity itself as I struggled to overcome the experience of the negation of my educational values.

My first attempt to present an account of my own educational development in terms of an immanent dialectic is contained in Appendix 3 "Describing the Values in Educational Practice". In this paper I pointed out that educational researchers usually draw a sharp distinction between statements of fact and statements of value. I argued that the language of educational researchers is inadequate as a medium for describing the value-laden nature of educational practice and discussed the possibility that the logic of educational researchers was sustaining a structured misrepresentation of educational practice.

I will now attempt to overcome the problem of finding a way of expressing the meaning of my claim to know my educational development, as an aesthetic form of life. My problem is how to communicate the nature of my struggle to give a form to my existence in education in a way that does not violate the unity of humanity as a whole.

CHAPTER THREE

THE AESTHETIC FORM OF LIFE OF MY EDUCATIONAL DEVELOPMENT

In order to communicate the nature of my claim to know the aesthetic form of life of my educational development I must captivate your imagination and move you with me through my work.

In the introduction to Part Two I mentioned the idea that the mind of a person could be, 'understood only by reliving its workings'. I also mentioned the idea that an aesthetic appreciation required, 'an entering into a work of art and thus dwelling in the hand of its creator'. I used the concept of "INDWELLING" to mean the entering into a work of art and thus dwelling in the hand of its creator.

The work of art I have in mind is my struggle to give a form to my life in education in a way which does not violate the integrity of humanity as a whole.

In my work in education I am giving a form to my life in relationships with other people. In my work I see the gradual emergence of 'I'. As this 'I' emerges, through the text, it can be seen to exist in particular contexts in relationships with other people. In looking at the emergence of 'I', I see the aesthetic form, of my form of life, in terms of my relationship with other people.

Let me try to characterise the quality of relationship I see emerging through my work. I will characterise this quality, following Buber(1923) in his book I and Thou, as the 'I-You' relationship. This relationship affirms rather than negates the unity of humanity as a whole.

I acknowledge that I was moved by the poetic inspiration of 'I and Thou'. I was moved by an aesthetic experience in my encounter with this work. Not in a trivial way but in the profound sense that it has had a formative influence on my life in education. I would say that Buber's work is part of the Art of Education in which we struggle to give form to life itself.

Following the pattern in the previous chapter I will discuss the meaning of the 'I-You' relationship in terms of a struggle to overcome its negation. Unlike the discussion

in the previous chapter I will ground my experience of the negation of this relationship within my childhood and adolescence rather than in my work in education.

I was born in 1944 towards the end of the Second World War. One of the first books I can recall contained pictures of the victims of the Nazi concentration camps. These pictures conveyed such suffering that they have remained as vivid visual images in my mind. When I saw these pictures I knew nothing of the context in which they were taken. Gradually, through newspapers, books, the radio and television I came to understand that the pain and suffering had been inflicted as a matter of social policy.

The visual image which holds, for me, the I-You relationship and its negation in the historical existence of Auschwitz, is that of Dr. Jacob Bronowski (1973) standing in the waterlogged fields of Auschwitz and saying;

" It is said that science will dehumanise people and turn them into numbers. That is false, tragically false. Look for yourself. This is the concentration camp and crematorium at Auschwitz. This is where people were turned into numbers. Into this pond were flushed the ashes of some four million people. And that was not done by gas. It was done by arrogance. It was done by dogma. It was done by ignorance. When people believe that they have absolute knowledge, with no test in reality, this is how they behave.... In the end the words were said by Oliver Cromwell:

' I beseech you, in the bowels of Christ, think it possible you may be mistaken . '

In my claim to know the aesthetic form of life of my educational development I am looking at my research programme and making a claim to knowledge with a direct object, a claim to know-this. The art object is not a musical performance, a painting or a play. It is my struggle to produce knowledge of my subject, education. In this struggle I have been giving a form to my life in education. In this struggle I am conscious of being moved by a power which affirms the unity of humanity as a whole.

I am saying that the art of education which I am apprehending in my work, given that it contains evidence of some of the traditional forms of knowledge, and given that it contains evidence of a scientific and an ethical form of life, is the art of struggling to give a form to one's own existence in a way that does not violate the integrity of humanity as a whole.

I return to the points I made at the beginning of this chapter. I have experienced despair in the knowledge of what can be done to other human beings when the 'I-You' relationship is violated. I am bearing witness to the

importance of the I-You relationship in my work. In my work I have attempted to remain open to this quality whilst protecting myself from its violation. In saying this I recognise that I am simply affirming what Fromm(1978) recognised as a basic human need for an object of devotion.

I wonder if the aesthetic quality of the 'I-You' relationship, and the form which emerges from the struggle to transcend its negation, can be understood by comparing its denial in Report 1, where I related to the researched through a methodology which was appropriate for the study of mechanical objects, with its indirect expression in the work of one of my students (see pages 185-187 of this thesis).

"During my own research I was assigned to an 'academic' who was prepared to travel a long distance to join me in my school environment. He was prepared to view my problem by engaging in the situation himself and actually entering into it, not as an hierarchical figure, but one who was able to work through the problem with me at first-hand. The advice and teaching which he was able to give was relevant and directly related to my problem in my own environment..... Most importantly it has achieved the 'opening of my classroom' to the rest of the staff. They are more aware of the educational values that I hold, and how I intend to realise them in my practice. It took a great deal of courage on my part to let the evaluation group, evaluate my report and see video-tapes of my lessons, especially as the Headmaster and the Deputy Headmaster were present and formed part of the group. From comments made to me by staff, they recognised the strain which I had to go through to bring this about. Because of this they have now started to discuss their own problems with me. I have been asked by two normally very reserved members of staff, to come into their science lessons, and help them with their work. This gradual breaking down of barriers has been of tremendous help to me!"

With such an intangible quality as the I-You relationship there is no hope of communicating the nature of this quality with a linguistic definition. As I have said above, in my own case it was the poetic expression of Martin Buber which gave me a profound sense of identity with his own attempt to communicate the nature of this quality.

In judging my claim to know the aesthetic form of life of my educational development I would ask you to bear in mind that you are looking at fourteen years of my productive work. It seems appropriate to ask you to spend time in the work. In making this request I recall the words of Buber (1947);

" If this educator should ever believe that for the sake of education he has to practice selection and arrangement, then he will be guided by another criterion than that of

inclination, however legitimate this may be in his own sphere. He will be guided by the recognition of values which are in his glance as an educator. But even then his selection remains suspended, under constant correction by the peculiar humility of the educator for whom the life and particular being of all his pupils is the decisive factor to which his 'Hierarchic' recognition is subordinated. For in the manifold variety of the children the variety of creation is placed before him. ";

and the profound feeling of communion with Martin Hyman when he said;

" By the time they come to us a lot of people have lost their trust, confidence and eagerness to learn. We have to start trying to get it back and we succeed only partially. All the children even the non-exam children are bound by the constraints of teachers who feel obliged to cover exam syllabuses. I think this is where the confidence goes."

(Report 3, p.4)

The meaning of these words to me is linked to the context in which they were spoken. It is difficult to communicate the meaning of the words trust, confidence and eagerness to learn as they were spoken by Martin. They were spoken with a passionate faith in his pupils and in his own life's work as a teacher. In watching Martin with his pupils I was aware of the Art of Education in the work of a teacher with his pupils. A teacher who was trusted by his pupils, who expressed confidence in his pupils and whose own passion for learning was communicated to them.

In looking at my own work I am conscious of things I could have done better with more commitment, of things I could have resisted more effectively with more political awareness and of some searing errors of judgement due to a lack of sensitivity to other people's feelings (Report 3 p10).

These errors, and my own learning from my mistakes, were all part of my educational development. At the end of this particular section I will simply express the hope that we share a faith in the unity of humanity and that you are able to affirm that you have caught glimpses in my work of the quality of human relationships which does not violate the unity of humanity as a whole.

I have tried, in my relationships in education, to express and communicate a sense of integrity to the people I work with. This communication includes a commitment not to violate the integrity of another and at the same time to protect myself from the violations which others may attempt to impose upon me. I try, through my work to demonstrate

that a feeling of trust will not be misplaced. It seems to me that many people, in order to experience trust in working relationships, must see that, over time, you treat them with respect, that you take their problems seriously and are genuinely concerned to help them to overcome the problems which, because of your work with them, become shared problems.

As one individual 'I', who is giving form to his life in education, I have described the many enquiries in my work. I am saying that to apprehend the 'one' enquiry you will need to see that these separate enquiries are related in the one enquiry, 'How do I improve this process of education here?'. You will I think have to listen carefully to my conversations with the people I work with. Do you think that I am addressing them in a way that affirms rather than negates the I-You relationship?

My claim to knowledge has a direct object in the sense of my research programme. This claim can be characterised in relation to a debate between Hirst(1979) and Reid(1979) on the nature of knowledge with a direct object.

I will now discuss the nature of my claim to know the aesthetic form of life of my educational development in terms of the conflicting positions of Hirst and Reid. Hirst commits himself to the position that examples of knowing-this (in the sense of knowledge with a direct object) are reducible to examples of knowing-how and knowing-that plus another non-knowledge component;

" It has frequently been pointed out that the language we use when referring to knowledge is very varied. We speak of knowing that $2+2=4$, that it is wrong to cause unnecessary suffering, what caused a fire, how to drive a car, how to get from Euston Station to Russell Square, who is the President of France, about motor cars. Mr. John Smith, Paris, the Ring, the feeling of pain and so on. On closer investigation, however, these expressions all seem to be readily reducible to variations on three basic forms, in spite of certain overlaps in the linguistic structures involved. First, there are those expressions in which what is known is a truth or set of truths, eg. that $2+2=4$, or who is President of France, These are normally referred to as expressions of propositional knowledge or know-that. Secondly there are expressions in which what is known is how to carry out a performance or activity of some kind, eg. how to drive a car. These are usually referred to as cases of procedural knowledge of know-how. Thirdly there are expressions in which what is known is an object of some kind eg. Paris, the Ring, the Prime Minister, the feeling of pain. Here it is customary to speak of knowledge with a direct object. But are there then three quite distinct mutually irreducible kinds of knowledge, or can we show that

there are ultimately only two kinds, or perhaps even one? In a strict sense it seems to me there are only two distinct mutually irreducible concepts. 'Know-that' and 'Know-how' with cases of knowledge with a direct object, always being reducible to 'know-that' and 'know-how' plus another non-knowledge element. "

In total opposition to the view that knowledge with a direct object or knowing-this, is reducible to 'know-that' or 'know-how' plus another non-knowledge element, Reid argues his case for knowledge of the direct object.

Drawing his example from music Reid makes his point:-

"Consider one of the 'Master Classes', which, through T.V. we are sometimes privileged to look in upon. The clear, and important, distinction between knowledge-that and knowledge with the direct object comes clearly if I say, 'The Master knows-that it ought to go like this'. His knowledge - that and - how is clearly dispositional, and up to a point his overt message can be conveyed in general words, sometimes metaphors. But only so far. Then come expressive bodily gestures, facial movements arm and body moving, singing, perhaps demonstrating. The passage just has to go 'like this' something so particular and individual that in the nature of things the 'this' cannot be said in any general language. It is not to repeat once more that there is a non-knowledge experience on which knowledge-that can 'rest'. It is indivisible a cognitive experience. Real musical intuitive knowledge is direct as the arrow. Many insightful things, in forms of knowledge-that and -how can be said by musicians; but musical knowledge, qua musical, does not reach its musically cognitive consummation finally from -that or -how. Rather, knowledge-that or -about music in itself derives from direct musical gnosis, musical intuition. Even technical knowing-how of performance is barren musically without underlying musical intuition. In the sphere of art, at any rate (and perhaps in other spheres too) Professor Hirst puts the cart before the horse - or maybe he has just unharnessed the horse."

Before I show how the above analysis of my research programme can help to resolve the problems I raised in Part One, I will explain how I see my claim to know my own educational development in relation to the views of acknowledged authorities in the field of epistemology. I think that this discussion is important because it may enable those who wish to criticise my claim, to understand the nature of the unit of appraisal and the standards of judgement which I have used in my claim to know my own form of life in education.

The unit of appraisal is my claim to know my own in-service educational development. The standards of judgement

include the criteria used by Popper, Medawar, and Mitroff and Kilman to characterise the growth of scientific knowledge, a scientific enquiry and social science research methodologies, respectively.

The standards of judgement also include the values I use in making the decisions which give a form of my life in education and the aesthetic quality of my struggle to give a form to my existence in education in a way that does not violate the integrity of humanity as a whole.

OVERCOMING THE PROBLEMS

Let me say how I think that the problems raised in Part One are overcome in the dialectical approach and how I go on to examine a number of the implications of this approach for in-service education. The problems I discussed in Part One included:-

- 1) The lack of emphasis in the educational literature on the generation of educational theory.
- 2) The problem of the disciplines approach to educational theory producing an adequate explanation for an individual's educational practice. This problem was broken down into;
 - a) The problem of including 'I' as a living contradiction in a claim to know an individual's educational development.
 - b) The problem of including 'I' as a materialist concept in a claim to know an individual's educational development.
 - c) The problem of making statements about a way of solving a practical educational problem when the problem integrates matters of fact and matters of value and yet the propositional logic of statements treats statements of fact and statements of value as if they were logically independent.

- d) The problem of a conceptual view of education imposing a structure upon practical decisions whilst an individual's experience of the decisions, which give a form to his life in education, balance a tendency to impose a structure with a tendency to remain open to the possibilities which life itself permits.
- 3) The problem of finding an appropriate methodology for investigating a practical educational problem of the form, 'How do I improve this process here?'

I will take each problem in turn and say how I think the dialectical approach in Part Two moves towards a solution.

- 1) The problem of the lack of emphasis in the educational literature on the generation of educational theory.

In Part One I explained my interest in exploring the possibility that there was an alternative to the view that educational theory 'must' be presented to teachers in training in terms of the differentiated forms of the disciplines of education.

I am offering what I think is an original alternative to the 'disciplines' approach. I am saying that it is possible to offer a view of educational theory which is constituted by the explanations which individuals give for their own educational development. I have given one such explanation above as an example of the possibility that an alternative form of theory to the disciplines approach can be presented to students of education.

I acknowledge the power of senior academics in education to sustain the dominant form of educational theory. All I have attempted to do in an intellectually honest way is to try to show that there is an alternative to the view that educational theory 'must' be presented to teachers in training in a particular form. In presenting my thesis I hope to redress the imbalance in the educational literature by emphasising the importance of theory generation.

- 2) The problem of producing an adequate explanation for the educational development of an individual from the disciplines approach to educational theory.
 - a) The problem of including 'I' as a living contradiction in claims to knowledge.

Of central importance to my thesis in the inclusion of

'I' as a living contradiction in my claim to know my own educational development. My initial problem, 'How do I improve this process of education here?', contained 'I' as a living contradiction in the sense that 'I' existed as a dialectical unity. By this I mean that 'I' contained two mutually exclusive experiences of the negation of some of my educational values and the negation of this negation in my struggle to overcome the original negation.

As I have said in Part One the issue of contradiction is a focus of debate between dialectical and formal logicians. It is usual in propositional forms of discourse to hold to the Law of Contradiction in which it is held that two mutually exclusive statements cannot be true simultaneously. For example if I made the statement that 'I am free' together with the statement, 'I am not free' and claimed that both statements were true simultaneously I would be violating the Law of Contradiction. I can see that in forms of discourse of a linguistic as distinct from a materialist form then it is important to abide by the Law of Contradiction. We can consider thinking in a way that is independent of a thinking body and there is no doubt that this human capacity has been fundamental to our development as human beings.

There is also a form of thinking, dialectical thinking, in which we engage in our practical living. In dialectical thinking, (of which the investigation of the problem, 'How do I improve this process of education here?' is an example), thinking is not treated as independent of practice. Indeed, in dialectical thinking, thinking is an integral part of practice. In my thinking body I can hold a form of thinking which adheres to the Law of Contradiction as it applies to the statements which are held in a propositional form. This brings me to the question whether the statements, 'I am free', or, 'I am not free', are propositions. Do propositions have to be presented in a conceptual form? As 'I' am not a linguistic concept does the Law of Contradiction apply to statements which contain 'I'?

My own solution to the problem of contradiction is to examine and explain the movement of my educational development by pointing out that it can be understood in terms of my attempts to overcome my experience of 'I' as a living contradiction. Popper, in his refusal to accept contradictions within a theoretical form of discourse, talks of the elimination of error and a stubborn refusal not to persist in error. My own materialist view of theory not only contains contradictions it attempts to show how an individual is attempting to overcome the contradictions in practice. In describing and explaining my educational development I am left with the problem that 'I' exist as a living contradiction who, whilst struggling to overcome the experience of contradiction, nevertheless must acknowledge

its existence within the claim to know this development.

This attempt to communicate the nature of my claim to know my own educational development is different from the claim to know itself. I am adopting a literary mode of communication in order to communicate the nature of my claim to know. The communication should not be taken as the claim to know itself. Like Plato, in his discussion of the art of the dialectician, I am trying to present what I see as the necessary steps in communicating the nature of my claim to know. I cannot however completely explicate what is involved in the claim to know. Ultimately I think that my communication rests upon a synthesizing capacity in which you will bring together the separate components in my description and analysis of my claim to know my educational development. I agree with Russell(1916) that this synthetic judgment will rest upon your delicate intuitions, imagination and respect. This holistic judgment will either affirm or reject the claim to know my own educational development as an original and substantial contribution to knowledge of my subject education.

b) 'I' as a materialist concept in the claim to know my own educational development.

I think that you will agree that it is not usual to take 'I' as a concept in the normal forms of linguistic discourse. I agree with Hirst and Peters that understanding what it is to have a concept involves both grasping a principle and the ability to use words correctly. I also accept that this understanding is necessary to understand what it is to have a concept whilst having a concept is not identical with it.

In asking you to think of 'I' as a materialist concept I am asking you to reflect upon a process through which my concrete singularity is being formed in the course of my work. It may help if I say that I am identifying 'I' with my personality in the sense that it is the total system of activity which forms and develops throughout my life and whose evolution contains the essential features of my biography.

In asking you to reflect upon a process in which my concrete singularity is gradually emerging as a conscious form in my educational development, I am asking you to reflect upon a materialist as distinct from a linguistic form of presentation. By this I mean that when you look at the texts you are looking at the work I produced in my struggle to make an original and substantial contribution to my subject education. As you look at the texts you will I hope agree that 'I' begins to emerge in the texts as an identifiable object of study. When I look at myself gradually emerging as a conscious form in my work I cannot

look at myself without seeing myself as embodying value. Let me say how I have tried to move towards a solution of the fact/value problem.

c) How to communicate the claim to know the value-laden practical activity of my educational development?

When I look at my research programme I see myself attempting to produce knowledge of my subject, education. I look upon this process as my own educational development. When I look I see educational values. One of my problems is to communicate what I see in my work. I am faced with the problem that when I experience the problems which move my work forward I am experiencing the negation of some of my educational values. In that this negation is a problem, it is a problem because 'I' embodies the values which are being negated. But how do I communicate the meaning of values which are experienced as negated? When I say that the values are experienced as being negated I do not mean that they do not exist. What I mean is that I must communicate my meaning by pointing to a process in which I am struggling to overcome the experience of the negation of some of my educational values.

As a pointer to my meaning, (and I must emphasise again as no more than a pointer,) I have used the value-words freedom, justice, consideration of interests, worthwhile activities, respect for persons and democratic forms of social organisation, as they are used by R.S.Peters. What I claim to have done in Part Two is to show how I am integrating and applying in life the linguistic meanings of the value-words in a way that transforms them into a materialist meaning of the valued-practice that is my educational development.

I am thinking of the work of R.S.Peters as a concrete case of a person who explored the implications (for a person) of seriously asking himself, 'What ought I to do?' I contend that what Peters has done in practice is to set up the very formal facade which his work was dedicated to removing. I am saying that the formal facade was established through a propositional use of language which eliminated the 'I' from his discourse and which prevented him from seeing what it would be to engage in a serious enquiry about a practical educational problem. This is not to say that the work of R.S. Peters does not have serious implications. It is to say that his linguistic approach has established a formal linguistic approach which is helping to sustain a structured misrepresentation of reality. I will now present a materialist analysis of my valued-practice to show how I use my values in making choices which produce a matter of fact from a matter of value.

I have described the nine research reports which formed

the site of my knowledge-producing activities. I am saying that my struggle to produce knowledge of 'education' is embodied in the texts. They are my attempts to live a rational form of life in my knowledge producing activities. In saying that I am producing a matter of fact from a matter of value I am saying that I can point to the texts at the points where my values were negated (Whitehead 1980, Appendix). I can outline the imagined solution to the problem I experienced because of this negation. I can show you my struggle to act in the direction of this solution and to evaluate the outcome. Finally I can show you the modifications of the problems, ideas and actions in the light of my evaluations. This is the process I am trying to communicate to you in the presentation of my thesis.

I am saying that in my work I have experienced the negation of some of my educational values in my work. For example, I have experienced at times the negation of freedom, justice, consideration of interests, worth-while activities, respect for persons and democratic forms of control. I have pointed to the locations in my research programme where these values were negated. I have outlined my research programme which contained my imagined solutions to my problems, I have shown you my actions and how I evaluated the outcomes of my actions and modified my problems, ideas and actions in the light of my evaluations.

In looking at my research programme you are looking at a matter of fact which is being produced in the struggle to live my educational values in my practice. You are looking at a matter of fact which has been produced from a matter of value.

d) The problem of a view of education which includes a tendency to impose a structure upon practical decisions and a tendency to remain open to the possibilities which life itself permits.

The 'disciplines' approach to educational theory claims that a conceptual view of education must impose a structure upon practical decisions. I can see how, from within the logic of a propositional form of discourse, this idea would be implied by the logic of the discourse. My own view of education, experienced in the value-laden practice, is that the Art of Education gives a form to one's existence such that it acknowledges the value of the tendency to structure one's existence. In this way it remains open to the possibilities for improvement permitted by life itself.

I do hope that this point is clear. I think that it is most important to my thesis. In following through my educational development as it is embodied in the thesis you

will see a number of reports characterised as 'creative' and 'critical' reports. I will be suggesting that the language and logic in the critical reports conforms to propositional logic in that the Law of Contradiction is upheld. I suggest that my educational development as a whole can be characterised as a process of transformation which holds a number of 'transition structures'. In my attempt to communicate the nature of my claim to know my own educational development I am emphasising the role of the Artist in struggling to give a form to his existence in a way that does not violate the integrity of humanity as a whole. I am asking you to look at this emergent human form and through your delicate intuitions, imagination and respect to integrate the separate components with their critical judgments in the aesthetic affirmation or rejection that you understand my claim to know my own educational development.

3) The problem of finding an appropriate methodology for investigating a practical educational problem of the form, 'How do I improve this process of education here?'

In Part Two I demonstrated that my educational development could be understood as a methodological form of life in the sense that my research programme could be partially classified by applying the criteria of four distinct methodological approaches to the research programme. The point that the programme could only be 'partially' classified is important. I offered a 'dialectical' methodology for understanding how I had investigated my practical educational problem in a methodical way. The point about the 'dialectical' methodology was that it included the 'I' as a living contradiction, an 'I' with the creative and critical powers of a mature and creative adult. This 'I' produced discontinuities in his educational development in the sense that 'creative' leaps were needed to pursue the enquiry. When considering the 'dialectical' methodology it is important to bear this point in mind. You are not being offered a methodology of the form which can be directly applied to a problem in a way that guarantees the solution of the problem. In the dialectical methodology there is always the risk of failure and the insistence on the exercise of the individual researcher's creative and critical powers. What I would say, given that each 'I' exists as a living contradiction in a practical educational problem of the form, 'How do I improve this process of education here?', is that I have found a method of trial and error a useful way of investigating my problem in the form of a dialectical enquiry.

Having explained how I think my 'dialectical' approach to the generation of educational theory offers a way of

solving the problems raised in Part One, I would like to present a brief discussion of how I see my claim to knowledge relating to the views of eminent authorities in the field of epistemology. I think that this discussion is important because in any claim to 'know' it is useful for those who wish to criticise the claim to understand the nature of the unit of appraisal and the standards of judgement which are used by the researcher in his claim to know something about the object of his study.

CHAPTER FOUR

THE UNIT OF APPRAISAL AND THE STANDARDS OF JUDGEMENT IN THE CLAIM TO KNOW MY OWN IN-SERVICE EDUCATIONAL DEVELOPMENT

If asked to locate my claim to knowledge within a particular epistemological perspective I would find great difficulty in answering in any way but my own perspective. In my claim to know my own in-service educational development I recognise a number of familiar ideas. I have, for example, characterised my claim to know in terms very similar to the form of the Popperian Schema for the growth of scientific knowledge.

The difference between my own schema and Popper's schema is that my own claim to know my own in-service development contains 'I' as a living contradiction. My claim to knowledge has similarities to Lakatos'(1972) view of the methodology of scientific research programmes. I offer the unit of appraisal in the form of my own research programme. This can be understood as my own claim to know my own educational development. The standards I use in judging my programme are more closely identified with those of Kuhn (1972) than those of Lakatos in that they are values I use in making choices rather than rules of choice.

I am also indebted to Polanyi's (1958) view of Personal Knowledge in that the revelation that the dialectical view of my own educational development could be understood as a process of dialectic was grounded in 'Personal Knowledge'. Polanyi's work fulfilled its purpose in that it helped to strip away the 'crippling mutilations' of my objectivist thought and encouraged me to trust my own creative and critical powers in justifying my claim to know my own educational development.

I must also say that a dialectical materialist conception of knowledge helped me to see the limitations of a view of knowledge which referred to 'I' as a sign relating to a conscious individual. 'Dialectical Materialism' (Ilyenkov 1977) helped me to see myself, in my in-service educational development, as located within the division of labour in which 'I' did not exist as whole or as a unity. I had to acknowledge on the basis of my experience that 'I' existed as a living contradiction.

Given that I can identify elements of a number of different views within my own claim to knowledge I will simply identify these views and leave the reader to grapple with my own view and to make a judgment about the adequacy of my presentation of my claim to knowledge.

I would also like to mention how I see my work in relation to the ideas of Feyerabend(1975). In particular I am thinking of two ideas in Feyerabend's 'Against Method'.

My reason for drawing attention to Feyerabend's ideas is that they appear to be closely related to my own views on the creative episodes of my research programme and the forms of validation I use to test out my ideas by subjecting them to public criticism;

" The teaching of standards and their defence never consists merely in putting them before the mind of the student and making them as clear as possible. The standards are supposed to have maximal causal efficacy as well. This makes it very difficult indeed to distinguish between the logical force and the material effect of an argument. Just as a well-trained pet will obey his master no matter how great the confusion in which he finds himself, and no matter how urgent the need to adopt new patterns of behaviour, so in the very same way a well-trained rationalist will obey the mental image of his master, he will conform to the standards of argumentation he has learned, he will adhere to these standards no matter how great the confusion in which he finds himself, and he will be quite incapable of realizing that what he regards as the 'voice of reason' is but a causal after-effect of the training he has received. He will be quite unable to discover that the appeal to reason to which he succumbs so readily is nothing but a political manoeuvre.

That interest, forces, propaganda and brainwashing techniques play a much greater role than is commonly believed in the growth of our knowledge and in the growth of science, can also be seen from an analysis of the relation between idea and action. It is often taken for granted that a clear and distinct understanding of new ideas precedes, and should precede, their formulation and their institutional expression.(An investigation starts with a problem, says Popper) First, we have an idea, or a problem then we act, i.e. either speak, or build, or destroy. Yet this is certainly not the way in which small children develop. They use words, they combine them, they play with them, until they grasp a meaning that has so far been beyond their reach. And the initial playful activity is an essential prerequisite of the final act of understanding. There is no reason why this mechanism should cease to function in the adult. We must expect, for example, that the idea of liberty could be made clear only by means of the

very same actions, which were supposed to create liberty. Creation of a thing, and creation plus full understanding of a correct idea of the thing, are very often parts of one and the same indivisible process and cannot be separated without bringing the process to a stop. The process itself is not guided by a well-defined programme, and cannot be guided by such a programme, for it contains the conditions for the realization of all possible programmes. It is guided rather by a vague urge, by a 'passion'(Kierkegaard). The passion gives rise to specific behaviour which in turn creates the circumstances and the ideas necessary for analysing and explaining the process, for making it 'rational'. "

One of the crucial problems in presenting my claim to know my own educational development is centred upon the idea that, 'Creation of a thing, and creation plus full understanding of a correct idea of the thing, are very often parts of one and the same indivisible process and cannot be separated without bringing the process to a stop'..... The idea of liberty could be made clear only by means of the very same actions, which were supposed to create liberty'.

In his final paragraph of 'Against Method', Feyerabend gives the description which fits the procedures I use to subject my own claim to know to public criticism;

" Scientists will of course participate in governmental decisions, for everyone participates in such decisions. But they will not be given overriding authority. It is the vote of everyone concerned that decides fundamental issues such as the teaching methods used, or the truth of basic beliefs such as the theory of evolution, or the quantum theory, and not the authority of big-shots hiding behind a non-existing methodology. There is no need to fear that such a way of arranging society will lead to undesirable results. Science itself uses the method of ballot, discussion, vote, though without a clear grasp of its mechanism, and in a heavily biased way. But the rationality of our beliefs will certainly be considerably increased. "

I do not wish to sound pretentious when I say that I want my work to be understood as a work of art. I am referring to my work in education in the sense of my attempt to form my life in my own educational development. I simply ask you to bear in mind that I am attempting to present an expression of the meaning of my claim to know my own educational development in the sense of a struggle to learn how to integrate and apply in life the knowledge which helps to improve the world.

I have offered you the unit of appraisal of my research programme in the sense that this programme is my claim to know my own in-service educational development. I have

offered you standards of judgement which include, the explicit criteria used by Popper, Medawar and Mitroff and Kilman, the values I use in making choices (the meaning of which emerges in my struggle to overcome the experience of the negation of these values) and the aesthetic quality in my struggle to give a form to my existence in education in a way that does not violate the integrity of humanity as a whole.

I will now explore some of the implications of my dialectical thesis for educational researchers in general and for those dialecticians in particular who are working within the disciplines of education.

SOME IMPLICATIONS FOR EDUCATIONAL RESEARCHERS

The main focus, for this examination of some of the implications of a dialectical approach for educational research, is a number of articles which have recently appeared in the refereed journals of education. The articles have been chosen because they have been written either by eminent authorities in the field of educational research or they are concerned with a critical analysis of such eminent authorities.

I do not intend to give an exhaustive account of the nature of research articles in the journals of educational research. My purpose is rather to present an analysis of the work of influential writers in order to illustrate some implications of a dialectical approach for educational research. I take educational research to include curriculum research, development and theorising.

PROFESSOR EGGLESTON AND THE NATURE OF EDUCATIONAL RESEARCH

Simon (1978) stated that the central problem facing educational researchers was to 'focus directly onto education itself'. His challenge was that to recognise, 'the specificity of education as an object of investigation, we must face up to the conceptual and technical norms based on the recognition of educational criteria'. Eggleston (1979), bases his analysis, of the characteristics of educational research on Simon's three propositions;

1. That there is a distinctive field of knowledge informed by conceptual structures called education which impinges on disciplines none of which can adequately describe it.
2. That once this field is identified, criteria will be identified to determine potentially effective research questions and research programmes.
3. That the goal of educational research is to improve educational practice.

Eggleston gives an analysis of what he thinks it is to respond to Simon's challenge to 'focus directly onto education itself'. To do this he analyses the concepts of Intentions, Processes, Strategies, Tactics and Outcomes. I have explained above in what I think are the characteristics

of an explanation which focuses directly onto education itself. I have also given my reasons for rejecting the idea that education can be adequately characterised in terms of linguistic criteria of the form of Intentions, Processes etc;.

Eggleston says that he does not deny Taylor's (1966) thesis that educational research is distinctive because of the centrality of practical judgements. Unfortunately he does not explore what it means to focus directly onto education itself and show what appropriate methodologies are available to study the educational problems in which practical judgements are embedded. What he does is to give a brief analysis of methodologies which assumes that educational research is to be like research in the natural sciences in that it is a search for generalisations which are expected to hold in a variety of situations. He concludes his analysis by saying that if in pursuit of regularities in teacher-pupil behaviour, we find such models do apply under certain specified conditions, then the use of these methods will be justified.

In his analysis of the methods of experimental design and data analysis, which I used in Report One, he states that the fact that these methods have failed to live up to expectations (ie, to yield statistically significant results in favour of one treatment or another and failed to facilitate the elucidation of mechanism) may however not be due to inherent defects in the method. What Eggleston advocates is that we should attempt to improve the approach by putting the ideal of true experimental designs in the broader perspective of what is loosely called 'scientific method'.

Eggleston accepts that appropriate disciplines, each using its own criteria for truth, will make available interpretations of the educational processes, and that one cannot judge, a priori, which one is better than another. This I accept. But I have defined above the logical, linguistic, ethical, critical and general characteristics of my claim to know an individual's educational practice and I also gave my reasons for rejecting the methodology of the analytic scientist. On the basis of these characteristics and these reasons it appears unlikely that Eggleston's attempt to focus directly onto education itself, with the aid of true experimental designs and scientific method, will be successful. I do however agree with his conclusion;

"In conclusion I wish to add a point or two about teachers and research. Constantly teachers are regarded in reviews of research methodologies as the objects of communication and consumers of research findings. While I would agree that it is our responsibility to write accounts of our researches and their implications in comprehensive

prose which give teachers access to our minds and share the hope that our work does yield usable findings, I am even more concerned that we think of teachers as professionals with whom rather than on whom we do research. Effective teaching is more likely to be achieved when the teacher himself is operating in reflective and empirical modes. Teachers operating in this way cease to be tiresome intervening variables and become self-conscious instruments of educational processes. Then the problem of communication is solved. Some teachers will be there when the play is being written, not merely witnesses to the performance."

In the light of this conclusion I do think that it is reasonable to expect that Eggleston should have given some indication of how research could be done, using the methods he advocates, 'with teachers rather than on teachers', and given an example of research with teachers who were operating in reflective and empirical modes.

PROFESSOR STONES AND THE CONCEPT OF PSYCHOPEDAGOGY

Professor Stones has influenced what is defined as educational research through his articles, his books and his position on the editorial board of the British Educational Research Journal. In his article 'Psychopedagogy - theory and practice in education', Stones (1979) stated that research and teaching in education have suffered for some time from an unfortunate dichotomy in the conceptualisation of two of its most important elements; the study of educational psychology and the study of practical teaching. In an attempt to bridge this gap Stones proposes the concept of 'psychopedagogy', to embrace theoretical principles from psychology and the practical application of these principles in teaching, with the central aim of enhancing learning and its affective context.

Drawing heavily on behaviourist theory Stones develops a system of categories, which he calls schedules, for the observation of teaching and learning. He has produced four schedules relating to the teaching of conceptual matter, the teaching of psychomotor skills and the creation of a positive classroom atmosphere. The fourth schedule is concerned with the key elements in teaching pupils how to solve problems. He has this to say about his schedules;

"Two important characteristics of the approaches I have outlined are fundamental to the claim to unite theory and practice. One is the claim that the schedules of teaching activity are derived within a systematic framework. The other is that they are testable in practice. The validity of the former will be determined by attempting to apply the methods outlined in planning teaching activities, inconsistencies and errors on a large scale or sheer

inutility in producing suitable teaching methods, will invalidate the approach. The practical validity of the approach will be demonstrated by the extent to which it is capable of producing schedules of teaching activities of benefit to a student teacher."

Stones accepts that the decision to take the focus he does is clearly values-related. The values are there at the beginning, in the initial choice of theories, and persist throughout his analysis. He accepts that he is not able to take in completely different theoretical standpoints but what he has tried to do is to start from the hypotheses and theories that he feels comfortable with and by an attempt at a logical process to derive the necessary skills therefrom. He also accepts that his ideas are still in the exploratory phase and says that in this exploratory activity teachers, in the act of testing the instruments, are themselves acting as research workers validating hypotheses from psychology. He believes that this kind of activity holds promise of breaking down the barriers between theorist and practitioner as well as between theory and practice.

It would be foolish and arrogant of me to dismiss Stones' exploratory approach to educational research especially as he is most concerned to break down the barrier which exists between educational theory and practice. It would come as no surprise however, given my earlier analysis of my educational practice, and the rejection of the basic assumptions of this analysis by behaviourist psychology, to learn at some later date that the underlying epistemological assumptions accepted by Stones actually prevented him from achieving a unity between theory and practice. The prediction of this failure is a direct implication of my own thesis on the production of an explanation which corresponds to an individual's educational development.

PROFESSOR SIMON AND A MARXIST APPROACH TO EDUCATIONAL THEORY.

Simon(1978) in his analysis of a Marxist approach to problems in contemporary educational theory states that Man, through his own activity - in the process of his activity- both changes his external circumstances and changes himself. Man's consciousness and his activity are, then, a unity. Activity implies both changing consciousness and a changed external world. Simon says that this concept - that of the unity of consciousness and activity, is fundamental to education.

What I find disturbing about Simon's analysis is the way he takes language as the focus of his concern;

" Of key importance for human formation, in the Marxist

view, is the role of language with its powers not only of abstraction and generalisation but also as the means by which the child organises his own behaviour. "

The implication of my thesis for a Marxist concerned with the production of educational theory is that the starting point for an analysis of the problems of contemporary educational theory is the objective contradiction which the Marxist experiences in his own educational practice within the division of labour. Simon recognises the sharp social and political conflicts that characterise society are reflected in the schools but says that he has not attempted to deal with these;

" The main conclusion however, relevant to the concerns of this paper is the stress laid by Marxists arising from this analysis, on human educability, and potentialities, and on the consequent need to produce effective and systematic educational opportunities for all. Of course in any realistic view, Marxists must accept that many obstacles of various nature exist to stultify or prevent the realisation of human potentialities today. The sharp social and political conflicts that characterise society are certainly reflected in the schools as we see all too clearly. I have not attempted in this paper to deal with these—only to try to set out, as clearly as I can, the Marxist orientation to certain major theoretical issues in education today. "

By not making these conflicts, as they are experienced by teachers and pupils, the central problem in contemporary educational theory it seems to me that Simon has not followed his own prescription which was to focus directly upon education itself. It appears that he has given the same kind of analysis, in its linguistic conceptual form, which typify the contributions from those who support the disciplines approach to educational theory. I think that Apple and Wexler (1978) make a similar point about Bernstein's views on a theory of educational transmission.

" Bernstein's language misses this dialectic. Its very logic creates non-interacting, separate 'things' that do not depend on each other for their content and form... The real experience of being a worker, say, is divorced from the concrete conditions of a person's existence and, just as importantly, from its relationship to the larger socioeconomic divisions in society. "

In asking this question I feel like the small child, in one of Hans Christian Anderson's fairy stories, who pointed out that the King had no clothes. I want to establish that my question is not a trivial question by showing that three articles which explicitly use education or research in the title do not consider the problem of identifying what it is that they are describing or explaining.

Bennett(1979) in an article 'Open Plan-Open Education', takes for granted what is to count as education. He says that the specific purpose of his article is to assess whether the original rationale for building schools of open design is reflected in practice. The central qualities, picked out by Bennett to define 'open', are the desire of education to provide informal and flexible learning environments. He then focusses upon his main question as to whether the available evidence bears out the assumption that open plan schools house informal or open educational practices. He says that questionnaire studies can only present reported practices, which may or may not be valid and acknowledges that observation studies can give a more detailed picture of the reality of classroom practice. He moves on to cite the findings of some fourteen studies which have used either questionnaires or observation or both. The two examples below are characteristic of the kind of statements in which the major conclusions of the studies were presented.

Canadian SEF 5. Open style teaching occurred in conventional schools but not as frequently as in open plan schools. In the latter there were more variable grouping patterns, pupils spend less time in their class base, moved around the school more often, talked to a larger number of teachers, used more audio, visual equipment and also visited the library and went on field trips more often.

Dilling and Tran(1973) focussed on teacher pupil interaction in open and conventional classrooms. They found that there was a greater emphasis on subject content in the open plan teaching approach. They concluded that open plan and open education were not synonymous.

The central point I wish to make is that the authors identify, in behavioural terms, what is to count as 'open', but do not identify what is to count as 'open education'. Bennett concludes his study by saying that it is not unusual to find researchers who have sampled open plan schools and written their reports in terms of open education as if design and pedagogy were synonymous. My point about Bennett's article is that he has presented the results of his research in such a way that he has treated the concept 'open' as synonymous with the concept 'open education' and thus failed to relate what he has to say to education.

McNamara(1979), in his 'Paradigm Lost, Thomas Kuhn and educational research', argues that the introduction of the term paradigm into educational research is based upon a misunderstanding or inaccurate representation of Kuhn's work and that it can lead to muddled and unclear thinking about education;

" Its invocation may lead to unproductive debate and misrepresent the educational research enterprise. "

He suggests that the conditions within natural science, as described by Kuhn, are quite different from those within educational research. Kuhn asserts that a community of natural scientists will be doing normal science, ie; working within a dominant paradigm , until such time as a condition of crisis requires the rejection of an established paradigm and its replacement by an alternative. McNamara says that the conditions in education are quite different in that there is hardly ever a sustained endeavour by a community of researchers investigating a specific issue within the context of a dominant theoretical perspective. McNamara states that there is no group of researchers working in similar fields and ready to replicate each others research.

McNamara believes that it is more appropriate to characterise the research enterprise in education as a community of small teams of individuals who are investigating a range of issues and problems from a variety of points of view and theoretical perspectives. His conclusion is that educational researchers ought not to seek the protection of frameworks and argue that legitimate criticism of their work is contained within the limits of their paradigm. Rather in the spirit of Popper they ought to be prepared to state the grounds on which their work can be rejected or would fail to convince.

My own view is that there is a dominant paradigm in educational research which is guided by the disciplines approach to educational theory. In the analysis of my own research programme I have attempted to establish the practice of producing educational theory from the explanations for an individual's educational practice. I am saying that educational research is in a state of crisis and I am suggesting that a transition from the state of crisis, in the disciplines approach, to a new approach is possible. I have offered one possibility for the reconstruction of the field from new fundamentals and I realise that the reconstruction does change some of the field's most elementary theoretical generalisations as well as many of its paradigms methods and applications.

McNamara, in his claim that researchers, in the spirit of Popper, should be prepared to state the grounds on which

their work can be rejected or would fail to convince is apparently unaware that he is holding to the very epistemology which underpins the dominant paradigm in educational research. In his demand that I STATE the grounds on which my work can be rejected I think it unlikely that he will accept my claim to knowledge in which I assert that some of these grounds are not linguistic.

I have already explained why I think that the ethical and the aesthetic components in my educational development are not the kind of qualities which can be adequately represented in linguistic form. If McNamara sticks to his demand for linguistic statements what hope is there that he will understand my own claim to know my educational development.

Because there is such widespread support, by those with the power to define what counts as valid knowledge in the field of education, to the idea that researchers ought to state the grounds on which their work can be rejected (rather than showing themselves in their educational development), I will summarise the central points I made earlier about the characteristics of my own claim to know my educational development.

Wittgenstein(1965), has pointed out that the problem of all those who try to talk or write ethics is that they come up against the barrier of language. Education is a value-laden activity and because of this fact descriptions which pick out something as education are necessarily evaluative and come up against 'the barrier of language'.

My difficulties over this issue became most severe when I attempted to show in Report Seven that the explanation which I gave for my practice did in fact correspond to this practice. In my attempt to solve this problem I took Dunlop's (1977) view that because we see a logic in practical rationality it does not necessarily mean that we can capture this logic in propositional form. What I did was to include in my reports two video tapes of my educational practice. By including these tapes I recognise that I am not restricting the inhabitants of the 'Third World of Objective Knowledge', to the analysis of propositional relationships. I am attempting to include into 'Objective Knowledge', all those elements, including my educational practice, that can be critically judged against rational standards. As Toulmin says;

" If the result is to transform the 'Third World' from being a formal world of Being, comprising only propositions and propositional relations, into a substantial world of Becoming, comprising both linguistic/symbolic and non-linguistic/practical elements, so be it. "

In order to overcome the barrier of language I have presented my form of life, in my educational development, on the video tapes, to be compared with my explanation for this development and for both to be judged against rational standards by the community of educational researchers. In making this move I am conscious of entering the difficult area of ostensive definition. To understand my question, 'How do I improve this process of education here?' you need to have some indication of what 'I', 'this' and 'here', refer to. Now 'I', 'this' and 'here' are not names but they are, says Wittgenstein, connected with names. He says that names are explained in terms of them.

In Report Seven I used ostensive definitions to point to what you can see on the video tapes as I attempt to solve my problems. I take it that Kuhn is using a similar idea when he says that knowledge is embedded in terms and phrases which are learned in some non-linguistic process like ostension. He also says that the role of paradigms as concrete problem situations are the exemplary objects of an ostension. Heron (1976) has also pointed out the problems of what he calls the experiential method. He says that the basic concepts of the related theory tend to be phenomenological, their full significance can only be grasped experientially by 'living through'. Hence they cannot be taught by verbal exposition alone, they require, 'what might be called, experiential ostensive definition'.

I have pointed out that there was an aesthetic component in my claim to have produced a rational explanation for my educational practice. I drew your attention to this component through my use of the words, 'the I-You relationship'. Like Reid's 'knowledge of the direct object', this aesthetic quality must be experienced directly. I am saying that in the act of accepting or rejecting (the act of judging) the explanation for an individual's educational practice, the three components (linguistic, ostensive and experiential) are necessary and integrated.

McNamara's demand that researchers should state the grounds on which their work can be rejected is much too limited to justify claims to know an individual's educational development. In making such a demand McNamara is preventing himself from 'seeing' the phenomena he is attempting to describe and explain. He also appears oblivious to the fact that his demand for linguistic criteria, 'in the spirit of Popper', is in fact supporting the dominant epistemological paradigm in educational research.

Cope and Grey (1979), in an article 'Teachers as Researchers; some experience of an alternative paradigm', emphasise that the 'gap between educational research and

practice is a yawning commonplace'. They say that there is a growing movement, of which they are not a part, linked with curriculum innovation and its evaluation, to initiate teachers into techniques of classroom research. In their view the movement is based upon a phenomenological stance which recognises that teachers (along with pupils) are creators of the social realities of the classroom and ought, therefore, to be encouraged to be sceptical, reflective and articulate about their experiences.

Cope and Grey say that their own Collaborative Research Programme is markedly different from this, 'Teachers as Researcher' movement, on the grounds that for, 'one thing, we do not need teachers in order to acquire the core data'. Their own approach is to collect survey data which is based upon pupil's responses to questionnaires administered some six months after the pupils have left school.

The point I want to make about this approach is that there is no attempt to say what counts as education. The data being collected is not even gathered by focussing directly onto education itself. I can see the value of presenting the data to teachers as a starting point for educational research but I cannot see that data gathered outside the process one is investigating, ie:- education, can form the basis for any understanding of the process one is attempting to explain. The problems of focussing directly on education itself and of actually doing educational research are ignored, or eliminated, by gathering data outside the process the researchers are concerned to describe and explain.

I now want to examine how a concern with understanding their own in-service educational development could lead dialectical proponents of the disciplines of education to an educational theory which has the power to offer an adequate explanation for the educational development of individual human beings.

I take it that the idea of an adequate explanation is a basic concept in any discipline of education. Each discipline will be giving a partial explanation for the phenomena of education. What I want to question is whether the partial explanations given by the disciplines of education do have a direct relationship to the value-laden practical activity of education.

My question is related to the first and third principle isolated by Peters (1964/77) for the presentation and selection of educational theory. The first principle was that though it must be presented in a differentiated way the different disciplines must also mesh in with and be seen to

mesh in with each other in relation to matters of educational policy and practice. The third principle was that the differentiated modes of thought about education must intimate problems at a fundamental level in the disciplines themselves and the forms of enquiry necessary for their solution. As I have considered an alternative principle of differentiation in the main body of my thesis I will now consider the problems which my own dialectical principle of differentiation raises for the disciplines of education.

In my claim to know my own educational practice I make a claim to have explained my own in-service educational development. The explanation was presented in the form of an analysis of nine research reports. In this analysis I suggested that my form of life in education could be understood as one enquiry within which were integrated several enquiries. The one enquiry, 'How do I improve this process of education here?', contained 'I' as a living contradiction. My analysis of this enquiry revealed ethical, scientific and methodology enquiries which were integrated within the art of education or the aesthetic enquiry.

In my exploration of the implications of my principle of differentiation for the dialectical disciplines of education I will examine the implications of including 'I', as a living contradiction within an explanation for my own educational development, for the dialectical disciplines of education. In particular I will be examining the ideas of dialectical philosophers and sociologists to see if I can substantiate my claim that the inclusion of 'I' as a living contradiction within an explanation for an individual's educational practice raises fundamental problems for the dialectical disciplines of education. When I have defined these problems I will suggest that the dialectical approach to educational research in the thesis offers a form of enquiry which could lead to the solution of the problems. I will examine the ideas of a number of authorities in the field of dialectics and raise the problem of contradiction in relation to the work of these authorities.

In setting out his purpose in producing his 'Dialectical Logic', Ilyenkov points out that dialectical logic is not only a universal scheme of subjective activity, creatively transforming nature but that it is also a universal scheme of the changing of any natural or socio-historical material in which this activity is fulfilled and with the objective requirements of which it is always connected;

" The concretisation of the general definition of Logic presented above must obviously consist in disclosing the concepts composing it, above all the concept of thought

(thinking). Here again a purely dialectical difficulty arises, namely, that to define this concept fully ie; concretely, also means to 'write' Logic, because a full description cannot by any means be given by a 'definition', but only by 'developing the essence of the matter'...Everything we have said determines the design and plan of our book. At first glance it may seem that it is, if not wholly, then to a considerable degree a study in the history of philosophy. But the 'historical' collisions of relating the 'matter of Logic' is not an end-in-itself for us, but only the factual material through which the clear outlines of the Logic of the Matter' gradually show through."

In a brilliant display of his grasp of dialectics Ilyenkov takes his reader with him in his 'writing' of dialectical logic. Yet we arrive at the end of the book with a most serious and unresolved problem;

" Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics- its central category. On that score there cannot be two views among Marxists; but no small difficulty immediately arises as soon as matters touch on 'subjective dialectics' on dialectics as the logic of thinking. If any object is a living contradiction, what must the thought (statement about the object) be that expresses it? Can and should an objective contradiction find reflection in thought and if so, in what form? "

Ilyenkov states his concern to develop 'the essence of the matter' and to present his work in a way in which the clear outlines of the ' Logic of the Matter ' gradually show through. Given his concern and his grasp of the history of dialectics why then is Ilyenkov still faced with the unresolved problem of contradiction? My answer is that Ilyenkov allowed himself to be constrained by the propositional form of his presentation. Ilyenkov failed to 'write' a dialectical logic which transcended the limitation of the propositional form of his presentation because he did not show his own life in action as he struggled in a dialectical way to resolve the living contradiction which he experienced himself to be. I am saying that if Ilyenkov had recognised himself as an object existing as a 'living contradiction', and presented the logic of his own personal development as he struggled to resolve his own contradictions, then he could have provided an answer to his question (- ie; what is the form of thought which can express the existence of a living contradiction?), by providing his readers with an outline of the form of the logic of his own development.

When I say that the resolution of the problem of contradiction, as posed by Ilyenkov, would have necessitated

Ilyenkov showing what it was to resolve his own existence as a living contradiction in a dialectical way, I think that I am making a similar point to Sartre in his critique of dialectical reason. Sartre says that it is necessary that the questioner understands how the questioned—that is himself—exists his alienation, and how he surpasses it and is alienated in this very surpassing .

" It is necessary that his very thought should at every instant surpass the intimate contradiction which unites the man-as-agent, with the knowing of man-as-object and that it forges new concepts, new determinations of Knowledge which emerge from the existential comprehension and which regulate the movement of their contents by its dialectical procedure."

I would however make a similar point about the limitations of Sartre's dialectical investigations, as I made about the failure of Ilyenkov to show how to resolve the problem of contradiction. Sartre advocates a dialectical approach in a propositional form of presentation which is the form of thinking whose logic needs transcending if a dialectical approach is to be developed. Sartre's thought remains formal and does not show what it is for Sartre to understand how the questioned, that is himself, exists his alienation, how he surpasses it and is alienated in this very surpassing.

I would also criticise Merleau Ponty's work on the same grounds. In the epilogue to his ' Adventures of the Dialectic' Ponty says;

" Dialectic is not the idea of reciprocal action, nor that of the solidarity of opposites and of their sublation, Dialectic is not a development which starts itself again, nor the cross-growth of a quality that establishes a new order, a change which until then had been quantitative—these are consequences or aspects of the dialectic, But taken in themselves or as properties of being these relationships are marvels, curiosities or paradoxes. They enlighten only when one grasps them in our experience, at the junction of a subject, of being, and of other subjects: between those opposites, in that reciprocal action, in that relationship between an inside and an outside, between the elements of that constellation, in that becoming, which not only becomes but becomes for itself, there is room, without contradiction and without magic, for relationships with double meanings, for reversals, for opposite and inseparable truths, for sublations, for a perpetual genesis, for a plurality of levels or orders. There is a dialectic only in that type of being in which a junction of subjects occurs, being which is not only a spectacle that each subject

presents to itself for its own benefit, but which is rather their common residence, the place of their exchange and of their reciprocal interpretation. "

Ponty then goes on to say that the adventures of the dialectic are errors through which it must pass, since it is in principle a thought with several centres and several points of entry, and because it needs time to explore them all. I do agree that the point of entry is important. I agree that the dialectic has several centres as well. I would say however that in saying that the dialectic is a 'thought' and that by representing this 'thought' in a purely propositional form then Ponty misses the point of entry which sets up the dialectic as an adventure of the concrete individual who exists as a living contradiction. I have already mentioned Marcuse's point that if he starts thinking of individual persons in a specific situation then he finds them in a supra-individual context, of which they partake, and then he thinks in general concepts. I wish to make two points about Marcuse's thought.

On the one hand Marcuse never starts his thinking by considering himself as the individual person in a specific situation. If he placed his own 'I' as a living contradiction in a specific situation then I am saying that he would find it difficult to think solely in general concepts as his own 'I' would be part of his thinking as a thinking body. On the other hand Marcuse talks of the basic dialectical proposition 'stating' the negative character of empirical reality. Now I do not believe that a dialectical proposition can state the negative character of empirical reality. It is rather experienced in the lives of human beings and formulated in practical problems. It is the 'I' existing as a living contradiction which bears witness to the negative character of empirical reality, not a propositional form of thinking. It could be that a dialectical sociology could emerge from the work of those sociologists who will take their own existence as living contradictions, in their attempts to reconstruct social formations, as the starting point for their investigations.

I am claiming that until the individual philosophers, psychologists and sociologists begin to examine their own in-service educational development and comprehend the central importance of their own 'I' 's as living contradictions in that development then their attempts to create a dialectical approach to their subject will flounder within the very logic and language which they must transcend if they are to create a dialectical approach to the subject of education.

Perhaps the clearest example of the failure to produce a dialectical approach to their subject can be found in the work of the dialectical psychologists Buss (1979) and

Riegel (1973,1975,1977). Buss has consistently attacked the writings of humanistic psychologists for failing to show how a humanistic society, in which a humanistic psychology could exist, can be brought into being. Buss proposes a dialectical psychology to overcome the limitations he sees in present day humanistic perspectives.

The way he presents his ideas illustrates most clearly what I hold to be a fundamental limitation in the dialectical approaches to the , psychology and sociology of education. I think that Buss is guilty of making the same error which he says exists in the work of the humanistic psychologists. The example below is particularly apposite because Buss attempts to show the implications of his dialectical psychology for Educational Theory and Values . He says:-

" Attempting to go beyond the mere appearance of a phenomenon or theory in order to penetrate to its true essence is the goal of critical theory. Critical theory, as developed by the Frankfurt School, is, in part, committed to revealing the social, political and economic forces underlying theory. Human values and interests are intimately connected to the knowledge-seeking process, and a greater awareness of these interrelationships permits a more conscious and directing influence in managing the future course of society with respect to certain prescriptive educational theory and practice. Although the importance of the reciprocal interactions between education and society has been recognized of late (Glaser 1972) critical theory goes beyond this point and attempts to establish the interrelationships between both theory and facts to the underlying socio-economic relationships and values.

Critical theory accepts and endorses the individual's own partiality in social theory and itself makes a conscious commitment to theory which leads to an emancipatory practice based upon nonexploitative relations between individuals (economic or otherwise), as well as to theory which restores the individual as a self-conscious, self-managing subject within social reality. In other words, awareness of the partisanship underlying theory is a prerequisite to transcending the enslavement of social theory and practice based on the mere recording of facts. It is in this sense that educational theory should become critical theory in order that it truly become " critical ".

The central point that I wish to make about Buss' analysis is that it remains at the level of rhetoric. He talks about educational theory becoming truly 'critical'. He writes however in a form which is purely propositional. This form eliminates contradiction as a matter of principle. Nowhere in Buss' work on dialectical psychology does a dialectical psychology appear.

Buss is critical of Glaser and says that critical theory goes beyond the work of Glaser. I have made my own points about the work of Glaser in the first chapter of Part One. I would say that his work goes beyond the work of Buss in recognising the essential component of creativity in theory production. Buss talks about dialectical psychology in a way which denies the basis of a dialectical psychology. I am saying that this basis would be the living contradictions which individuals experience themselves to be within particular social contexts. I do not object to Buss' statement that critical theory gives important insights into the nature of the social system which is constituting individuals as contradictions. I do object however to the idea that a dialectical psychology is going to be produced from a logical base which, in the form of its presentation, explicitly excludes the central nucleus of dialectics ie; contradiction itself.

I am saying that a creative leap is required from a propositional base on to a dialectical base if a critical educational theory is to be produced. Without such a creative leap all the critical theorist is doing is to operate from the very basis he is attempting to transcend. I would suggest that as long as the position being attacked is formally consistent then in terms of the logic of the analysis it would be impossible to transcend.

I now want to examine the work of Klaus Riegel, a founding father of dialectical psychology, in order to show that his work suffers from a similar limitation to that of his student Buss.

The work of Riegel is predominantly associated with a dialectical theory of human development. His contributions (Riegel 1973,1975,1977) have provided a basis for the work of other theorists in the dialectical tradition (Buss1979, Buck-Morss1980). Without seeking to undermine the important insights which Riegel's work has provided for the development of a dialectical theory I want to argue that the presentation of his ideas suffers from a serious limitation. This limitation is that Riegel has failed to come to terms with the central nucleus of dialectics, the category of contradiction, and thus fails to give an adequate presentation of a dialectical theory of human development.

I will argue my case by criticising passages from Riegel's work in order to show what I take to be the central place of contradiction in his dialectical theory of development. My criticisms are intended to show where there are limitations in Riegel's analysis both in relation to the category of contradiction and to internal contradictions in the theory, which, if resolved would overcome the

limitations. I will draw upon Riegel's analysis both in relation to the category of contradiction and to internal contradictions in the theory which if resolved could overcome the limitations. I will draw upon Riegel's analysis of structure and transformation to show that he adopts a linguistic and logical form of presentation, which, whilst appropriate for presenting structural descriptions, actually contradicts the form of presentation of a dialectical psychology. The contradiction exists between Riegel's statement, that dialectical psychology has not yet reached the state where it can be adequately represented in formal structural descriptions, and his actual presentation of his views which are given solely in the language and logic of structural descriptions.

Drawing on the work of Sartre(1963) Kosok(1976) Ilyenkov(1977)and Seve(1978), I will suggest that one way forward, in the presentation of a dialectical theory of human development would be to take our own development, as dialectical psychologists, as both the object and the subject of study and to offer dialectical descriptions and explanations for this development.

In his work, 'Towards a Dialectical Theory of Development', Riegel (1975) points out that contradiction is an essential part of such a dialectical theory;

" As soon as the development task is completed and synchrony attained , new questions, doubts and contradictions arise within the individual and within society. With this shift of emphasis, contradiction and discordance have become essential parts of a dialectical theory of development. In the continuous process of transformation and change, the individual, the society and even outer nature are never at rest and in their restlessness, they are rarely in perfect harmony. "

His clearest statement on contradiction is to be found in the paper , 'Dialectical Operations: the final period of Cognitive Development', (Riegel 1973). Riegel says that the issues of identity and contradiction separate Hegel's dialectical logic from the formal logic of his predecessors, especially Aristotle and Kant. Riegel quotes the following passage from Hegel to distinguish the formal logic of Kant and Aristotle from the dialectical logic of Hegel;

" But it is one of the basic prejudices of traditional logic and of common sense conception that contradiction is not such an essential and immanent determination as identity; indeed, if we were to consider a rank order and if both determinations were to be kept separate, contradiction would have to be accepted as deeper and more essential. For identity, in contrast to it is only the recognition of the single immediate, the dead being, but contradiction is the

source of all motion and vitality; only in so far as something contains contradiction does it move, have drive and activity. "

My first point is that Riegel does not do justice to Kant's logic. In his critique of pure reason Kant goes to some lengths to establish the existence of contradiction in pure reason. Kant postulated four contradictions which he called the antinomies. These antinomies, as I pointed out earlier, formed the 'Dialectical Doctrine' on which Hegel built his own logic. Hegel acknowledges, in his 'Logic', the importance of Kant's 'Dialectical Doctrine' before offering his own solution to the problem of contradiction.

Leaving aside Riegel's misunderstanding of the Kantian Logic, I want to turn to a more profound criticism of his acceptance of the the Hegelian Dialectic. I am thinking of Marx's acceptance of Hegel's Dialectic but his rejection of its use in Hegel's Phenomenology. Marx, as I have previously stated, says that Hegel takes the universal, or concept, which ought to express the predicate of some real object and so be a category or function of that object, and turns it into an entity existing in its own right. I am saying that Riegel has done the same thing in his presentation of a dialectical theory of development. Riegel begins his analysis with the very linguistic abstractions which deny the dialectical base of his theory. He presents his theory from within the very formal logic which he must overcome if he is to present a dialectical theory of development.

Riegel takes the concepts, 'Dialectic' and 'Contradiction' and treats them as linguistic abstractions which exist in a way that can be arranged in a propositional form in the structure of his dialectical conception. As an example of what I mean consider an individual's human development as the object under investigation. The 'Dialectical Doctrine' characterises the development of an individual as the development of a 'living contradiction'. Riegel presents his ideas in the language and logic of formal abstractions which abide by the Law of Contradiction. What he does not do is to show the individual's development as a dialectical development which is grounded in the division of labour. This position should follow from his earlier work (Riegel 1972) where he argues for the inclusion of the influence of economic and political ideologies on the development of development psychology. I believe however that Riegel's work contains the following contradiction which indicates a way of overcoming this conceptual inadequacy.

Riegel(1977) follows Carnap's distinction between ostensive statements and definite descriptions. He says that science will ultimately remove itself from an ostensive base

reflection upon personal experience (research)".

Grundy and Kemmis classify action research in terms of three types; 'technical', 'practical' and 'emancipatory'. They say that in 'technical' action research, the participants in the project are coopted by a facilitator into exploring some aspect of their practice; a technology of group dynamics is employed to create and sustain group commitment to the project, and the facilitator of the group takes the role of project director. Wittingly or unwittingly, the facilitator and the action researchers conspire in this instrumentalisation process, 'responsibility for project success or failure rests ultimately with the facilitator'. In this sense, technical action research involves dependence of the action researchers on the facilitator. The aim of this kind of action research is more efficient or effective educational practice; the criteria by which progress towards effectiveness may be evaluated pre-exist in the mind of the facilitator.

In 'practical' action research participants monitor their own educational practices with the immediate aim of improvement and the general aim of developing professional wisdom. The criteria for improvement are generated by group members individually and in the language community they create for one another.

Their monitoring is directed at improving their understandings; in the process, their criteria for improvement (and their views of education) will change. The facilitator's role in practical action research is Socratic: to provide a sounding-board against which the action researchers may try out ideas and learn more about both the substance of the action research project as well as the process of self-reflection.

In 'emancipatory' action research the immediate aim is improvement and one of its general aims is practical or professional wisdom; another is social transformation.

The main purpose in relating my exploration, of some implications of my dialectical thesis for in-service education, to the analysis of action research presented by Grundy and Kemmis, is to expose a number of weaknesses in both perspectives when they are analysed from the perspective of 'emancipatory' action research. You will recall my points in Part One where I examined a number of schools of thought in the areas of the philosophy, psychology and sociology of education and educational research methodology. I pointed out my reservations that a number of researchers, whilst saying that they were developing a dialectical perspective, did not overcome the problem of presenting claims to knowledge, about the object of their

investigation, within a form of logic and language which excluded contradiction (Appendix Two). A dialectician acknowledges that the object of his investigation exists as a dialectical unity in the sense of mutually exclusive opposites. A dialectician is faced with Ilyenkov's problem of how to present a claim to know a living contradiction.

Grundy and Kemmis draw heavily upon the work of 'Critical Social Theory' in general and Habermas' Critical Theory in particular. They say that Habermas provides a philosophical foundation for action research and that whilst Aristotle's model of praxis is not adequate as a model for emancipatory action research, some of Aristotle's language may be borrowed to explore the relationship between Habermas' critical social theory and emancipatory action research.

According to Geuss(1981) in his 'The Idea Of A Critical Theory', the Frankfurt account of the essential distinguishing features of a 'critical theory' consists of three theses:

"1) Critical theories have special standing as guides for human action in that:

a) they are aimed at producing enlightenment in the agents who hold them, i.e. at enabling those agents to determine what their true interests are;

b) they are inherently emancipatory, i.e. they free agents from a kind of coercion which is at least partly self-imposed, from self frustration of conscious human action.

2) Critical theories have cognitive content, i.e. they are forms of knowledge.

3) Critical theories differ epistemologically in essential ways from theories in the natural sciences. Theories in natural science are 'objectifying': critical theories are 'reflective'. "

A critical theory, then, is a reflective theory which gives agents a kind of knowledge inherently productive of enlightenment and emancipation.

Grundy and Kemmis make the point that the interests of action research are not in the development of abstract theoretical languages communicating universal truths, nor in scepticism, proclaiming universal uncertainty. Rather, they say, its interest is in developing a theoretical position grounded in the real life of social practice on the one hand and a critical theory of society on the other. " Authentic insights rather than universal truths arise out of action

research ".

My focus of concern is on the discussion which Grundy and Kemmis claim constitutes some of the 'theory' of action research. They say;

" Such theory cannot, within its own definition, have direct implications for practice, but it can be useful for the process of enlightenment with regard to the action research event . "

The contradiction I want to point out in the work of Grundy and Kemmis is focussed upon their point that the interests of action research are not in the development of abstract theoretical languages communicating universal truths . I want to suggest that by 'borrowing' the language of Aristotle, they have unintentionally 'borrowed' his logic. What they are doing is in fact to develop an abstract theoretical language which, because it is presented within the form of Aristotelian logic , denies the dialectical base of critical theory.

I understand Grundy and Kemmis when they say that their constitution of the 'theory' of action research cannot, within its own definition, have direct implications for practice. My own anxieties are focussed upon their claim that such a 'theory' can provide a 'philosophical foundation' for action research.

I have taken some care to distinguish the two forms of theory which were characterised by the 'disciplines' and 'dialectical' approaches to educational research. The logic and language of Grundy and Kemmis place them firmly within the logic and language of the 'disciplines' approach whilst they , in stating that they see their views as grounded in 'Critical Theory', would claim that their work is in the tradition of dialectical researchers.

I return to the criticism I made of the work of Buss and Riegel in Part One (and developed in Appendix Two). Until the community of dialectical researchers see the importance of examining their own 'I' 's in their own educational development (and in particular the importance of working out the problem of the 'I' existing as a living contradiction in claims to knowledge), then the logic and language of their forms of presentation will exclude the dialectical base of their research.

BIBLIOGRAPHY

- ALTHUSSER, L. 'Ideology and ideological state apparatuses'
(1971) in L. Althusser Lenin and Philosophy and other essays(trans.B.Brewster) London: New Left Books.
- ANDERSON, A.W. The Task of Educational Theory.
(1951) Educational Theory. Voll.No1.
- ARGYRIS, C. & A Theory in Practice: Increasing Professional
SCHON, D. Effectiveness. San Francisco: Jossey-Bass
(1974)
- ARISTOTLE. On Interpretation. Aristotle II. The Great
Books. University of Chicago. 1952.
- BATES, R.J. New Developments in the New Sociology of
(1980) Education. British Journal of Sociology of Education. Vol.1 No1 1980.
- BENNETT, N. & Open Plan - Open Education.
HYLAND, T. British Educational Research Journal Vol5.No2.
(1979)
- BERNSTEIN, B. Class Codes and Control.Vol 3. Unwin Brothers
(1971)
- BOURDIEU, P. & Reproduction in Education, Society and
PASSERON, J. Culture. London : Sage.
(1977)
- BOWLES, S. & Schooling in Capitalist America. R.K.P.
GINTIS, H.
(1976)
- BROWN, R.H. A Poetic for Sociology-Toward a logic of
(1977) discovery for the human sciences.
Cambridge University Press.
- BRUNER, J. Towards a Theory of Instruction.
(1966) W.W. Norton & Co.
- (1975) Poverty and Childhood.
Oxford Review of Education Vol.1 No.1.

- BUBER, M. I and THOU. T.&T. Clark . 1970
(1923)
- (1947) Between Man and Man. Fontana.
- (1957) Afterword to I and Thou. T.&T. Clark.
- BUCK-MORSS, S. Piaget, Adorno, and the possibilities of
(1980) Dialectical Operations. Article in 'Piaget,
Philosophy and the Human Sciences', Ed.
Silverman, H.J. Harvester.
- BURGESS, T.& ADAMS, B The Outcomes of Education. Macmillan
(1980)
- BUSS, A. Development of Dialectics and Development of
(1976) Humanistic Psychology.
Human Development. 19.1976.
- (1979) A Dialectical Psychology. Irvington.
- CARR, W. Philosophical Styles and Educational Theory.
(1979) Educational Studies Vol.5. No.2.
- (1980) The Gap Between Theory and Practice.
J.F.H.E. 4(1), Spring 1980.
- CASTELL, A.& FREEMAN, H. Education as a Socio-Practical Field: the
Theory/Practice question reformulated.
- CHOMSKY, N. Problems of Freedom and Knowledge. Random.
(1972)
- CLARK, C. Education is not an academic discipline
(1976) Educational Studies Vol 2. No. 1.
- CLARK, J.& FREEMAN, H. Michael Young's Sociology of Knowledge:
(1979) Criticisms of philosophers of education
reconsidered.
J.F.H.E. 3 (2) Summer 1979.
- COLLETTI, L. MARX, Early Writings. Introduced by Lucio
(1975) Colletti. Pelican & New Left Review.
- COMEY, D.D. LOGIC. In Marxism Communism and Western
(1972) Society. Kernig, Vol. 5.

Harder and Harder. New York.
- COPY, E.& Teachers as Researchers : some experience of

- GREY, J. (1979) an alternative paradigm. British Educational Research Journal. Vol 5. No2. 1979.
- DAY, C. (1980) Teachers in Classrooms - Towards Self-Evaluation. Unpub. article. University of Nottingham School of Education.
- DONNE, J. The Extasie. Poems of John Donne(1572-1631) in Eight Metaphysical Poets. Jack Dalglish. Heinemann Educational Books.
- DUNLOP, F. (1977) What sort of Theory should we have? J.F.H.E. (1) Spring.
- DURKHEIM, E. (1933) On the Division of Labour in Society. London: Macmillan.
- DYER, J.R. (1979) Understanding and Evaluating Educational Research. Addison Wesley.
- EGGLESTON, J. (1979) The Characteristics of Educational Research: Mapping the domain. British Educational Research Journal. Vol5.No1.
- ENGELHART, M.D. (1972) Methods of Educational Research. Rand McNally
- ERBEN, M, & GLEESON, D. (1977) Education as Reproduction: A critical examination of some aspects of the work of Louis Althusser. Article in 'Society State and Schooling'. Ed. Young, M. & Whitty, G. Falmer Press.
- FEYERABEND, (1975) Against Method. Verso.
- FILMER, P. et al. (1972) New Directions in Sociological Theory. p150 Collier Macmillan.
- GEVAS, R. (1981) The Idea of a Critical Theory-Habermas and the Frankfurt School. Cambridge University Press.
- GLASER, B. & STRAUSS, A. (1967) The Discovery of Grounded Theory. Aldine.
- GREEN, B. Personal Dialectics in Educational Theory and

- (1979) Educational Research Methodology.
Unpub. M.A. Dissertation. University of London.
- (1980) The Theory Practice Problem. Seen from a
classroom commitment to improve art education.
Journal of the National Society for Art
Education. Vol VII January 1980.
- GRUNDY, S. &
KEMMIS, S.
(1981) Social Theory, Group Dynamics and Action
Research. A paper presented in a symposium at
the Annual Meeting of the South Pacific
Association for Teacher Education, Adelaide
July 22-26 1981.
- GUARDIAN
(1981) Article on 'The Third World', Guardian Newspaper
August 6 th. 1981.
- HARNETT, A. &
NAISH, M.
(1976) Theory and the Practice of Education. Voll.
Heinemann.
- HARRIS, K.
(1979) Education and Knowledge. R.K.P.
- HAYES, G.
(1980) An Investigation of Educational Practice in
the Classroom. Unpub. M.Ed. dissertation.
University of Bath.
- HEGEL, G.W.
(1817) Logic. Translated by William Wallace.
Oxford University Press.
- HIRST, P.
(1966) Educational Theory. Article in 'The Study of
Education'. Ed. Tibble, J.W. R.K.P.
- (1977) Rational Curriculum Planning: Its Logic and
Objectives.
Melbourne Studies in Education.
- (1979) Human Movement, Knowledge and Education.
Journal of Philosophy of Education.
Vol 13. 1979.
- HIRST, P. &
PETERS, R.S.
(1970) The Logic of Education. R.K.P.
- HOLBROOK, D.
(1980) What it means to be human. unpublished
manuscript. Kings College, Cambridge.
- HUDSON, L.
(1980) Language, Truth and Psychology. Article in
The State of the Language. Ed. Michaels, L.
and Ricks, C.
University of California Press.

- HUDSON, W.D. The IS/UGHT question. Macmillan.
(1969)
- HUME, D. Treatise on Human Nature. Oxford.
(1888)
- ILYENKOV, E.V. Dialectical Logic. Progress Publishers.
(1977)
- KANT, I. Critique of Pure Reason. Translated by
(1781) J.M.D. Michlejohn. Everyman's Library.
- KIERKEGAARD, S. Concluding Unscientific Postscript.
(1941) Princeton University Press.
- KILPATRICK, W. Crucial Issues in Current Educational Theory.
H, (1951) Educational Theory. Vol 1. No.1.
- KITWOOD, T. Educational Research and its standing as
(1976) Science.
Studies in Higher Education, Voll.No1.
- KOLBE, W. On Approaching a Science of Values.
(1979) B.S.A.J. Vol2.No1.1979.
- KOSOK, M. The Systematization of Dialectical Logic for
(1976) the Study of Development and Change.
Human Development.19:325-350.(1976)
- KUHN, T. The Structure of Scientific Revolutions.
(1962) University of Chicago.
- (1972) Reflections on my critics. Article in
Criticism and the Growth of Knowledge.
Ed. Lakatos, I. & Musgrave, A.
Cambridge University Press.
- LAKATOS, I. & MUSGRAVE, A. Criticism and the Growth of Knowledge.
(1972) Cambridge University Press.
- LEWIS, D. Experimental Designs in Education.
(1968) University of London Press.
- MACINTYRE, A.C. Hume on 'is' and 'ought'. Article in 'The
(1969) Is/Ought Question'. Ed. Hudson, W.D. Macmillan.
- MCNAMARA, D.R. Paradigm Lost: Thomas Kuhn and Educational
Research.
British Educational Research Journal. Vol5.No2.
- MARCUSE, H. One Dimensional Man. Abacus.
(1964)

- MEDAWAR, P. Induction and Intuition in Scientific Thought.
(1969) Methuen.
- (1963) Is the Scientific Paper a Fraud?
The Listener. B.B.C. Publications, 12/9/1963, pp337-8.
- MERLEAU-PONTY, Adventures of the Dialectic. Heinemann.
M. (1955).
- MITROFF, I. & Methodological Approaches to Social Science.
KILMAN, R. Jossey-Bass.
(1978)
- MUSGRAVE, P. The Sociology of Education. Methuen 1972.
(1972)
- NAISH, M. & What Theory cannot do for Teachers.
HARNETT, A. Education for Teaching, 96, Spring. pp12-19.
(1975)
- PETERS, C.A. Research into the Evaluation of Youth Work.
(1980) Unpublished M.Ed. Dissertation.
University of Bath.
- (1981) Personal View. Youth In Society. Number 52
March 1981.
- PETERS, R.S. The Place of Philosophy in the Training of
1964/1977) Teachers. Article in 'Education and the
Education of Teachers'. See the discussion on
pages 138-140 for the logic of the disciplines
approach to educational theory.
- (1966) Ethics and Education. Allen and Unwin.
- (1970) See Hirst.P. and Peters, R.S. 1970.
- (1974) Psychology and Ethical Development.
Unwin University Books.
- (1978) Democratic Aims and Educational Values.
unpublished paper.
- PIAGET, J. Structuralism. R.K.P.
(1972)
- PIAGET, J. & The Growth of Logical Thinking from Childhood
INHELDER, B. to Adolescence. R.K.P.
(1958)
- PLATO. 'Phaedrus'. In Five Dialogues of Plato on
Poetic Inspiration. Everyman's Library 1931.

- (1979) Hegel and Self-Actualization.
Self and Society, Vol7 No.5.
- RUSSELL, B. Principles of Social Reconstruction.
(1916) George Allen and Unwin.
- RYLE, G. The Concept of Mind. Penguin.
(1973)
- SARTRE, J.P. Search for a Method. Vintage.
(1968)
- SCHUTZ, A. The Phenomenology of the Social World.
(1967) Heinemann.
- (1972) See Filmer, P. (1972).
- SEVE, L. Man in Marxist Theory: and the psychology of
(1978) personality. See the sections on Forms of
individuality and Theory of the individual; pp
258- 286, for the crucial section on the
distinction between the psychological form and
the form of social relations.
- SIMON, B. Problems in Contemporary Educational Theory:
(1978) A Marxist Approach.
Journal of the Philosophy of Education. Vol12.
- (1978) Educational Research, which way?
Research Intelligence, Vol4. No.1.
- SKINNER, B.F. The Technology of Teaching.
(1968) Appleton-Century-Crofts.
- (1979) Interview with B.F.Skinner.
B.F.S.A.J. Vol. 2 No.1
- SMEDSLUND, J. Piaget's Psychology in Practice.
(1977) Br.J. Edu. Psychol.Vol 47 pp 1-6.
- STONES, E. Psychopedagogy:theory and practice in teaching.
(1978) British Educational Research Journal Vol4.No.2.
- STRIKE, K.A. An Introduction to Educational Theory. A review.
(1975) Educational Theory, 25.
- TANNER, M. The Language of Philosophy. Article in 'The State
(1980) of the Language'. Ed. Michaels, L. and Ricks, C.
University of California Press.
- TAYLOR, P.H. Does initial training prepare teachers to understand

- and take part in educational research.
Educational Research. Vol 9. No.1.
- TOULMIN, S.
(1972) Human Understanding. Clarendon Press.
- TUNNEL, D.R.
(1978) An analysis of Bowles's and Gintis' Thesis that schools reproduce economic inequality. Educational Theory. 28.
- ULMAN, J.
(1979) A Critique of "Skinnerism: Materialism minus the Dialectic". B.F.S.A.J. Vol.1. No. 2, 1979.
- VARGAS, J.S.
(1977) Behavioral Psychology for Teachers. New York. Harper and Row.
- WALKLING, P.H.
(1979) Structure of Knowledge Theory: a refutation. Educational Studies, Vol5. No.1.
- WHITTY, G.
(1974) Sociology and the problems of radical educational change. Article in Educability Schools and Ideology. Ed. Flude, M. and Ahier, J. Croom Helm.
- (1977) See Young, M.F.D. & Whitty, G. (1977)
- WHITTY, G. &
YOUNG, M.F.D.
(1976) Explorations in the Politics of School Knowledge. Nafferton Books.
- WHITEHEAD, A.J.
(1980) In-service Education: The Knowledge Base of Educational Theory. British Journal of In-service Education Spring 1980
- WITTGENSTEIN,
L.W. (1953) Philosophical Investigations. See paragraph 410 for the crucial point about 'I', 'this' and 'here' Blackwell 1958.
- (1965) Lecture on Ethics. Philosophical Review, Boston. 1965. Lxxiv.
- YOUNG, M.F.D. &
WHITTY, G.
(1977) Society State and Schooling. Falmer.
- YOUNG, M.F.D.
(1971) Knowledge and Control. Collier Macmillan.
- ZAPLETAL, I. Towards a Theory and Methodology of Pedagogical Science. Jednotna Skola Bratislava 1975 27(3)209-219.

In the following Bibliography and Notes I have taken a number of the references above and discussed their significance in the main text. For those wanting an introduction to the central ideas in the contemporary debate on the gap between educational theory and practice I would recommend;

Kitwood (1976), 'Educational Research and its Standing as Science', Carr (1980), 'The Gap between Theory and Practice', and Dunlop (1977), 'What sort of theory should we have', give excellent analyses of the present debate. Walkling (1979), 'Structure of Knowledge Theory: a refutation', and Clark (1979), 'Education is not an academic discipline', require an understanding of the work of R.S. Peters and P Hirst.

BIBLIOGRAPHY AND NOTES

The principles behind the selection and organisation of the references and notes are based upon a dialectical solution to a number of problems in educational research. I am thinking specifically of the problem of the gap between educational theory and practice and the four problems discussed in the main text. These problems were concerned with the dialectical assumptions;

- 1) that 'I' exists as a conscious living contradiction in a practical educational problem of the form, 'How do I improve this process of education here?'
- 2) that 'I' exists as a materialist concept in the struggle to resolve the problem,
- 3) that matters of fact and matters of value are logically related in the experience, expression and formulation of the problem,
- 4) that the quality of the educative relationship which does not violate the integrity of humanity as a whole includes both a tendency to impose a structure upon practical decisions in education and a tendency to remain open to the possibilities for improvement which life itself permits.

THE GAP BETWEEN EDUCATIONAL THEORY AND PRACTICE.

The papers which should be read to give an understanding of the debate about the nature of educational theory over the past thirty years are:-

- | | |
|----------------------------|---------------------------------------------------------------------------------------|
| ANDERSON, A.W. (1951) | The Task of Educational Theory Educational Theory, Vol 1. No. 1. |
| KILPATRICK, W.H. (1951) | Crucial Issues in Current Educational Theory. Educational Theory, Vol 1. No. 1. |

Kilpatrick points out that educational theory is a form of dialogue which has profound implications for the future of humanity.

Anderson gives an early account of the belief that educational researchers should follow the methodologies of the physical sciences. This article is well worth reading as it shows a total disregard for the value-laden nature of education and for the fact that education is a form of art.

Tom Kitwood has analysed a number of published articles which have been based upon the assumptions discussed by Anderson and argued that these assumptions are the reasons why so many of the findings of educational research fail to appear convincing or relevant to those who are directly involved in education;

" It is suggested that many research studies employ a specious view of science, as a result of which important problems are often trivialized. Also some of the techniques of inquiry commonly used involve counter-educational assumptions. Thus a 'false consciousness' about education tends to be generated, and many substantive issues are obscured or neglected.

Three positive propositions are put forward. First, that research must be centrally concerned with education itself; second, that the conception of the human beings implicit in research must be one in which human powers are acknowledged; third, that fresh standards of acceptability must be established, based on a more intelligent understanding of the nature, scope, and limits of scientific inquiry. "

KITWOOD, T. Educational Research and its Standing as
(1976) Science.
Studies in Higher Education Vol 1. No.1.

William Torbert shares Kitwood's concerns about the problems of educational research and examines the reasons 'Why educational research has been so uneducational'.

TORBERT, W. Why educational research has been so
(1980) uneducational: the case for a new model of
social science based on collaborative
inquiry.
Chapter Eleven in Human Inquiry - A
sourcebook of new paradigm research.
Ed. Peter Reason and John Rowan. Pub. Wiley.

The 'Disciplines' approach to educational theory had its genesis in the work of L.A.Reid the first Professor of the Philosophy of Education at the Institute of Education of the University of London. This Institute has been very influential over the past thirty years in formalising and disseminating the 'Disciplines' approach. The influence of the Institute in the 1960's and early 1970's in the Philosophy of Education was largely due to the work of two

of its professors, Richard Peters and Paul Hirst. The following papers cover some central points in their ideas and the arguments put forward against their position.

REID, L.A. Philosophy and Education. Heinemann
(1962)

PETERS, R.S. The Place of Philosophy in the Training of
(1964) Teachers. Article in 'Education and the
Education of Teachers'. See the discussion on
pages 138-140 for the logic of the
disciplines approach to educational theory
R.K.P.

(1978) Democratic Aims and Educational Values.
unpub. paper.

Charles Clark disputes Peters' view of Educational Studies. Clark's attack is focussed upon Peters' claims both that most people study education with practical concerns in view and that it need not necessarily be so studied. Clark claims that it must be so studied, in so far as it is education, and that it cannot be 'studied in a...reflective, disinterested manner' by academics, or for that matter by anyone. Clark attacks the assumption that there is any 'it' in the sense required, that such people could mediate upon.

CLARK, C. Education is not an Academic Discipline: A
(1976) Reply to Professor Peters.
Educational Studies, Vol 2. No. 1.

One of the central points in the educational theory of Paul Hirst is the claim that the conceptual structures manifest in, and formed by, formal public knowledge are necessary to rational thought, and are consequently the prime conditioning factor of general intellectual education. Philip Walkling mounts an attack on this point.

WALKLING, P.H. Structure-of-Knowledge Theory: a refutation.
(1979) Educational Studies, Vol. 5. No 1.

Hirst has explored the implications of his views for the curriculum in general and the arts in particular in;

HIRST, P. Rational Curriculum Planning: Its Logic and
(1977) Objectives.
Melbourne Studies in Education.

(1979) Human Movement, Knowledge and Education.
Journal of Philosophy of Education. Vol. 13.

Hirst has been heavily criticised by Louis Arnaud Reid for the views in the paper, 'Human Movement, Knowledge and Education'. I think that the following passage contains the kernel of Reid's argument.

" Consider one of the 'Master Classes' which through television we are sometimes privileged to look in upon. The clear, and important, distinction between knowledge-that and knowledge with the direct object comes out clearly if I say, 'The Master knows-that it ought to go like this'. His knowledge-that and knowledge-how is clearly dispositional, and up to a point his overt message can be conveyed in general words sometimes metaphors. But only so far. Then come expressive bodily gestures, facial movements, arm and body moving, singing, perhaps demonstrating. The passage just has to go 'like this', something so particular and individual that in the nature of things the this cannot be said in any general language. It is not (to repeat once more) that there is a 'non-knowledge experience' on which knowledge-that can 'rest'. It is indivisibly a cognitive experience. Real musical intuitive knowledge is direct as the arrow. Many insightful things, in forms of knowledge-that and knowledge-how, can be said by musicians: but musical knowledge, qua musical, does not reach its musically cognitive consummation finally from knowledge-that or knowledge-how. Rather, knowledge-that, or knowledge about, music, in itself derives from direct musical gnosis, musical intuition. Even technical knowing-how of performance is barren musically without underlying musical intuition. In the sphere of art, at any rate (and perhaps in other spheres too) Professor Hirst puts the cart before the horse, or maybe he has just unharnessed the horse ! "

REID, L.A. Art: Knowledge-That and Knowing-This.
(1980) The British Journal of Aesthetics. Vol 20 No. 4.

A number of articles explore the problems of relating theory and practice. The clearest analysis of the problem of the gap between educational theory and practice is given by W. Carr.

CARR W. The Gap between Theory and Practice
(1980) J.F.H.E. No.4.

Francis Dunlop makes the important point that academics should now begin to develop educational theory from where the teacher 'is'.

DUNLOP, F. What sort of Theory should we have?
J.F.H.E. No.1.

Hartnett.A. and Naish M. have gathered together an interesting collection of papers on 'Theory and the

Practice of Education'. In the first volume of their work they discuss educational theory and educational practice in relation to the work of Paul Hirst.

See pages 120-121 in Theory and the Practice of Education Vol 1, on theory, values and the classroom teacher. Published by Heinemann Educational Books Ltd. 1976.

Other articles of interest in the Theory/Practice debate are:-

- NAISH, M. & HARTNETT, A. What Theory cannot do for Teachers
- " Bartholomew's Fare: or Theory and Practice Regurgitated.
- 1977 Educational Theory: Bromide and Barmecide. J.F.H.E. No. 3.
- NAYLOR, F.D. Theory and Educational Research. Educ. Phil. & Theory. Vol 7. pp 1-14 Australia.

I think that the need for an approach which can resolve the problem of the gap between theory and practice is clearly stated by Hartnett and Naish on pages 120-121 in Vol 1. of their Theory and the practice of education.

" Hirst's view of educational theory is not so much a description of what is now possible, but rather an outline of a long-term and perhaps unending programme. For it is by no means clear that the knowledge on which the possibility of reliable practical generalizations depends is available or will be in the near future. "

What I think the above readings will demonstrate to you is a dissatisfaction with the current state of educational theory but even the most rigorous criticisms of the dominant approach does not lead to a creative leap which establishes a coherent alternative.

My own thesis is that a coherent alternative can be created on a dialectical base. This base requires a shift in the way we think about Theory. Instead of always attempting to formulate theory in the form of propositions which conform to the Law of Contradictions, I am suggesting that we begin to express and formulate Theory in the form of descriptions and explanations for the educational development of individuals in a way which acknowledges:-

- 1) That those individuals exist as conscious living contradictions in their development.

2) That in their experience of practical educational problems matters of fact and matters of value are logically related.

3) That in their struggle to develop, their 'I' becomes a materialist concept.

4) That the quality of their educative relationships holds both a tendency to impose a structure upon practical decisions and a tendency to remain open to the possibilities for development which life itself permits.

The following readings will I think give a detailed understanding of the epistemological, ontological and ethical issues which are involved in the development of a dialectical approach to educational research.

1) THE PROBLEM OF 'I' EXISTING AS A CONSCIOUS LIVING CONTRADICTION.

I think that the importance of this problem can be understood in the terms used by Maurice Kogan, the professor of government and social administration, at Brunel University, in his review of Brian Salter's and Ted Tapper's recent book, 'Education, Politics and the State - the theory and practice of educational change.

Kogan states that Salter's and Tapper's theory dismantles, in a helpful way, the view of education as a deterministic world inhabited by Zombies. Without in any way suggesting that Professor Kogan is a Zombie I am afraid that the book does no such thing. Salter's and Tapper's rhetoric is superb. The fact that it is empty rhetoric seems to have escaped the analytic capacity of Maurice Kogan. Take for example Chapter Four of the book on 'Schooling and the Organization of Knowledge'. Salter and Tapper state;

" If the organization of knowledge is central to the experience of schooling then we need to know how it is changed and how to ascertain the social implications of such changes. The focal point for our analysis is the individual teacher, for the four positions we intend to review each consider in some detail the role of the teacher in the process of changing the organization of knowledge. "

Having made their statement that the focal point of their analysis is the individual teacher they then proceed to ignore individual teachers as living human beings and discuss their ideas in terms of empty linguistic abstractions. No living individual teacher is mentioned in the analysis which follows. This process of mystification is unfortunately typical of contemporary analyses of educational policy and practice.

I would say that the reason why the analysis remains in the form of empty rhetorical assertions is that the authors fail to understand the nature of the existence of individual teachers as conscious living contradictions. The reason for this failure has a long history and can be located intellectually in a difference of opinion between Plato and Aristotle.

Plato, in his work on Poetic Inspiration, 'Phaedrus' states, through the character of Socrates, that there are two principles involved in coming to 'know'.

" First, the comprehension of scattered particulars in one idea; as in our definition of love, which whether true or false certainly gave clearness and consistency to the discourse, the speaker should define his several notions and so make his meaning clear...

The second principle is that of division into species according to the natural formation, where the joint is, not breaking any part as a bad carver might..... I am myself a great lover of these processes of division and generalization; they help me to speak and to think. And if I find any man who is able to see " a One and Many " in nature, him I follow, and "walk in his footsteps as if he were a God ". And those who have this art, I have hitherto been in the habit of calling dialecticians.

The idea that a dialectician can hold " a One and a Many " as they occur in nature contains the possibility of contradiction. Aristotle, in his work 'On Interpretation' asserts that a dialectical questioner would put his question into a definite form and inquire " whether man has such and such a characteristic or not ".

" And at the same time it is plain that a question of the form, 'what is it?' is not a dialectical question, for a dialectical questioner must by the form of his question give his opponent the chance of announcing one of two alternatives, whichever he wishes. He must therefore put the question into a more definite form, and inquire, e.g. whether man has such and such a characteristic or not. "

PLATO Dialogues of Plato. The Phaedrus . In The Great Books. University of Chicago. page 134. (1952).

ARISTOTLE On Interpretation. Aristotle II. The Great Books. University of Chicagp. 1952 . See page 31 para. 25.

The dialectical movement was carried forward in the

work of Kant, Hegel and Marx. The extracts in the main text were taken from the following sources.

- KANT, I. Critique of Pure Reason. Translated by J.M.D. (1781) Meiklejohn. Everyman's Library 1979. See pp 257 - 281 on the Antithetic of Pure Reason.
- HEGEL, G.W. Hegel's LOGIC . Translated by William (1817) Wallace. Oxford University Press. See pp 77-79.
- MARX, K. 1844 Paris Manuscripts. See Praxis and (1844) Action. Bernstein, R. (1972) . Duckworth p.59.

The scene for the contemporary ^{or} debates between dialectical and formal logicians was set in the 1960's by Karl Popper and Herbert Marcuse. In his 'Conjectures and Refutations', Karl Popper (1963) dismisses dialectical claims to knowledge as based on nothing better than a loose and woolly way of speaking. Marcuse (1964), in his 'One Dimensional Man', points out that in classical logic the judgement which constituted the original core of dialectical thought was formalised in the propositional form S is p . But says Marcuse, this form conceals rather than reveals the basic dialectical propositional which states the negative character of empirical reality.

- POPPER, K. Conjectures and Refutations. R.K.P. See (1963) pp312-336 on 'What is Dialectic' and in particular pp316-319 where Popper justifies his assertion that dialectical claims to knowledge are based on nothing better than a loose and woolly way of speaking because every theory which involves a contradiction is entirely useless as a theory.

- MARCUSE, H. One Dimensional Man. Abacus. See pp 110-111 (1964) and pp 116-117 for Marcuse's argument that formal logic serves to conceal rather than reveal reality.

The central problem facing dialecticians, in the expression, formulation and presentation of claims to knowledge, has been stated by Ilyenkov;

" Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics, its central category. On that score there cannot be two views amongst Marxists; but no small difficulty immediately arises as soon as matters touch on 'subjective dialectics' on dialectics as the logic of thinking. If any object is a

living contradiction, what must the thought(statement about the object) be that expresses it? Can and should an objective contradiction find reflection in thought? If so, in what form? "

ILYENKOV, E.V. Dialectical Logic. Progress Publishers. (1977).

One of the central difficulties to be overcome by dialecticians is how to include the 'I' in claims to knowledge when the 'I' exists as a conscious living contradiction. There is some indication that the nature of the problem is gradually being understood. The work of Erich Fromm shows the gradual emergence of his view of the importance of 'I', as he tries to synthesize his Marxist social analysis with his humanistic values.

In his Fear of Freedom he describes a central theme of his life's work.

" This discussion will always be centered around the main theme of this book : that man, the more he gains freedom in the sense of emerging from the original oneness with man and nature and the more he becomes an "individual", has no choice but to unite himself with the world in the spontaneity of love and productive work or else to seek a kind of security by such ties with the world as destroy his freedom and the integrity of his individual self. "

In the last major work before his death, Fromm acknowledges the importance of 'I' in claims to knowledge;

" My certainty rests upon the knowledge in depth I have of the other and of my own experience of love and integrity. This kind of knowledge is possible only to the extent that I can drop my own ego and see the other man in his suchness, recognize the structure of forces in him, see him in his individuality and at the same time in his universal humanity. Then I know what the other can do, what he cannot do, and what he will not do. Of course, I do not mean by this that I could predict all his future behavior, but only the general lines of behavior that are rooted in basic character traits, such as integrity, responsibility, etc..

This faith is based on facts; hence it is rational. But the facts are not recognizable or "provable" by the method of conventional, positivistic psychology; I, the alive person, am the only instrument that can "register" them. "

FROMM, E. The Fear of Freedom. R.K.P. See p. 18. (1942)

(1978) To have or to be ? Jonathan Cape. See p.44

SARTRE, J.P. Search for a Method. Vintage. p. 180.
(1963)

What I think that these readings show is that there is a central problem for dialecticians in showing how 'I' as a conscious living contradiction enters a dialectical claim to knowledge. My own exploration of this problem has been to put myself at the centre of my research into the practical educational problem, 'How do I improve this process of education here?'. In an attempt to resolve the problem I would suggest that dialectical researchers have now a responsibility to focus upon the problem as defined by Ilyenkov. In attempting to resolve the problem I have faced the problems of relating facts and values, structures and transformations and of understanding the development of my own personality in term of the materialist concept 'I'.

THE MATERIALIST CONCEPT "I"

In the text I highlighted three major differences between linguistic and materialistic concepts. I contrasted;

- 1) Having a concept with Being a concept.
- 2) Grasping a principle with a reflection upon the process through which one's own concrete singularity was produced.
- 3) The ability to use words correctly with the struggle to live correctly.

I must confess that I have had to spend many hours of reflection to develop my understanding of the materialist concept "I". At the beginning of my philosophical studies I was influenced by the linguistic analyses of R.S. Peters. In particular I took the idea of R.S. Peters and P. Hirst in their 'Logic of Education' on what it means to have a concept;

" As, however our understanding of what it is to have a concept covers both the experience of grasping a principle and the ability to discriminate and use words correctly, which is observable in the case of others as well as ourselves, there is, amongst philosophers generally a tendency to rely on this publicly observable criterion of having a concept. For it is possible to say more about it than it is about the subjective side. This public criterion is necessary to identify having a concept, but having a concept is not identical with it . "

HIRST, P. & Logic of Education. R.K.P.
 PETERS R.S.
 (1970)

The way in which linguistic philosophers have contributed to a clarification of the linguistic concepts of education, can be studied in R.S. Peters seminal work, 'Ethics and Education' .

PETERS, R.S. Ethics and Education. Allen and Unwin.
 (1966)

I think that a number of crucial distinctions between linguistic and materialist concepts can be understood through a study of what could be meant by ' grasping a principle and the ability to discriminate and use words correctly' .

Hirst and Peters do stress that this public criterion is necessary to having a concept but that having a concept is not identical with it.

When we think in linguistic forms of conceptual analysis the 'principles' which we 'grasp' are linguistic abstractions. Concrete, singular cases are subsumed under a conceptual form. For example when R.S. Peters (In his Ethics and Education) asks what is implied for a person who is seriously asking himself questions of the form, ' What ought I to do', he treats the concrete singular 'I' as insignificant as it is subsumed under the linguistic abstraction 'person' .

In the development of my own understanding of the materialist concept "I", I am indebted to the work of Lucien Sève in his Man in Marxist Theory and the psychology of personality. Without the insights I gained from a study of the section in this work on 'Forms of individuality and theory of the individual' I do not believe that my own understanding of materialist concepts would have developed its present form.

In particular I am thinking of a conclusion, reached by Sève, which he thinks is of the greatest importance ;

" This leads us to a conclusion of the greatest importance: although the individual finds his human essence outside himself in the social world, the psychological form of this human essence is an effect of concrete individuality and only originally exists in concrete individuality. "

A second point which I have taken to be of profound significance is Seve's discussion of the task of conceptual thought;

" ..it must express the logic of the essential processes through which the development of this object is brought about. Doing which, the concepts absolutely do not tell us how the singular concrete is in general but in general how the singular concrete is produced. This is precisely why the essence can then be reached in its concrete reality, the singular grasped in the generality of the concept: in dialectical forms of abstraction the essence is not what appears common to the object and to others with which one compares it, but the necessary internal movement of the object grasped in itself, i.e. it is the essence of this object; the generality of the concept is not constituted by eliminating the singular but by raising the singular to the level of its internal logic, i.e. it constitutes 'the specific logic of the specific object'.

The implications of these ideas for my own work are that I have taken the essence of my personality, expressed in the materialist concept "I" to be the total system of activity of a given individual (myself) which forms and develops throughout my life and the evolution of which constitutes the essential content of my biography.

SEVE, L. Man in Marxist Theory and the psychology of
(1978) personality. Harvester.

For the section on Forms of individuality and theory of the individual, see pages 253-286.

For the point that the psychological form of the individuals's human essence is an effect of concrete individuality and only originally exists in concrete individuality see page 256

The crucial statement in which Seve defines the task of conceptual thought can be found on pages 264-265.

Seve's definition of " personality " is on page 451 of the postscript to the Third French Edition.

To understand the nature of 'I' as a materialist concept I think that you will find it necessary to reflect

upon your own attempts to overcome an educational problem in your own educational development. If we assume that your personality and your educational development are closely related in the sense that your educational development is part of the total system of activity which forms and develops in your life and the evolution of which constitutes your biography, then a reflection by you upon your educational development could reveal the material sense in which 'I' is a concept.

If you formulate a problem of the form 'How do I improve my educational practice?' or, 'what ought I to do in my educational development then, as you solve your problem or work out a solution, your 'I' is changing. As you reflect upon the way you are working towards a solution of your problem it may be that we share a dialectical approach to educational problems in the form;

- 1) I experience a problem because some of my values are negated.
- 2) I imagine a solution to my problem.
- 3) I act in the direction of the solution.
- 4) I evaluate the outcomes of my actions.
- 5) I modify my problems, ideas and actions in the light of my evaluations.

Being the concept "I" takes on a materialist meaning as you reflect on your own development and offer an explanation for that development which contains "I".

Instead of grasping a principle, in a linguistic form, I suggest that you reflect upon the process in which your own concrete individuality is being produced. As Seve says one of the tasks of conceptual thought is to show that the generality of the concept is not constituted by eliminating the singular but by raising the singular to the level of its internal logic.

In reflecting upon the process in which your own concrete singularity is produced I am saying that you will experience your 'I', in the educational problem as a conscious living contradiction. As you offer descriptions and explanations for the way in which you attempted to resolve the contradictions then you will be expressing and formulating a dialectical form of presentation which contains 'I' as a conscious living contradiction and a materialist concept.

3) THE PROBLEM OF RELATING FACTS AND VALUES IN DESCRIPTIONS AND EXPLANATIONS FOR THE EDUCATIONAL DEVELOPMENT OF INDIVIDUALS.

W.D. HUDSON in his Editor's Introduction to his book 'The Is/Ought Question', states that the central problem in moral philosophy is that commonly known as the is-ought problem. How is what is the case related to what ought to be the case- statements of fact to moral judgement. In the same book A.C. MacIntyre in his "Hume on 'is' and 'ought'" discusses the statement made by Hume which is generally attributed as the source of the principle which has become known as the Principle of the Autonomy of Ethics. This principle holds that statements of fact and statements of value form logically independent realms of discourse. Now what Hume actually requests is that a researcher who is relating matters of fact and matters of value should give a reason for what to Hume is inconceivable i.e. how a statement of value can be deduced from a statement of fact.

Now without in any way questioning Hume's concern that a reason should be given, I would not ask the question in the same way. The way we formulate questions is most important for what counts as an appropriate answer. I would not ask questions about the deduction of one kind of statement from another. I ask question about producing, not statements but an individual's educational development. When I experience, and formulate a practical educational problem of the kind, 'How do I improve this process of education here?', 'I' experience myself as a living contradiction in which matters of fact 'How do I.....this process ofhere?' are integrated with matters of value '.....I improve.....education.....?'. In the problem 'I' exist as both a matter of fact and a matter of value. In my struggle to overcome the negation of some of my educational values I produce a matter of fact from a matter of value. I have already given the dialectical form of the explanation for how I do this. I have presented the relationship between matters of fact and matters of value within the dialectical form of my enquiry. This does not violate the principle of the autonomy of ethics, as applied to my purely linguistic thought. What it does is to include my linguistic thought within my educational development as a thinking body. Does not this accord with what each one of us knows about himself namely that our thinking takes place within our thinking bodies?.

HUDSON, W.D. The Is/Ought Question. Editorial Introduction on page 1. Macmillan.

MACINTYRE, A.C. Hume on 'is' and 'ought'. Chapter One in The Is/Ought Question. op.cit.

4) THE PROBLEM OF RELATING STRUCTURE TO TRANSFORMATION.

KOSOK
(1976)

The systematization of Dialectical Logic for
the study of Development and Change.
Human Development 19:325 -350.

A SUMMARY OF TEN RESEARCH REPORTS

1) A PRELIMINARY INVESTIGATION INTO THE PROCESS THROUGH WHICH ADOLESCENTS ACQUIRE SCIENTIFIC UNDERSTANDING.

This study is based upon a transmission view of education and a commitment to normal science. A controlled experiment is described which attempts to isolate causal variables in the transmission of important concepts. Data is collected with a standardised interview whose content and construct validity is based upon Piagetian Cognitive Stage Theory.

2) WILTSHIRE SCIENCE TEACHERS PROJECT THEMSELVES INTO IMPROVING LEARNING SITUATIONS FOR THEIR PUPILS.

This report was constructed in a creative phase of the enquiry. It is inchoate in the sense that it has no formal structuring principles. The report contains transcripts of interviews with teachers and pupils in which the teachers express their intentions and the pupils give their responses to the teachers. The report also contains examples of the learning resources produced by the teachers and the teachers' self-evaluations of their own activities. The report can be characterised as an evaluator's report in that it was attempting to fulfil the following aim;

" The process of evaluation requires the co-ordinator to make available details of your intentions, the learner's responses, the resources produced and the transcripts of the evaluation sessions. This process was accepted on the assumption that improvements in learning situations would require a creative and critical response from us all. We believed that this response would develop in trusting relations and that we should express faith in each other's capacity to evaluate our questions, activities and products in critical dialogues between ourselves. This report is simply my contribution to the process of evaluations. "

3) AN 11-14 MIXED ABILITY PROJECT IN SCIENCE :- THE REPORT ON A LOCAL CURRICULUM DEVELOPMENT.

This report describes my work, with other teachers, as I attempt to see how they can be helped to improve the quality of their pupils' relationships, activities and products, in mixed ability groups. The report describes and interprets the formation, operation, funding and evaluation of a working group of teachers, who design, organise and

evaluate their attempts to produce enquiry learning situations in science for 11-14 year olds in mixed ability groups.

4) IMPROVING LEARNING FOR 11-14 YEAR OLDS IN MIXED ABILITY SCIENCE GROUPS.

This report describes how a group of teachers created a network of in-service support, organised resources for enquiry learning and established a process of self-evaluation. It also contains an explanation for the lives of the teachers in terms of the teachers' problems, imagined solutions, actions and evaluations.

This report is a reconstructed version of report 3. After report 3 had been rejected by the researched, I constructed report 4 to take account of the criticisms. In report 4 I attempted to explain the lives of the teachers in terms of their problems, and in terms of the language which was related to their commonsense schemes of interpretation.

5) THE PROCESS OF IMPROVING EDUCATION WITHIN SCHOOLS.

This report presents one possibility for the construction of an educational theory which is scientific, dialectical and retains a direct link with the consciousness of educators in their educational practice.

6) TWO VIDEO TAPES OF J. WHITEHEAD'S EDUCATIONAL PRACTICE.

This form of presentation marks a break with purely linguistic representations of educational practice. This report enables me to point to the practice which I am attempting to describe and explain. It also enables me to point towards the values and the aesthetic which I claim are embodied in my practice.

7) CONSTRUCTING AN EDUCATIONAL THEORY FROM THE QUESTION, "HOW DO I IMPROVE THIS PROCESS OF EDUCATION HERE?".

In this report I attempt to describe and explain my own educational practice as I attempt to answer my question, "How do I improve this process of education here?", from within the classroom with my pupils. I use the video tapes of my practice to point to the values and the aesthetic which I claim is embodied in my practice.

8) EDUCATIONAL PRACTICE AND ITS THEORY.

This report is presented as a thesis. It contains the following abstract:-

This thesis presents a claim to know an individual's educational practice. On the basis of this claim it is argued that the dominant concept of educational theory is too limited to produce an explanation which corresponds to an individual's educational practice. A psychological form, for a dialectical materialist's approach to the production of educational theory, is presented as an alternative to the dominant concept of educational theory. The alternative is based upon an exploration of the implications of the practical educational problem, 'How do I improve this process of education here?'. These implications include the fact that the problem was formulated within the political and economic realities of the division of labour in society.

9) A DIALECTICAL APPROACH TO EDUCATIONAL RESEARCH

This report analysed the ideas in Report 8 and presented a dialectical claim to know an individual's educational development. The dialectical claim to know, contains both the one enquiry, 'How do I improve this process of education here?' and the enquiries in the philosophy, psychology and sociology of education, and in educational research methodologies and educational theory.

10) THE IMPLICATIONS OF AN ALTERNATIVE(DIALECTICAL) EDUCATIONAL THEORY FOR THE IN-SERVICE EDUCATIONAL DEVELOPMENT OF INDIVIDUALS.

This report is also presented as a thesis. The abstract states;

The past twenty years have seen the emergence, dominance and partial decline of an approach to educational theory which has become known as the 'disciplines' approach. The principle of differentiation in this approach is contained in the statement of R.S. Peters that ...' Though it (educational theory) must be presented in a differentiated way the different disciplines must also mesh in with and be seen to mesh in with each other in relation to matters of educational policy and practice'.

This thesis seeks to replace the principle of differentiation of the 'disciplines' approach with a 'dialectical' alternative. The alternative is presented in terms of an individual's claim to know his own in-service educational development.

To show that the approach has some universal potential its implications are explored in the in-service educational development of a manager in a local authority youth service,

a teacher and an educational researcher.

The dialectical approach is shown to have some emancipatory potential. It also throws some light on the problem of finding a way of integrating the contributions of the different disciplines of education in the solution of a practical educational problem.

2.1 A DIALECTICAL APPROACH TO EDUCATIONAL RESEARCH

This report analyzes the ideas in Report 1 and presents a dialectical claim to know an individual's educational development. The dialectical claim to know contains both the question, 'How do I improve this process of education here?' and the question in the philosophy, psychology and sociology of education, and in educational research methodology and educational theory.

The dialectical approach to educational research is presented as a thesis in the dialectical approach to educational research.

This report is also presented as a thesis in the dialectical approach to educational research.

The past twenty years have seen the emergence, dominance and partial decline of an approach to educational theory which has become known as the 'disciplinary' approach. The paradigm of differentiation in this approach is contained in the statement of R.S. Peters that '... though it [educational theory] must be presented as a differentiated set of different disciplines and also seen in with and be seen to mesh in with each other in relation to general educational theory and practice'.

This thesis seeks to replace the paradigm of differentiation of the 'disciplinary' approach with a 'dialectical' alternative. The alternative is presented in terms of an individual's claim to know his own in-service educational development.

To show that the approach has some universal potential, the implications are explored in the in-service educational development of a manager in a local authority youth service.

through purely formal structural descriptions. Riegel however, presents his dialectical theory in the form of structural statements which follow the Law of Contradiction. He appears to ignore his own point that psychology has yet to reach the state where it can be presented in this form.

According to Riegel's own views we dialectical psychologists still need ostensive definitions to relate to our specialised field of observations. In the case of a dialectical theory of human development I take this field to be intimately connected to living human beings. We should surely be using ostensive definitions in the construction of a dialectical theory of human development to point to cases where this development occurs. We could then establish a community of discourse in which we could communicate our meaning when we refer to particular cases.

I am saying that Riegel contradicts his own assertions in the form of his presentation but that his contradiction provides us with a way forward. Whilst saying that psychology is not yet at the stage of removing its form of presentation from its base in ostensive descriptions he presents his ideas in the form of structural descriptions. Not only does Riegel's presentation suffer from an inadequate conception of 'contradiction' but it also suffers from a lack of awareness of the internal contradictions which offer a way of resolving the contradictions in the development of the theory.

My own way forward is to overcome this contradiction, in practice, with the assistance of four insights from the work of Sartre(1963), Ilyenkov(1977), Kosok(1976) and Seve(1978). The four points I think provide a way forward can be listed as follows;

1) Sartre says that each questioner must understand how the questioned - that is one's self - exists one's own alienation, how one struggles to transcend this alienation and in the process of transcending the alienation becomes alienated once more.

2) Ilyenkov in his exposition of dialectical logic in action poses the problem of contradiction.

Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics, its central category... If any object is a 'living contradiction', what must the thought/statement about the object be that expresses it?

3) Kosok shows how an open-ended nonlinear dialectic process can be depicted as a self-linearizing form

which reveals transition structures as nodal points of self-reflection.

4) Sève points out that a materialist conception of an individual's dialectical development would attempt to show how in general the concrete individual was produced in the division of labour. The effort would be to raise the explanation, for the dialectical development of the concrete individual, to the logic of its development in a way which could show how in general concrete individuals were produced within the division of labour.

If we take ourselves, in the division of labour, to exist as living contradictions in the sense that our dialectical unities, expressed in 'I', contain mutually opposed determinations, then it could well be that we should, as dialectical psychologists, be showing how we ourselves develop. In this way we could overcome the problem of starting our analysis from within the logic(and linguistic form) which excludes the basis of contradiction from which we are working. By starting with our own 'I' 's in the division of labour we must however be careful to distinguish this 'I' from the Hegelian 'I'.

I am saying that by starting our investigations with our 'I' in the division of labour, not as Hegelian 'I' s in the sense of abstract freedom but as the embodiment of concrete freedom, then we would discover dialectical forms for the presentation of a dialectical theory of development which would include the existence of our 'I''s as living contradictions and would not eliminate such contradictions within the formal structure of our linguistic representations of our practice. In this way I am suggesting that we would overcome Ilyenkov's problem of contradiction, we could take Sartre's point seriously, demonstrate how an open-ended nonlinear dialectic process can be depicted as a self-linearizing form which reveals transition structures and raise the explanation, for the dialectical development of the concrete individual, to the level of the logic of the development of the specific logic of the specific object.

In conclusion I would like to point out how I see my own research, as a form of action research, in relation to the work of Grundy and Kemmis(1981). I have examined above some of the implications of my work for dialecticians in the different disciplines of education. I will conclude with an examination of some of the implications for dialecticians in educational research.

In particular I wish to relate my work to the work of Grundy and Kemmis (1981) at the point where they say that, "Action research seeks to give individuals the power to act for change (action) by generating knowledge through rational