

**A DIALECTICIAN RESPONDS TO A PHILOSOPHER WHO HOLDS AN
ORTHODOX VIEW OF KNOWLEDGE**

ARE WE REALLY ADDRESSING THE SAME QUESTION?

A RESPONSE TO WILSON'S CRITICISMS

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ABSTRACT

The purpose of this paper is to examine and reject a number of criticisms which can be made against a dialectical approach to educational knowledge by proponents of an orthodox epistemology.

DIALECTICAL AND ORTHODOX VIEWS OF EDUCATIONAL KNOWLEDGE

The purpose of my original paper was to raise the question: why are the aesthetic dimensions of Higher Education omitted from the Journal? The reasons I gave for this omission focussed upon the prevailing view of educational knowledge in institutions of Higher Education.

Wilson responded to my paper by examining,

“from an orthodox point of view questions of dialectical logic; knowledge acquisition and knowledge structures; facts and values; and theory and practice. The main concern is to show that there is no essential conflict between the pursuit of objective knowledge and human values. There is, on the contrary, the highest educational virtue in achieving impersonal, objective knowledge.” (1, p.66)

Wilson does not respond to my main enquiry which concerned the omission of questions concerning the aesthetic dimensions of Higher Education from the Journal. His article is however most useful for a dialectician as it reveals the kinds of criticism a dialectical view of educational knowledge provokes from an orthodox point of view. It also raises the problems of communication between those who hold dialectical and orthodox views of educational knowledge.

Wilson summarises my thesis as follows:

“Educational researchers typically presume that there are impersonal objective knowledge structures. Objective knowledge is systematically differentiated and codified in the forms of propositional logic. Assessment and educational attainment properly deploys an (impersonal) propositional calculus. Evaluation of educational outcomes requires reference to personal educational and human values and properly deploys dialectical logic. In reality there is no reference to values and no deployment of dialectical logic in educational research practice. This is because people, their values and the ways that they actually learn, are conspicuously absent from the educationalist’s picture of the processes and outcomes being assessed and evaluated. Education should be unequivocally directed towards resolving the problems of people as ‘living contradictions’. These are experienced by individuals as primarily moral and aesthetic, that is to say essentially personal problems; especially the problems of shared humanity, “humanity as a whole”. The key to current problems in assessment and evaluation lies in the distinction between the formal and dialectical views of contradiction and a general neglect of the latter due to a failure to appreciate its importance for understanding of human life in general and learning processes in particular.”(1, p.67)

Wilson presents my basic position in a way that I would accept. However, I would like to add material contradictions to the moral and aesthetic contradictions and I would like to include social problems within the personal problems. I think that these additions are significant because they place the problems in their political and economic context.

“Whilst it is clear that there is much to endorse in Whitehead’s thesis, there are nevertheless several more or less serious problems with it. What I have to say by way of constructive criticism about it falls conveniently under six headings:

- 1) “Assessment” and “Evaluation”
- 2) Contradiction
- 3) Knowledge acquisition and knowledge structures
- 4) The differentiation of knowledge structures
- 5) Facts and values
- 6) Theory and practice.

What I have to say is based on very orthodox views of knowledge and education, but I hope it is none the worse for that, since it is orthodoxy that Whitehead attacks.”(1, p.68)

Wilson then goes on to criticise my views in a way that I think would fulfil any Popperian’s desire for ‘savage criticism’ as a way of contributing to the growth of knowledge. Wilson’s criticisms can be answered under his own headings.

1. "ASSESSMENT" AND "EVALUATION"

In my article I explained that where criteria can be explicated in a propositional form and applied directly to an educational outcome I would say that I was assessing and that where the criteria are the values I use in making choices, rather than rules of choice, I would say that I am evaluating.

Wilson's criticism of my position is as follows:

"The distinction drawn here is a verbal mirage that can be easily dispelled if we keep in mind, not only that matters of fact can be stated in propositional form, and values used, but also that moral precepts can be stated and matters of fact used. This will be absolutely crystal clear from the following table:

<i>OBJECT</i>	<i>STATEMENT</i>	<i>(in the propositional form)</i>	<i>USE</i>	<i>(or action)</i>
FACT	S FACT	"Objects of specific gravity less than one will float in water"	UF	Floating (SG<1) objects in water
VALUE	S VALUE	"People who harm people ought to be condemned"	UV	Condemning harmers

Significantly, Whitehead ignores (a) the use to which knowledge of propositions is put (UF) and (b) statements of value (SV). That is why he brackets propositions (explications/descriptions) with assessment, and values and use with evaluation. But the propositional form is equally appropriate for enunciation of matters of fact (such as physical phenomena) and matters of value (such as rules of choice). Propositional logic is also equally inappropriate to enacting whatever is enunciated; whether facts or values. Certainly, the propositional form of statements does not itself enjoin or involve the performance of actions in accordance with rules of choice (such as moral precepts), but that is not, as Whitehead seems to suppose, a defect of propositional logic. Statements in the propositional form are equally impotent to cause wood to float on water but that is not regarded as a defect of propositional logic! (As Einstein remarked: it is not a defect of physics that it does not capture the taste of soup)." (1, pp. 69-70)

From his orthodox view Wilson asserts that "the propositional form is equally appropriate for enunciation of matters of fact (such as physical phenomena) and matters of value (such as rules of choice)". My reasons for thinking that Wilson is mistaken are as follows.

Education is a matter of value. It is a value-laden practical activity which is essentially concerned with the giving of form to one's own life. Educational Knowledge which holds a claim to understand the educational development of an individual must represent such an ethical and aesthetic activity in a form which can be publicly criticised.

In his lecture on ethics Wittgenstein (2) points out a difficulty he experiences in finding a way of expressing the meaning of values in language:

“. . . if certain experiences constantly tempt us to attribute a quality to them which we call absolute or ethical value and importance, this simply shows that by these words we don't mean nonsense, that after all what we mean by saying that an experience has absolute value is just a fact like other facts and that all it comes to is that we have not yet succeeded in finding the correct logical analysis of what we mean by our ethical and religious expressions. Now when this is urged against me I at once see clearly, as it were in a flash of light, not only that no description that I can think of would do to describe what I mean by absolute value, but that I would reject every significant description that anybody could possibly suggest, *ab initio*, on the ground of its significance. That is to say; I see now that these nonsensical expressions were not nonsensical because I had not yet found the correct expressions, but that their nonsensicality was their very essence. For all I wanted to do with them was just to go beyond the world and that is to say beyond significant language. My whole tendency and I believe the tendency of all men who ever tried to write or talk Ethics or Religion was to run against the boundaries of language. This running against the walls of our cage is perfectly, absolutely hopeless. Ethics so far as it springs from the desire to say something about the ultimate meaning of life, the absolute good, the absolute valuable, can be no science. What it says does not add to our knowledge in any sense. But it is a document of a tendency in the human mind which I personally cannot help respecting deeply and I would not for my life ridicule it.”(2, pp.11–12)

The point I take from this work is that there is a problem in trying to communicate the meaning of ethical values. Wittgenstein referred to his problem in terms of running against the boundaries of language. I have presented this extract from Wittgenstein simply to show that I think that other philosophers have acknowledged that the propositional form is not equally appropriate for the enunciation of matters of fact and matters of value.

The crucial difference between us is that Wilson believes that matters of value can be expressed in a propositional form and used as rules of choice. I believe that matters of value (such as education) cannot be represented adequately in the propositional form in claims to educational knowledge and I am advocating that such forms of discourse need supplementing with other forms of presentation such as visual records of practice. The criteria I use to evaluate a claim to educational knowledge are the values I use in giving a form to my educational development. I think that this is similar to Kuhn's (3) position where he says that the standards of judgement are values we use in making choices rather than rules of choice.

For these reasons I hold that Wilson is mistaken in his view that the propositional form is equally appropriate for enunciation of matters of fact and matters of value. I have suggested that we distinguish clearly between “assessment” and “evaluation” by adopting the criteria I have proposed. The distinction has the merit of revealing some serious problems for those who are evaluating the ethical and aesthetic dimensions in a claim to educational knowledge.

2. CONTRADICTION

For those readers who are concerned to understand the way dialecticians are criticised by those with orthodox views of knowledge I can recommend a close study of Wilson's section on contradiction. Wilson claims that to talk of 'living contradictions' serves no useful purpose. He says that I pervert the concept of contradiction and that in my use of the jargon of dialectic I confuse issues of conflict and contradiction. He also says that I put dialectical and propositional logics in opposition. As contradiction is the central category of dialectics I must refute these criticisms.

a) To talk of 'Living Contradictions' serves no useful purpose

"Whitehead depicts people as 'living contradictions', as if this were in some way in opposition to logical contradiction. But to speak of people as 'living contradictions' is merely a *facon de parler* . . . The main, unexceptionable, thought behind talk of 'living contradictions' is that people have conflicting beliefs, emotions, intentions, ideals, interests, roles and responsibilities. It serves no useful purpose and only confuses things hopelessly to speak of conflicts (personal sorts of things) and contradictions (logical, impersonal sorts of things) as if they were the same sort of thing. Sight seems to be lost here of a simple consequence of the truth that contradiction is a purely formal concept." (1, p.72)

The orthodox philosopher dismisses the dialectician's talk of contradiction as a *facon de parler*.

My own position is that contradiction is also a rigorously defined concept of dialectical logic. I acknowledge that there is a fundamental problem for dialecticians who wish to present a claim to knowledge which contains contradictions. This problem has been succinctly put by Ilyenkov (4) in his work on Dialectical Logic:

"Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics, its central category . . . but no small difficulty 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?" (4, p.320)

Wilson says that to talk about 'living contradictions' serves no useful purpose. One of the uses of logic is that it helps to develop forms of thought which lead to an understanding of the nature of education. By developing adequate descriptions and explanations for the educational development of individuals my hope is that we develop a better understanding than we have at present of what we must do if we wish to improve a process of education. I value educational knowledge for two reasons. Firstly in that it gives me educational information and secondly that it is concerned with the

generation and testing of educational theory. In the latter we should use ideas which are appropriate for the development of our understanding of the educational development of individuals. I think that one such idea is that of a 'living contradiction'.

I find the idea of a 'living contradiction' useful in combating criticisms made of a dialectical position by orthodox philosophers. The propositional form attempts to eliminate contradictions from correct thought; a dialectician embraces them as essential to our understanding of human development. How do we test out which is the most appropriate form of explanation for the educational development of ideas? I would encourage individuals to present descriptions and explanations for their own development in higher education to see if they find the idea of 'I' as a living contradiction both useful and necessary.

As well as being a useful idea in refuting criticisms made from an orthodox position it has been useful in discussions between dialecticians. To clarify still further what I see as the useful purpose of talking about 'living contradictions' I will criticise Ilyenkov's work in order to suggest a resolution to the problem above.

In the introduction to his work on Dialectical Logic Ilyenkov says:

"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, i.e. 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'." (4, p.9)

Given that Ilyenkov was concerned with "developing the essence of the matter", why did he fail to resolve the problem of finding an appropriate form for a linguistic presentation of a 'living contradiction'? My answer to this question is that he left us with this problem because he did not examine his own existence as the essence of the matter. Thus he did not examine the form of presentation he would accept for a description and explanation of his own development as a living contradiction.

In my research I have explored the practical and theoretical implications of asking myself questions of the form 'How do I improve this process of education here?' The 'I' in such questions exists as a living contradiction in the sense that I hold within myself, as a dialectical unity, mutually exclusive opposites of the form, I value freedom/I am negating freedom, or I value social justice/I am negating social justice. This experience of mutually exclusive values, moves me forward in a struggle to overcome the original experience of negation.

The usefulness of talking about 'living contradictions' in descriptions, explanations and evaluations of an individual's educational development is that it gives us a way of thinking about that development which is more appropriate than the orthodox position.

Wilson's next point is,

b) That I pervert the concept of contradiction

Wilson says that the statement I make below is an obtuse way of saying that the world as it is ('in fact') is not as we desire it to be, or as it ought to be. He says that the jargon of dialectic confuses rather than clarifies this important but simple point. Before I examine my original statement I will summarise what I think are significant points of scholarship in our present understanding of 'dialectic'.

The dialectic has a two thousand year history and its essence is that it is a way of coming to 'know' through a process of question and answer. Plato, for example, in his work on poetic inspiration 'Phaedrus' (5) points out that there are two methods we use in 'coming to know'. We use our capacity to analyse things into many components and we use our capacity to synthesise a number of disparate elements under one general idea. Plato holds that the art of the dialectician is in holding both the 'One and the Many' together. The contemporary debates between formal and dialectical logicians can be traced back to differences between Aristotle and Plato. In his work 'On Interpretation' (6) Aristotle stated that a person using the dialectic as a 'way of coming to know' had to put his question into a definite form and enquire whether the man had such and such a characteristic or not. In Plato's view, the art of the dialectician appeared to contain contradiction by allowing both the 'One and the Many' to be held together. Aristotle demanded that we should choose whether a man had such a characteristic or not, and thus tried to eliminate contradiction from 'correct thought'. In more recent times we have Popper (7) claiming that dialectical claims to knowledge are based upon nothing better than a loose and woolly way of speaking and we have Marcuse (8) pointing out that attempts to describe and explain human action in a propositional form 'mask rather than reveal' reality.

Let me explain why I think that a dialectical approach to knowledge helps us to understand some of the fundamental contradictions of human existence. Like Plato I think that our aesthetic capacities are of fundamental importance in helping us to understand the nature of our existence. This is why I am so disturbed by their omission from the Journal. What I was attempting to communicate in the passage below was that the art of education is of profound importance in the world because it contains a vision of peaceful and productive unity.

"If we take an artist to be essentially concerned with giving form to whatever material he is working with we can take the art of education to be concerned with the giving of form to human existence. If we take our own existence to be the material, then we can take the art of education to be our own struggle to give form to our existence. This struggle can be related to the conception of Humanity as a Whole.

I am making the assumption that the existence of fifteen million children dying of starvation each year, and the dropping of the nuclear bombs on Hiroshima and Nagasaki, violate our understanding of 'Humanity as a Whole'. This is an aesthetic form of understanding in the sense that we have a view of humanity as a whole in which the existence of starvation, torture and nuclear war has been overcome. The actual existence of these events in the world violates our aesthetic understanding of

humanity and prevents the integration of our understanding into a unity.”(9, p.78)

My point of agreement with Wilson is that I do believe that the world is not as it ought to be. This does not, however, devalue the dialectic or its nucleus ‘contradiction’ as an approach to our educational investigations. The words above are my attempt to reveal a fundamental contradiction of existence which may be overcome in the practice of the art of education. The value of the dialectic is that it helps us to understand these contradictions. The relation between the art of education and these contradictions may become clearer if I relate what I say to the art of living (10).

“ . . . living itself is an art, in fact, the most important and at the same time the most difficult and complex art to be practised by man. Its object is not this or that specialised performance, but the performance of living, the process of developing into that which one is potentially. In the art of living, man is both the artist and the object of this art; he is the sculptor and the marble; the physician and the patient . . . It is interesting at this point to ask why our time has lost the concept of life as an art?” (10, pp.17–18)

Why do we omit the art of education, as part of the art of living, from our evaluations of Higher Education? In raising this question I am conscious of the wide gap between Wilson’s philosophy and my own. The significance of such gaps was highlighted by Kilpatrick (11) in the first issue of Educational Theory.

“ . . . Educational Theory is a form of dialogue which has serious implications for the future of humanity. He (Kilpatrick) states that within his own country (America) and within the world, contending philosophies are so far apart that consensus is made very difficult, if not impossible. He believes this constitutes the greatest single long-term threat to our civilisation and that education must face up to this problem in spite of its inherent difficulties.”(9, p.77)

I think that Wilson’s response to my paper is a clear example of Kilpatrick’s point that ‘contending philosophies are so far apart that consensus is made very difficult’. In addition it has become clear that communication between philosophers is made very difficult. I am told by Wilson that my concern to resurrect the dialectic as an antidote to propositional logic is far from being the radical new demand that I seem to think, “indeed it is rather *jejune*”. (1, p.73) In one sense, of course, the demand for a dialectical perspective has been with us for centuries. Any originality in my own work rests in its potential for providing an alternative form of educational theory to the ‘disciplines’ approach. I am trying to use whatever creative capacity I possess to develop a form of educational theory which includes the art of education. My research has convinced me of the fundamental significance of my experience of myself as a living contradiction in any valid account of my educational development. At the core of this contradiction is my identification with humanity as a whole. This identification is in a relationship contradictory to the present state of humanity. I use contradiction in the dialectical sense that we exist as living contradictions in holding mutually exclusive opposite values within our personal and social lives.

The vision of a peaceful and productive world is an aesthetic vision in the sense that it has a harmonious and unified form. The vision is embodied in the quality of relationship between the educator and his or her pupil, or in the case of our own education, in the quality of our relationship with the World. I am curious to hear whether other readers experience themselves as 'living contradictions' in terms of their educational values. In particular, would they accept that any adequate explanation for their educational activities must give reasons in terms which include a quality of human relationship within which the unity of humanity appears possible? I repeat that my point was not to say that the world as it is, is not as it ought to be. My point was that if we are to understand the art of education in terms of its significance for moving us towards a more peaceful and productive world then we will experience one of the fundamental contradictions of human existence. This contradiction is experienced in terms of our commitment to humanity as a whole and the experience of the violations of this aesthetic vision within the world in which we live and work.

If education is to have profound implications for the future of humanity I think that we have to understand the nature of such contradictions and the nature of the barriers to the development of a more peaceful and productive world. One such barrier is, I believe, the sole use of propositional logic for presenting claims to educational knowledge. It is a barrier because the propositional form is inappropriate as the sole form within which to present a claim to know the art of education. We need this art for a vision of a more peaceful and productive world. It should therefore be acknowledged to be of significance in the evaluation of an individual's higher education.

Wilson then says that:

c) I put dialectical and propositional logics in opposition

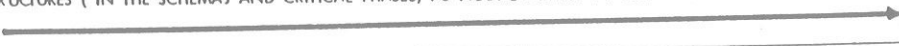
This statement is manifestly false. The truth is that in my dialectical view of education I use propositions within the dialectical form of my enquiry. I see my educational development as a process of transformation within which propositional forms can be clearly distinguished. In my original article I presented a classification of my research reports which showed that my educational development could be partially understood as a scientific enquiry. The principles used in the classification were presented in a propositional form and drawn from the work of Medawar (12) and Popper (13). Any idea that I put the two logics in opposition should be dispelled by the analysis shown in the table below. The table shows how I have used Kosok's (13) work to demonstrate how a propositional form exists within the dialectical form of my educational development. I would draw Wilson's attention to the fact that dialecticians do not put the two logics in opposition. It is rather the philosopher with an orthodox view of knowledge who excludes the academic legitimacy of dialectical claims to knowledge and places them in a conflicting relationship. The dialectician shows how the orthodox view can be incorporated and transcended within his approach.

I use Kosok's (14) idea of a 'Transition Structure' to show how the propositional form (in, for example, the disciplines of education) can be incorporated within the process of transformation of education. I am using the concept of 'Transition Structure' as a form of thought which exists within the transformatory nature of a form

of life. For example, in the table below I distinguish five Popperian Schemas (13) of formulating problems, proposing hypotheses, eliminating errors and reformulating problems. I have also used Medawar's (12) classification of a scientific enquiry. Medawar distinguishes between critical and creative phases in a scientific enquiry. He says that these phases alternate and interact. In the creative phase we formulate an idea, we propose a hypothesis or we experience a problem. In the critical phase we test the idea, usually by experiment. This pattern of the alternate creative and critical phases in the enquiry can be seen in the table below. Mitroff and Kilman (15) distinguish four methodological approaches to the social sciences. They refer to the four approaches as those of the Analytic Scientist, the Conceptual Theorist, the Conceptual Humanist and the Particular Humanist. They give the different criteria for distinguishing the modes of enquiry and the preferred logics which characterise each approach. The table shows where I have used the four approaches in my reports. The pattern shows that the critical, schematic and methodological reports correspond. It also indicates the possibility of a fifth methodological approach which is not within the Mitroff and Kilman classification.

The table presents an analysis of my educational development which includes the propositional forms from the above classifications. The propositional forms, in reports 1, 3, 5, 7 and 9, are integrated within the process of transformation. I characterise this process as the form of life of a living contradiction.

THE FORM OF LIFE OF A LIVING CONTRADICTION

REPORT	1	2	3	4	5	6	7	8	9
MEDAWAR'S PHASE OF SCIENTIFIC ENQUIRY	CRITICAL	CREATIVE	CRITICAL	CREATIVE	CRITICAL	CREATIVE	CRITICAL	CREATIVE	CRITICAL
THE POPPERIAN SCHEMA	S ₁	-	S ₂	-	S ₃	-	S ₄	-	S ₅
MITROFF'S & KILMAN'S METHODOLOGICAL APPROACH	ANALYTIC SCIENTIST	-	CONCEPTUAL THEORIST	-	CONCEPTUAL HUMANIST	-	PARTICULAR HUMANIST	-	-
KOSOK'S SELF-LINEARIZING FORM	A NON-LINEAR DIALECTIC PROCESS DEPICTED AS A SELF-LINEARIZING FORM WHICH REVEALS TRANSITION STRUCTURES (IN THE SCHEMAS AND CRITICAL PHASES) AS NODAL POINTS OF SELF-REFLECTION 								

3. KNOWLEDGE ACQUISITION AND KNOWLEDGE STRUCTURES

According to Wilson:

“Whitehead seems to forget that it is not the idiosyncratic nature of the puzzles of isolated individuals that produces the objective knowledge of Popper’s World Three, but the frameworks of publicly shared concepts and language that gives rise to them.”(1, p.75)

He says that fruitful questions are formulated only within a framework of shared concepts and are posed only in a common language. Shared concepts and language go with shared criteria for their proper use in a shared form of life.

I have not forgotten what Popper says. It is that I profoundly disagree with those researchers who use Popper’s view of objective knowledge as the epistemological base for the generation and testing of educational knowledge. I think that such a view of knowledge tends to lead to a view of education which places undue emphasis upon the pupil or student acquiring knowledge structures in a way which omits a consideration of the aesthetic and ethical qualities which should be guiding the process of education. Like Whitehead (16) I think that education is essentially the acquisition of the art of the utilisation of knowledge. For me the acquisition of knowledge structures is not a sufficient condition to define a process as educational. This is because history abounds with examples of individuals and groups who have acquired knowledge, but used it in ways which are aesthetically and morally unacceptable.

Paul Hirst is one researcher whose work will serve to illustrate the nature of my concern. In the *Logic of Education*, Hirst and Peters (16) state their purpose and on one page (17, p. 15) use the word ‘impose’ three times.

“It is the purpose of this book to show the ways in which such a view of education must impose such a structure on our practical decisions . . . For one of the problems about ‘integration’ is to understand the way in which ‘wholeness’ can be imposed on a collection of disparate enquiries . . . 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.”

Hirst (18) has consistently held to his commitment to the propositional logic of education and to the primary significance of Popper’s ‘Third World’.

“From these considerations I conclude that, though education is very much concerned with the exercise of human powers, it is not characterised at all adequately in terms of the exercise or development of those powers, even dialectically. It is only in learning, by the human powers becoming structured and organised through the agency of the ‘Third World’, that what we mean by education takes place.”(18)

Peters (19) has acknowledged 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 the beauty of the world or of man's striving to give concrete embodiment to intimations about the human condition which we cannot explicitly articulate. Hirst (1983) has also acknowledged that his earlier view of educational theory was mistaken.

I do not believe that the community of educational researchers has shared concepts and language to go with shared criteria for their proper use in expressing, describing or explaining the educational development of individuals. This is the central assumption in my paper. I am saying that it is the very adherence to the orthodox view of knowledge that Wilson holds which is preventing the development of the kind of dialectical research which enables such problems to be revealed. I would also say that it is an adherence to this logic which allowed Richard Peters (20) and Paul Hirst (18) to clarify a misconception of education and educational theory. In their 'Logic of Education' (17) Hirst and Peters describe their purpose in terms of showing how a structure must be imposed upon practical decisions in education. I would say that in education we do acquire knowledge structures as part of the process of transformation. I reject, however, the idea that such structures must be imposed upon practical decisions. Acquiring knowledge in a process of education appears to me to have the aesthetic quality described by Martin Buber where he points out that the educator has a special humility which enables him or her to subsume a particular selection and arrangement of knowledge to the emergent form of the pupil's life.

"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 its own sphere; he will be guided by the recognition of values which is in his glance as an educator. But even then his selection remains suspended, under constant correction 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. For in the manifold variety of the children the variety of creation is placed before him."

My insistence on the importance of the art of education is related to the development of those values which should guide the use of knowledge structures. Also of importance is the development of technical skills and the capacity to control the material world. I am concerned that an undue emphasis on the imposition of knowledge structures will have the same effect which Whitehead (16) described in relation to the prolonged imparting of technical skills:

"This is only an instance of the more general fact, that necessary technical excellence can only be acquired by a training which is apt to damage those energies of mind which should direct the technical skill. This is the key fact in education and the reason for most of its difficulties." (16, p.144)

4. THE DIFFERENTIATION OF KNOWLEDGE STRUCTURES

Wilson's point in this section is that there is a need to be considerably clearer about what is meant by 'educational development' on the dialectical account. This was one of the few points in his paper with which I could agree.

The way I see my educational development in terms of the differentiation of knowledge structures can be understood in terms of Plato's idea of the art of the dialectician. In the exercise of this art the dialectician holds the 'one enquiry' and the 'many enquiries' together. I have explored the implications of asking the question, 'How do I improve this process of education here?' in the context of my work in Higher Education. In the course of this one enquiry I have pursued many enquiries in the traditional disciplines of education. For example, in report 8, listed in the table above, I have examined the assumptions in linguistic and phenomenological philosophy, in behaviourist, cognitive and humanistic psychology and in structural functionalist, marxist and phenomenological sociology to see in what ways they describe and explain the development of individuals in terms of human values and personal agency.

In my conception of educational development the differentiation of knowledge structures can be seen and 'assessed' in terms of explicit criteria. For example, by reading the texts in the above table an authority in the disciplines of education could see whether or not I demonstrate an understanding of the basic assumptions in the different schools of thought.

The conception also contains something that Peters (20) believed in, but failed to show in his work, namely that integration and differentiation exist together in the working out of a solution to a practical educational question. The philosophers with an orthodox view of knowledge have only been able to show what it is to break an educational problem down into its separate components. They can also savagely criticise the work of others. What they have failed to do is to show how both the capacity to integrate and the capacity to differentiate can exist together in the working out of a solution to a practical educational problem. This failure of the orthodox view is implicit in Wilson's section on the Differentiation of Knowledge Structures. Whilst the dialectical approach to educational knowledge shows the capacity to break a problem down into its separate components, it differs from the orthodox view in its capacity to show how the separate components are integrated in the working out of a solution to the problem.

To be clear about my conception of educational development it is important to understand how both the differentiation of knowledge structures and the process of integration exist together in that development. The way this can be done has been described in 2(c) above.

A dialectical approach to Educational Knowledge incorporates both a claim to know educational development as a process of transformation (the one enquiry) and a claim to know the knowledge structures (the many enquiries) which exist within this process. The orthodox philosopher remains blind to the essentially dialectical nature of education because his logic does not permit an acknowledgement of the academic legitimacy of a dialectical claim to knowledge. By adhering to his logic, the orthodox philosopher

is led to a position which stresses the imposition of differentiated knowledge structures upon practical decisions in education.

Considering the damage which the prolonged imparting of knowledge structures is likely to produce on the aesthetic and ethical values which should guide our use of these structures I am asking contributors to this Journal to concern themselves with the question: why is the art of education not represented in the Journal? If we are to represent education as an art I think that we must show how both our mastery of different knowledge structures and our capacity to integrate these structures exist together in the working out of practical educational problems.

5. FACTS AND VALUES

Wilson makes three criticisms under this heading.

i) He says that I treat moral questions as aesthetic. His case is as follows:

“Whitehead is concerned very much that values are not neglected in educational development, its assessment and evaluation. In this connection he surprisingly uses ‘aesthetic’ where one would expect ‘ethical’ or ‘moral’. Thus:

“. . . (harmful events) violate our understanding of ‘Humanity as a whole’. This is an aesthetic form of understanding in the sense that we have a view of humanity as a whole in which the existence of starvation, torture and nuclear war has been overcome. The actual existence of these events in the world violates our aesthetic understanding of humanity and prevents the integration of our understanding into a unity.”

Wilson’s surprise may be due to attachment to orthodoxy. By analysing aesthetic and ethical values and examining them as if they are distinct, sight may be lost of their relationship in claims to educational knowledge. The way I see the relationship can be understood in the terms which Plato used to describe the art of the dialectician. In his work on Poetic Inspiration (5) Plato 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 break any art 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.”

In drawing attention to the relationship between synthesising judgements which are necessary for an 'understanding of Humanity as a Whole' and the analytic judgements which separate different components in education (some of which are moral), I am directing attention to the art of education which I think, given the present state of the world, involves a struggle to overcome those aspects of the human condition, such as starvation, torture and the possibility of nuclear war, which are an affront to a wholistic view of the world.

ii) Wilson says that if I follow recent critics of 'positivist' theories of ethics which distinguish analytically between facts and values then I am misled into supposing that a concern for objective truth is incompatible with proper human values. The reason that I do not think of myself as so misled is that I do not see a concern for truth as incompatible with proper human values. Indeed, I see a concern for truth as a virtue. What I do think is that there is something basically wrong with the claim that there is an objective moral law that can be grounded by an appeal to pure practical reason.(23)

6. THEORY AND PRACTICE

i) I am told by Wilson that I follow recent 'radicals' who argue that there is a kind of inevitable, necessary link between objectivist 'theories' of knowledge and impersonal or inhumane practice. Nowhere in my paper do I infer this.

"What then of Whitehead's concern about the relation between collectivist theory and bad practice? He recounts such facts as teachers making racist and sexist comments; pupils' initiative being repressed; and teachers' failures of organisation. He refers to teachers' reluctance to press for moral and democratic practice, and to general deficiencies in the quality of human relationships (p.78). We are invited to believe that these things somehow follow from orthodox educational theory and commensurable theories of knowledge and value . . . it is unnecessarily portentous to look at the epistemological roots of practice to explain the ills of education."

Let us look carefully, once again, at the differences between the meanings in the statements I use and the use Wilson makes of my statements in the quotation above. What I actually say is:

"There have been long periods when I have drawn back from the struggle to establish democratic forms of control in my workplace because of the stress involved in the struggle. There have been other times when I have violated the basic respect and quality in human relationships which are required for a conception of humanity as a whole . . . So these are important components in my conception of Higher Education: concern with the art of education which contains a conception of 'Humanity as a Whole'; a concern with educational values, such as freedom, justice, consideration of interests, respect for persons, worthwhile activities, and democratic forms of organisation."

Wilson then says that my readers are invited to believe that my problems somehow follow from orthodox educational theory. As I raised these issues as practical problems for myself in my own educational development, how can Wilson say that I am inviting you to believe that these issues follow from orthodox educational theory? The issues were problems I have had to face in the course of my own educational development and were presented as such.

ii) Wilson says (1, p. 81) that it is a mistake to confuse pedagogy with epistemology. I agree. I also agree that wherever learners start, and however they proceed, the proper goal of their teachers is to develop in them a respect for truth, objectively conceived, as well as respect for other persons. I do not confuse pedagogy with epistemology. What I am attempting to develop is a form of educational theory which is adequate to the task of providing valid explanations for the professional practices of teachers and the educational development of their pupils. For the past thirty years the dominant view of educational theory has failed to give an adequate account of professional practice. My own enquiries have focussed upon the epistemological foundations of educational knowledge. I have concluded that educational knowledge which is adequate to the task of producing a valid explanation for the life of an individual will have a dialectical form and will incorporate the ethical and aesthetic dimensions of the individual's educational development.

One of the ways in which I see this being achieved is by educators assessing and evaluating their own professional practices and justifying their claims to know what they are doing. This will involve the presentation of their personal educational theories in a form which can be publicly criticised (22). I am concerned that the aesthetic criteria, which we must develop if our claims to educational knowledge are to include knowledge of the art of education, should not be omitted from a Journal which is concerned with Assessment and Evaluation in Higher Education.

My original paper raised the question of why the aesthetic dimensions of Higher Education were omitted from the Journal. Wilson's arguments have not moved me from my original view that these omissions are due to the dominance of an inappropriate epistemology.

I think that I have met Wilson's criticisms and that the following points still stand. When judging those components of education which can be represented in a propositional form, I have suggested that we are 'assessing'. When we are dealing with the ethical and aesthetic aspects of education I am suggesting that we are 'evaluating'. The propositional form is not equally appropriate for the enunciation of matters of fact and matters of value. We need to find an appropriate form of presentation for claims to knowledge which evaluate the ethical and aesthetic nature of education. I am suggesting that we could start by showing, with the assistance of visual records of practice, what we mean by an evaluation of an individual's educational development. We do not have an academic community with a shared set of assumptions concerning the art of education. I am suggesting that we address ourselves to the creation of such a community so that we can heed Whitehead's point that education is the acquisition of the art of the utilisation of knowledge and ensure that Kilpatrick is correct when he asserts that educational theory is a form of dialogue which has profound implications

for the future of humanity. If the criteria we use to judge an individual's educational development are inappropriate or if we omit an evaluation of educational development as a form of art, I am saying that we are likely to ignore the development of this vision in ourselves and in the next generation. Such a vision is needed not only for our own sakes but for the future of humanity as a whole. I do not believe that it is pretentious or arrogant to affirm a commitment to the art of education, and to take a personal responsibility for attempting to replace a view of educational knowledge which is either mistaken, or too limited, to be acceptable as an epistemological base for the generation and testing of educational theory. One arena for such a struggle is a Journal which is concerned with Assessment and Evaluation in Higher Education in an International Context.

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