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Educational Research and Educational Practice

Preamble

What is the relationship between educational research and educational practice? This is the very general question addressed in this work. All parties to education agree that research ought to inform practice yet there is at the same time a general belief that all is not as it should be. How is educational research to be made more productive for educational practice?

To explore the relationship between research and practice we will need first to consider the two fields, 'research' and 'practice', represented by these large terms before going on to think about how they may be related. We shall establish an argument for seeing practice in a certain sort of way, a way in some contrast with much of the prevailing orthodoxy. Educational practice will be discussed as a particular kind of practice with its own distinctive character. Furthermore, professional educational practice will be seen as educational practice in special contexts. Going on from this understanding of practice, we examine some of the main ways in which educational research is conceived and conducted, using the idea of 'paradigms' to do so. We shall then go on to argue the necessity for practitioners to become researchers and suggest that a particular form of educational research, namely case study, has the potential to unify the field in the service of the practical.

It must be frankly said at the outset that there is a clear thrust in this work in favour of practitioner research of a distinctive kind. Though we try to make counter-arguments apparent, our best contribution to critical consciousness is to make our argument so clear that objections can equally clearly be made by opponents. We try to clarify what is involved in professional educational practice in Part One, go on to research in Part Two and set up some criteria to which we believe truly educational research must conform in Part Three. In Part Four, much of which appeared as an Exeter University Monograph in 1993 (Golby, 1993), we consider case study as educational research, first by characterising case study and then by offering certain advice to those considering undertaking this form of research work.

Part One

Professional Educational Practice

'Practice' is an abstract noun whose verb form is 'practise'. Thus practitioners practise and what they practise is 'a practice'. When qualified by the adjective 'educational', practice is deemed of a certain character and/or to be striving towards a distinctive aim or end. When further qualified by the adjective 'professional', there are, at minimum, connotations of institutionalised activities in which teachers are paid for their responsibilities. In this section we first address *practice*; second, e*ducational* practice and third *professional* educational practice.

Practice

A practice exists whenever a more or less settled body of activities is carried on to some distinctive end**.** Activities may be regarded as particular things people do to some overall social purpose. For example, parenthood is a practice (and motherhood and fatherhood too). Within these practices particular activities have their place, a place which may be more or less settled or agreed. Bedtime routines, methods of discipline, family holidays and excursions, visits to grandparents; these are just a few randomly selected areas of activity which, taken together, give a character to individual parents' practice of parenting. Parenting then becomes something we can talk about, for example, as 'loving' or 'cold', 'permissive' or 'highly disciplined'. Evidence for such descriptions would come from examples of particular activities pursued by the parents in

question. We all in fact make these judgements in our retrospective moments. Also, of course, we all tend to learn from the strengths of our parents and to compensate for their weaknesses, as we perceive them.

Note, too, that all of these areas are potentially contentious. Note, also, that the conventional wisdom about them changes over time. The Victorian *paterfamilias* is no longer a popular figure. Note, further, that each and every family has its own decisions to make about them (whether explicitly and deliberatively or by default through habit). In establishing the character of your own practice of parenthood you are at the same time contributing to the general practice though in what may seem a small way. Nevertheless, a contribution it is, one that makes itself felt most in the subsequent influence it has on your grown up children and their own practice of parenthood.

Practice as skilled performance

In asserting this view of practice as an abstraction covering an indefinite multitude of specific activities we are at the same time rejecting a currently popular but we believe simplistic alternative view. We call this the 'skills' or 'Jessup' view after one its chief proponents. Gilbert Jessup is a leading theorist of the movement for skills training for vocational education in Britain. (Jessup, 1991). It is not our purpose to attempt a wholesale review of Jessup's position. Others have done so (Hyland, 1994). Rather, let us concentrate on his deployment of the concept of skills in education and training. What practitioners do, on this account, is to exercise skilled performance. Training is concentrated on producing the

skills necessary for the practice of a trade or profession. To produce a training programme entails analysing the actual skills practitioners need to use. Training for these skills entails breaking down the practice into the smallest possible units of skill. These are then arranged in some form of hierarchy and training is organised to present these skills for learning by novices. Practice on this view consists of a succession of skilled performances learned by the practitioner in one way or another and deployed as occasion demands. It sees the practice of a trade or vocation as the deployment of specialised skills. What it has difficulty with is how these observable skills are related together.

Jessup's view of learning is as follows:

> Learning is a purposeful activity and should be targeted on explicit outcomes.
> (1991, p.5)

This looks fine on first inspection. But a moment's reflection raises doubts. Doesn't much learning, and perhaps some of our most significant learning come about incidentally to our intentions-and those of our teachers? Isn't there something odd about setting out to learn something whose nature, by definition, you do not know? A couple of examples. When did you learn what we children of the fifties quaintly called 'the facts of life'? When did you learn that Father Christmas does not exist (in any literal sense anyway!)? In these matters there is something of a dawning of understanding for many people, not a sudden revelation. Light glows in the East; it is a long while to high noon and all too soon darkness falls again. Again, to set out to learn in areas such as these is already to be in a certain

condition of curiosity. Teaching in non-trivial areas such as these is surely more a matter of understanding where the learner is and fostering the spirit of curiosity than the simple transmission of facts to another. Indeed, the facts will be meaningless to one who is unready to accommodate them, a proposition which is fundamental to that broad approach to learning known as constructivism. Personal experience demonstrates also that even when we set out to learn one thing, say how to sail a dinghy, we find our interest wanes or is actually in something else, say navigation or meteorology. Explicit outcomes, seen in advance by teacher and learner, seem increasingly problematic in areas of significant learning. Obviously, much further work is needed to classify the kinds of learning we may wish to promote in schools and colleges. Ours is not an argument for no *planning* of teaching and learning but a plea for better recognition of the *complexities* of teaching and learning, The Jessup model has the virtue of simplicity but the great disadvantage of being simplistic or reductionist, that is to say it assimilates *all* teaching and learning to *one* particular kind of teaching and learning. We do not deny that there are important occasions when there are clear purposes and predetermined outcomes in the minds of teachers (and less often learners); nor that a skills approach is justifiable on occasion, perhaps when what is looked for are visible skills and performances of some kind. What we do contest is the dominance of this ‘means to an end’ model across the whole curriculum. So penetrating has the Jessup view become that even in higher education it is the orthodoxy in quality assurance and staff development circles. Do not use words such as ‘understand’ and ‘know’ urges a writer in the Times Higher Educational Supplement. Addressing university lecturers in its ‘Teaching’ section, Race (1998) elaborates as follows:

> While it is easy to write or say ‘when students have completed this module successfully, they will understand the Third Law of Thermodynamics’, it is much more helpful to step back and address the questions: 'How will we know that they have understood it?’ and ‘What will they be able to do to show that they understand it?

The following week a Classics lecturer replied that his teaching revealed more to him each time he taught the great literatures and he could hardly answer for his students in the terms specified. This, though unsatisfactory for those looking for value for money, seems an entirely credible and responsible answer. Stenhouse (1975) discussed the cult of behavioural objectives and the long debate about them in his classic text *Introduction to Curriculum Research and Development*. He concluded that objectives are best understood as defining a learning situation, a context in which it is possible for a (relatively inexperienced) learner and a (relatively more experienced) teacher to encounter and interrogate a part of our heritage as represented in the curriculum.

> Basically, the objectives approach is an attempt to improve practice by increasing clarity about ends. Even if it were logically justifiable in terms of knowledge there is a good case for claiming that it is not the way to improve practice. We do not teach people to jump higher by setting the bar higher, but by enabling them to criticise their present performance. (p.83)

The attraction of the Jessup model is easy to see. Skills, it would seem, are measurable, readily replicated and transportable to other relevantly similar situations. Mass production demands such skills of its workforces; latterly, the service industries too have specified the performances to be expected

of their employees on cue. ‘Have a nice day’ ‘Is everything all right for you?’

All of this works well in its place. But there is one serious theoretical flaw in the whole routine. What the skills account of practice cannot find room for is how learners learn *when to employ their skills* and *how to vary them according to circumstances.* Knowledge of such a kind might be regarded as the ‘theory’ of the activity or practice. While Jessup makes obeisances in the direction of underlying knowledge and understanding he gives no account of how that theory is to enter into an educational or training programme.

> In many areas, particularly at the higher levels of competence, there is a related body of knowledge and theory which underpins a wide range of competent performance. This body of knowledge would normally have its own internal coherence which should be acquired and understood by students. It would not be appropriate to perceive it, and assess it simply in relation to elements of competence. (1991, p.125)

What Jessup does not do is to show how knowledge and theory precisely enter into practice. A fatal separation between the two is introduced by the emphasis on observable skills. Thus though he complains that ‘when a body of knowledge is taught separately from a profession it tends to become an end in itself’ (1991, p.126) he does not show how the integration of theory and practice is to be achieved.

It is also worth noting that for all the apparent common sense and modernity of this view it is in fact a rather old one. The tradition of planning educational experiences through behavioural objectives dates

back at least to the early part of this century and the work of Franklin Bobbitt (1918, 1924) There the idea that life is just ‘one damn thing after another’ was to be reduced to a checklist of what as adults we had to do. School then was to train us to do it. The connection of this scientism to the impulse of social control is obvious.

We find a host of reasons to reject the skills view as anything like a satisfactory account of human practices, much less, as we shall show, of *educational* practices. It is first necessary, however, for us to propose an alternative account of human practices. This will serve as a foundation for the positive account of educational practice and research which is our overall project in this work.

Practice as a tradition of conduct

A practice is more than the aggregation of the skilled performances of individual practitioners. It is a living tradition. It evolves over time. It is, so to speak, the language of the conduct of individual practitioners. It has, quite inevitably, its own distinctive aims and values. These are internal to a practice, part of what makes it what it is. A practice does not, indeed cannot, seek ends external to itself. It seeks its own accomplishment.

> A ‘practice’, then is always the achievement of a tradition, and it is only by submitting to its authority that practitioners can begin to acquire the practical knowledge and standards of excellence by means of which their own practical competence can be judged. (Carr, 1987, p.170)

These statements orient us towards another way of thinking of human practices. Instead of the discrete psychological view taken in the skills model, here the emphasis is on the social and the historical aspects of practice. What people do within a practice, the activities they engage upon, are on this account intelligible only by reference to (a) their own understandings of what they are doing and (b) the tradition of conduct of which they are a part. A tradition of conduct itself is of course made up of contemporary practitioners who are in turn related to predecessors who have bequeathed their practice. When we engage in the characteristic activities of a practice, therefore, we are disciplined by its standards as represented by our peers and our predecessors. These standards are both technical and moral; they concern both the 'how to' and the 'why' of practice.

Practices develop over time as both technical and moral understanding changes. In this connection it is important to notice that developments in a practice may be evaluated both positively and negatively. Both progress and degeneration are possible. In recognising this, note that judgements one way or the other of this kind will always themselves be based in their turn on a point of view within its own tradition. There is no overall or superordinate tradition in terms of which all practices may be finally and unequivocally judged. This viewpoint will be familiar to readers of the late Isaiah Berlin. (1969)

The fact that the teacher, like any other practitioner, is located within a tradition, and the extent to which teaching practice is governed by tradition, can be brought out by a comparison with the visual artist. In *Art*

and Illusion, E. H. Gombrich is concerned with what he calls "The riddle of style," or the fact that "not everything is possible in every period." The art historian, he says, "is concerned with the differences in style between one school of art and another," differences which it is his business to classify and describe. And he goes on to point out that, "we all react, to a major or minor extent, as he does … we see a Chinese landscape here and a Dutch landscape there, a Greek head and a seventeenth – century portrait." This is so familiar a fact that it hardly seems worth pointing out. But it is less obvious why it is so; why, as Gombrich puts it, "it is so easy to tell whether a tree was painted by a Chinese or by a Dutch master."

The explanation which he gives is that limits are set to the scope for innovation on the part of even the greatest painters by the tradition to which they belong. As he puts it, "if art were only, or mainly, an expression of personal vision, there could be no history of art. We could have no reason to assume, as we do, that there must be a family likeness between pictures of trees produced in proximity" (Gombrich, pp.3-4). And later he adds: "The "temperament" or "personality" of the artist, his selective preferences, may be one of the reasons for the transformation which the motif undergoes under the artist's hands, but there must be others – everything, in fact, which we bundle together into the word "style", the style of the period and the style of the artist" (Gombrich, p.55). Since the word "style" might be thought appropriate only in the context of the visual and other arts, we use the term "tradition" to refer, more generally, to any settled manner of doing things.

What a tradition gives to painters, in addition to and even more important than skills and techniques, is a way of seeing the world. They cannot avoid tradition, and the way of seeing that it lays down, simply by 'painting what is there'. Gombrich quotes Constable himself as saying: “The art of seeing is a thing almost as much to be acquired as the art of reading the Egyptian hieroglyphs” (Gombrich, p.12). Later he remarks, “All art originates in the human mind, in our reactions to the world rather than in the visible world itself, and it is precisely because all art is “conceptual” that all representations are recognisable by their style” (Gombrich, p.76). Thus all seeing is seeing according to a certain way of seeing; ways of seeing must be acquired, as the Constable quote makes clear; and finally, perhaps only implicit in the above quotations but very important, ways of seeing must be acquired from and are therefore shared with others. It is these facts which explain why all pictures are painted in a recognisable style.

To acquire such a style, or to copy an archaic, existing style, is relatively easy. To introduce a new style – in other words a new way of seeing – is not, and it is the work of those who have managed to do so which provides the landmarks in the history of art.

To emphasise tradition is not in itself to deny individuality. As a matter of fact, however, it must be admitted that traditions differ greatly in the scope which they provide for individual expression. In what can be called critical traditions such expression is permitted or even encouraged, whereas in what might be called conservative traditions it is discouraged or even forbidden. The painters who provide the landmarks in the history

of European art are those who have contributed to and therefore changed the tradition to which they belonged. A rug made according to a traditional design, on the other hand, will be made as it has always been made, so long as that remains possible; the aim is to conserve the tradition rather than to change it. The distinction between critical and conservative traditions, however, does not affect the overall position, although it is important in its own right. Acceptance of the importance of tradition does not involve a denial of individual action and effort. It means only that in trying to understand what the individual does we have to see it as part of a social practice governed by a tradition. The individual does decide what to do and how to do it, but the opportunity of doing so is provided by the tradition and in doing what he does he is guided and constrained by the way of seeing and doing which the tradition provides.

The skills and techniques and ways of seeing which tradition provides are acquired from and shared with others. They are the shared possession of a community, not the private property of individuals. Moreover, the way in which experience is conceptualised is not neutral so far as possible action is concerned. The way of seeing which a tradition provides is also a way of doing; the related skills and techniques are not seen as neutral instruments to be used to satisfy whatever desires a particular individual may happen to have. The way we see the world, what we try to achieve in it and how we go about trying to do so are not independent of one another. We see and behave as we do primarily because we act in accordance with a way of seeing and doing laid down by a tradition and because people who belong to that tradition see and behave in that way. Tradition provides us with all the guidance we need.

The Gombrich view makes practice the primary reality, and a practice has no reality independently of its practitioners: the two are interdependent. Those who engage in a practice are guided by the way of doing which a tradition provides and the way of doing in turn exists only in the values and purposes of those guided by it. Thus practical principles are abstract but only in the sense that they are *abstracted from* practice. (Note 1)

Educational Practice

Thus far we have drawn attention to the limitations of a view of practice confined to a description of observable 'skills' and recommended an alternative view of practice as ' a tradition of conduct'. The generality and the power of this account has meant that it applies to *any* recognisable practice wherever it arises. Our concern, however, is with *educational* practices as such and so we must now consider what kind of a phenomenon we are dealing with. What sort of activities fall under the heading of 'educational practice'?

A first observation here might be that education is 'of the whole person'. It is interestingly strange to say, as once was said of Sir Stanley Matthews, that he was the man with the 'educated right foot'. One knows the general meaning here. The reference is to skill, style and grace of a high order. A penumbra of appreciation of the great man's footballing genius is conveyed by alluding to his foot as 'educated'. Yet, clearly, a right foot is simply not the kind of entity that can be educated. No individual part, and

certainly not a physical part, of a human being can be educated. A foot could be developed in a physical sense (through exercises and the like); it could be formed or trained in particular ways, for example through the ancient Chinese practice of binding the feet. But to talk of educating the foot is incongruous. No, education, we want to say implicates the whole person. While we may speak of an educated mind but not an educated brain, what we are saying in doing so is that the mind affects us comprehensively, is in an important way our very being. To be educated is to be transformed in no partial, minor or trivial way. (Peters, 1966)

We now possess a clue why the skills model of practice offends educators. Skills are always addressed to the relevant part of a person. An account of the skills to be found within a practice is a partial account of that practice. Such an account draws attention to certain observable features of the practice but misses the invisible purposes, motives, intentions and values that bind discrete performances together. Because the skills account is so inevitably partial it necessarily fails to capture the authenticity of practitioners' engagement in their practices, including of course educational practice.

Professional Educational Practice

We have characterised educational practice as concerned with the whole person. Now we must ask what is *professional* educational practice? There is much to say about professionalism but at minimum professionals, of course, are paid for their services. The relevant contrast is with amateurs.

What more requires to be said about the situation that arises when teachers are formally appointed and paid and schools established?

Mark Twain observed ‘Take care that your son’s schooling does not interfere with his education’ and Tony Benn once said that he was educated ‘in spite of Eton’. What these perfectly intelligible statements establish for us is that education and schooling are quite different concepts. Activities that may be appropriate to the one may not be to the other. One dimension of this is that ‘the whole person’ may be put at risk through overly narrow attention to some particular aspects of the person. What vocational regimes do, for example, is concentrate on the person as worker, not the person as citizen, parent, consumer or moral agent. The history of schooling may be understood as the struggle for dominance in the curriculum between competing priorities such as these.

Professional education for the mass provides a public forum for ideological struggle. Raymond Williams (1961) in his influential book *The Long Revolution* has described the conflict as one between the liberal humanists and the industrial trainers. The liberal humanists adopt a view of education very similar to our own while the trainers narrow their sights to something like the skills view of practice. Della Fish makes a similar contrast (Table I).

Contrasts such as Fish's are inevitably over-simple. They are usually drawn up by parties to one side of the debate and are intended to serve polemical purposes. For that reason it is important to scrutinise them carefully. However, that said, Fish’s contrast reminds us that practice in

schools and colleges is inevitably more contested than isolated or private practice. Also, it causes us to note that our own definition of education is indeed stipulative. The trainers will certainly object that we have no monopoly on the term itself. Our rejoinder would be that nothing hangs on the word itself; what matters is the nature of the practice, its values and the characteristic activities that comprise it. For the present we see 'education' as still denoting a liberal approach connected with the idea of the whole person. Certainly we must at the same time concede that there are real debates about the adequacy of liberal conceptions of education to modern conditions. We would see the use of the term 'educational practice' by contrast to 'training practice' as an aid to thinking in the service of an overall ideal. Definitions do not settle real disputes in the real world and the day will not be carried by assuming that schools and colleges are legitimately concerned only with 'education' and never with 'training'. For one thing, our analysis has subsumed skills within the general notion of a practice. Practices contain skills but are not exhaustively described by reference to them.

Professions represent the social embodiment of key aspects of human welfare. The idea of a profession, says Freidson,

> refers to specialised work by which one gains a living in an exchange economy. But it is not just any kind of work that professionals do. The kind of work they do is esoteric, complex and discretionary in character: it requires theoretical knowledge, skill, and judgement that ordinary people do not possess, may not wholly comprehend and cannot readily evaluate. Furthermore, the kind of work they do is believed to be especially important for the well-being of individuals or of society at large, having a value so special that money cannot serve as its sole measure; it is also Good

> Work. It is the capacity to perform that special kind of work which distinguishes those who are professional from most other workers. (1994, p.200)

A political settlement between the public interest as represented by political authority and the professions will not result from rhetoric alone; it must rest on various forms of trust, a precious commodity easy to forfeit and devilishly difficult to recover. Yet the struggle to find an accommodation is unavoidable. Freidson argues that no society can avoid managing its key workers in the various fields of human welfare. There are three broad means of doing this:

- there can be bureaucratic control
- the market can be allowed free play or
- professions can be nourished and developed.

Freidson argues for the latter as doing least violence to the special nature of those occupations we call professions.

What kinds of freedom of action, what forms of self-regulation, what kind of accountability are appropriate to teachers individually and collectively? How are people to conceive the individual and collective professionalism of teachers? Will answers to these questions differ across various sectors of education? Where specialised expertise is deployed, where room must be found for workers to exercise practical judgement and discretion but where also the welfare of ordinary people is being catered for we need particularly subtle relationships between "providers" and "consumers". Indeed the incongruity of terms such as "consumer", even "client" in

educational contexts is symptomatic of the conceptual problem we have with educational relationships. A school or college is not really at the end of the day "selling education" although it must obviously attract "customers". Nor is a school or college at the end of the day a business although it must run in a business-like way. (Tim Brighouse once said that a school that makes a profit is a failing school; it should be spending on children's education to the hilt). What schools and colleges are at the end of the day is educational institutions. They must be credible and viable but they must not lose sight of their essential mission, which is educational. It is enormously harder to entertain this idea than to cast schools as businesses.

In educational contexts, direct supervision of a professional's activity is both inappropriate and impossible; it allows too little room for discretionary judgement; inspection is problematic; it implies professional insight is available to the naked eye on the inspectors' part. At the same time, professionals are working in fields where there are competing views of the good life, to which all the professions contribute in their various ways. Lawyers, in the last analysis, are worth having at all only insofar as they individually and collectively act in ways that maximise the amount of justice available in society at large; doctors, similarly, in respect of the amount of health available to all of us. What is to count as justice and as health, though, are surely matters for all, matters of values on which the professional voice will be authoritative but not final.

No one can pretend, then, that the present stand-off between the professions and the public can be sustained. Responses to the situation on

preparation for review. A similar scheme called Validated School Self Evaluation is now fully functioning in the Channel Islands.

In the United Kingdom there has been major, continuous and accelerating reform of the education service over the past fifteen years or so. Though it is easy to overlook the dramatic changes and stresses brought about by earlier large scale initiatives such as the 1944 Education Act and the later introduction of non-selective comprehensive secondary schooling, it is certainly true that schools have undergone enormous changes latterly and that these amount to a cultural shift in the conduct and control of schools. All schools now must now have properly constituted boards of governors responsible for their own budget and educational policies; they must publish prospectuses and annual reports to parents; the National Curriculum must be taught and assessed; teachers must be regularly appraised. All schools are regularly inspected through OFSTED using procedures and criteria set down nationally.

It is clear that the nature of teachers' professionalism is in deep contention as educational systems struggle to adapt to political and popular movements for reform. The old certainties are no more. Nothing is settled by an appeal to professionalism as a concept since the concept itself has become problematic. Received statuses are no guide. A current attempt to characterise the teachers we need for the next millennium comes from Michael Newby in a draft document for the British Universities Council for the Education of Teachers (UCET). Newby maintains that teaching is "pre-eminently a learned profession".

Those who work in it must be “intellectually acute”. This implies a large learning agenda going far beyond “subjects” and “how to deliver them” or, even worse “to apply them”. It implies having a view on the educational relationship between schools, families, communities and the wider society. We have stripped the system of the teacher educators who can deal with these questions in any depth.

Newby goes on to argue that teachers work in a research-based “profession”. Part of the teacher’s task is to engage critically with current policy and research in order to transform learning for the good of their pupils”. Professionals, he says in an echo of Freidson above, define themselves by their possession of specialised knowledge and skill far in excess of the lay person and by “a readiness to work for others by offering a service affecting important aspects of their lives”. This latter is the “professional ideal of service” proposed by Langford. Freidson cautions against too high minded a view here, saying professions need to be regulated to discipline self-interest. They must cater for the ordinary or “a bit more than ordinary” person who wants to do some good in the world, short of martyrdom and while paying a decent mortgage.

There is much ground to recover and new ground to stake out if anything like the above is to come in sight of fulfilment. Teaching, says Newby, is now dominated by government agency. What is taught, and to an increasing extent how it is taught are being laid down in statute, regulation or injunction, The way in which new teachers are trained to enter the profession has never been more subject to rules and requirements. And now these impulses to control and supervise teaching is extending into

continuing professional development. The Teacher Training Agency specifies the criteria for the National Professional Qualification for Headship (NPQH) which will in due course become a required qualification for those seeking headship. Similar moves are well under way in respect of teachers at all other stages, including subject leaders, special needs co-ordinators, advanced skills teachers' etc.

The dangers in all this need no spelling out: they are Orwellian and the challenges to dialogue between teachers as professionals and those who employ and organise them are immense.

We have now done enough to attempt a preliminary characterisation of professional educational practice. The following four large and general points seem of importance for our subsequent discussion of the part to be played by research in the development of practice.

- **Professional education practice is essentially practical**.

Professionals engage in practical activity; their working knowledge must be in constant use. What ought to be done and how to do it, given what we know of the situation in hand, is the essential professional question. Professional knowledge is essentially knowledge-in-action. It is often necessarily incomplete.

- **Professional learning is multifaceted**.

Practice is acquired in an indefinite number of interacting ways within complex traditions and institutions: imitation, trail and error, apprenticeship, scholarship and research play their parts.

- **Professional practice has a moral basis**.

Professions serve human interests: justice (law), health (medicine), wisdom (education) etc. They are subject to dispute as to ends, confusion and ignorance as to means and general human corruption throughout.

- **Professionals are independent sources of judgement**

Because of the above features of professional practice, it is inevitable that practitioners make their own judgements within their own practical setting. Professionals must therefore be self-critical, independent learners. They must be willing to engage in professional and public debate and policy making.

It follows from all of this that educational practitioners must also be scholars and researchers. There can be no substitute for contextualised judgement in the light of both local circumstances and the guiding principles of the practice. The point of educational scholarship and research is to better understand and appropriately to act in the particular situations, problems and cases with which practitioners must deal. There can be no manager, supervisor, mentor or inspector standing over the detail of a practitioner's work (which is not to say that there can be no appropriate management and other support for practitioners). Practitioners

must deal independently with the situations presented professionally to them. They are judges of last resort in the cases with which they deal.

But what kind of research does this call for? A few preliminary points towards an answer to this question and in anticipation of our argument in the rest of this work:

- Practitioners are interested in understanding the nature of the problems set before them by the clients they serve. When they resort to general professional knowledge they do so in order to help individual clients who possess their own unique characteristics; these characteristics may well modify the applicability of general knowledge to them. We know that smoking causes cancer but in a particular case it may be unwise to press the issue, for example in an elderly person in severe distress from another condition.

- Many different sorts of understanding must come together in any overall judgement in the service of a client. The individual case is seldom if ever uni-dimensional. Medical cases are seldom purely scientific problems; learning difficulties are seldom purely psychological problems.

- Professionals' practical judgements on the individual cases set before them will always be made in the light of 'an ideal of service'. That is to say they will have in mind a notion of what constitutes a reasonable and achievable good for that client so far as their service is concerned.

In view of these generalisations about practitioners' professional research we can conclude that it is going to be situated, holistic, eclectic and principled. That is to say, practitioners' research will be focused in and on the practice situation; it will draw upon a variety of forms of understanding; it will aim to help a client towards a better condition; and what constitutes a 'better condition' for a client will itself be a situated judgement based on knowledge of the ideal and that client's circumstances.

How, then, do the available forms of research meet with such a specification for practitioners' research? We consider this question in Part Two by examining both conventional and alternative forms of enquiry.

Part Two

Research: Some Theoretical Bases

An orthodox definition

In 1996 The Higher Education Funding Council for England defined research for the purposes of the Research Assessment Exercise (RAE). The RAE constitutes a set of procedures for evaluating universities' research output. This must be a standard and orthodox definition, as it is designed to cover the research activities of the many departments and academics working in Universities.

> 'Research' for the purpose of the RAE is to be understood as original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sectors: scholarship*; the invention and generation of ideas, images, performances and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and analysis of materials, components and processes, e.g. for the maintenance of national standards, as distinct from the development of new analytical techniques.
>
> *Scholarship embraces a spectrum of activities including the development of teaching material; the latter is excluded from the RAE.

Such a definition in attempting to cover all the arts and sciences and other fields of university work (including Education) will obviously be very

general. However, we can note the emphasis on 'original investigation' and 'knowledge and understanding'. In the second sentence there is reference to practical utility in research, which may be contrasted with 'intrinsic' or 'blue skies'. There is a well-worn controversy about the balance between these two aspects of research – pure and applied. We return to this distinction in the context of educational practice and the contribution of research to it below. The definition goes on to refer to inventions and experimental developments with an emphasis on their generating 'new' insights and knowledge. The definition is perhaps more interesting in what it excludes. Note particularly that while scholarship is admissible, presumably to cover the activities of 'armchair' researchers in fields such as history, philosophy, theology and many others, the development of teaching material is excluded. Many text book writers in universities may have been less than thrilled with this prescription; for our present purposes it is of interest that the arts of teaching, however sophisticated and original they may be, were to play no part in the official review of universities' research activities. This is all the more surprising since the official view is that research in universities ought to 'inform' teaching. A particular view of the relationship of the relationship between research and educational practice is deeply implicit in the definition. Research and teaching are regarded as separable and indeed, there is the implication that research takes precedence over practice. Teaching on this view is variously conceived as the 'transmission' or 'application' of knowledge to learners.

This all-purpose definition of research has serious and deleterious implications for educational research. It portrays research as the search for

generalisations that can be applied to practice. It gives no coherent account of what this process of 'application' actually looks like in practice. We believe that violence is done to the arts of practice by the adoption of such a model of research. It works against the *situated* nature of practitioner research for it seeks not knowledge of individual cases but generalisations about populations by means of samples; it inhibits the necessary *eclecticism* of practitioner research by insisting on a single disciplinary perspective; it defeats the *holistic* aim of understanding the individual case in the round by insisting on filtering out context from subject; it threatens the values inherent in practice by segregating means from ends, failing to understand that practical professional judgement is always at the same time value judgement.

These are grave charges. Nevertheless, we press them further. We believe that orthodox conceptions of research present further difficulties in the specifically educational context. We therefore offer the following analysis of the theory of research before moving in Part Three to consider educational research specifically. We start with the crucial notion of paradigms of enquiry.

What is an enquiry paradigm?

In the most general terms, all research or enquiry can be described as an attempt to make sense of some aspect of the world, to explain or understand some part of reality. But this wider reality is not a simple, unproblematic backcloth to the enquiry process. In an important sense, a mode of enquiry creates its own reality. Serious researchers need to

engage with difficult and contested issues that have taxed philosophers for at least two and a half millennia. These are issues about reality (ontology) and knowledge (epistemology). Before their investigations get under way all researchers or enquirers will necessarily hold a set of beliefs about the nature of reality itself, and about what would count as acceptable knowledge of it at the end of their efforts. These assumptions about the nature of reality and of knowledge will also determine the kinds of data and evidence that enquirers regard as legitimate and worthwhile (methodology). It is these three "ologies", which are always linked together, that constitute an enquiry paradigm. Researchers in any academic or scientific field will necessarily be operating within a paradigm of enquiry, although it may be unconsciously held. People do not always know, or make explicit in their research activities, 'where they are coming from'.

In everyday life we do not usually ask ourselves deep philosophical questions like "what is reality?" or, "what can we ever know about it?" or, "what is truth?" We tend to take for granted the particular view of the world which we have absorbed from our upbringing and our culture. But as potential enquirers ourselves, or as critical examiners of other people's research claims, we need to become conscious of the various different and often conflicting versions of reality, knowledge and truth which can underlie enquiry projects. This point must be emphasised: in order to understand the relationship between educational research and educational practice there is no escape from the paradigm issue, either for the novice researcher or for the practitioner wanting to make use of the research of others. There is no non-academic version of reality, no common-sense

version of knowledge and no universally agreed set of enquiry methods, which can save us the effort of having to think about these difficult matters. As soon as we enter the world of genuine enquiry, in which people are claiming to have derived some kind of knowledge about some kind of reality using some kind of method, we have to ask questions about their deep-seated beliefs and pre-conceptions. And, of course, about our own.

Once we enter this debate we find that all statements about the nature of the world and the nature of knowledge are fiercely contested. At the same time we also find that there is a dominant world-view with its associated enquiry paradigm which has provoked most of the debate, and much of its fierceness. This dominant paradigm has been given various names (mostly by those opposed to it), including 'scientific', 'empiricist', 'logical/ empiricist', 'analytical', 'mechanistic', 'Cartesian' and 'scientistic'. But we shall use the term most commonly found in the literature, *positivism.* Later we shall look at the claims made by three other enquiry paradigms, which have in common the conviction that the dominant positivist approach to scientific enquiry is much less appropriate in human and social contexts, like education, than it is in the laboratory or test chamber.

What is positivism?

It is often asserted that the woman in the street, or the man on the Clapham omnibus, is a positivist. This means that they, like the rest of us in the daily routines of our lives, will take for granted those versions of reality and of truthful knowledge that western science or technology have defined

since the paradigm revolution of the 17th century. This is the life we lead, outside our homes and our hearts and our inner thoughts, in the world of factory-built machines and monetary exchanges, of high-speed travel and Clapham bus timetables, of market economics and percentage points. It is an external, objective world that emphasises quantities and measurements and technical solutions to all perceived problems. And it is asserted by our positivist tradition to be the "real world". Critics suggest, however, that this emphasis wrongly accentuates objective versions of reality and of knowledge, and downgrades much that is most meaningful and equally "real" in the world, but not so visible or measurable.

Before exploring the positivist world-view and enquiry paradigm in some detail, it is worth pointing out that prime ministers and education ministers, together with all the influential policy and decision-makers shaping our society in general and its educational arrangements in particular, are also positivist. Why would they not be? As a result of this way of thinking their political predecessors, advised by economists, assisted by technologists, and applauded by the population, have delivered social goods like immunisation, water and sewage systems, roads, bridges, dams, schools, hospitals and other celebrated public works, and it is only recently that some of these 'goods' have also been questioned. This means that there is now a disjuncture in our culture - an ontological and epistemological fissure - which divides serious thinkers and cutting edge enquirers in every discipline, who no longer accept positivist assumptions about reality and knowledge, from the bulk of the population and its political and educational leaders. Even thirty years ago this was not the case. Then most scientists and most researchers would have shared a

popular viewpoint which equated science and technology with modernity, with the advance of civilisation and with progress which, by definition, was brought about by scientific enquirers 'pushing back the boundaries of knowledge' - a very positivist metaphor.

Optimists see this intellectual confusion and cultural division about what is ultimately "real" and what constitutes legitimate or worthwhile knowledge as an opportunity rather than a crisis, a fertile breeding ground for a new and better paradigm to emerge. (Tarnas, 1991). A more pessimistic analysis puts emphasis on the massive educational effort which would be required to shift the mass of people and their leaders from their attachment to ways of thinking which have always had in-built limitations, but which now appear to present dangers to the natural world and the entire planet. (Bateson, 1973). Either way, educators in general and teachers in particular can be expected to play a significant role.

The word 'positivism' was coined in the nineteenth century by the French thinker, Auguste Comte (1798-1857), to describe scientific method. He was one of the first people to articulate the case for *social* science. His argument was that the same scientific techniques of observation and experimentation, prediction and measurement, which had been so spectacularly successful in controlling nature and in shaping the humanly-created world of industrial machines, could be used with equal impact in enquiries into human organisation and society. If social scientists could develop the same kind of positive certainties or laws as their counterparts had done in cosmology and physics, a "technology" of society itself would become possible.

The scientific paradigm which so impressed Comte had begun as an intellectual revolution in the sixteenth and seventeenth centuries. Galileo's telescope meant that the universe could quite literally be seen in a new way. The secrets of the universe and of nature itself were no longer to be regarded as part of God's mystery and purpose. Galileo's insistence on using the evidence of his own eyes, and his measurements of matter and motion, suggested that Francis Bacon had been right in his empiricist belief that nature's secrets could yield themselves to human beings through the ingenious experiments of scientists actively seeking them. The much more passive enquiry paradigm of the medieval age, based on Christian wonder, on the formal logic of Aristotle and other scholastic traditions inherited from classical thought, receded as the modern scientific enquiry methods demonstrated their power to predict and control nature. The seventeenth century scientific paradigm united an intellectually powerful rationalism with this newly triumphant demonstration of experimental methods.

For, at the same time as Bacon's empiricism was beginning to demonstrate its powers, Descartes was devising a kind of rationalism which also owed nothing either to Christian or to ancient, classical authority. He despised the official orthodoxies of the intellectual authorities of his day as much as he did the superstitions of the credulous masses, regarding them as equally unintelligible and unbelievable. He wanted knowledge which contained certainty. His rationalist emphases, on the thinking mind separate from the objects of its thought, on the world and the universe as vast machines to be analysed into their constituent parts and on the significance of

mathematical measurements as the basis of true knowledge, contributed as strongly as Galileo's experiments to our modern world-view. Modern science joined together Descartes' need for certainty, and the priority he gave to knowledge which could be expressed mathematically, with Bacon's vision of an experimental methodology which would provide mankind with power over nature, and enable him to predict and control the world.

Newton's work at the end of the seventeenth century accelerated the triumph of positivistic science when he apparently solved the problem of planetary motion and summed up the universe in four simple algebraic formulas. Although he dismissed Descartes' theory of the world in all its details, Newton's work validated the central Cartesian principle that the world is a vast machine of matter and motion obeying mathematical laws.

> By the time of Newton's death in 1727 the educated European had a conception of the universe, and of the nature of "right thinking", which was entirely different from that of his counterpart a century before. He now regarded the earth as revolving round the sun, not the reverse; believed that all phenomena were constituted of atoms, or corpuscles, in motion and susceptible to mathematical description; and saw the solar system as a vast machine held together by the forces of gravity. He had a precise notion of experiment ... and a new notion of what constituted acceptable evidence and proper explanation ... (Berman, 1981 p41)

> ‘The most important change was the shift from quality to quantity, from “why” to “how” ... The acid test of existence is quantifiability, and there are no more basic realities in any object than the parts into which it can be broken down.’ (Berman, op cit, p45)

The connections between this scientific revolution and the industrial revolution of the eighteenth and nineteenth centuries, and with the associated rise of capitalism, need no elaboration here. The economic and political triumphs of the western world over the same period ensured that by the start of the twentieth century it would be not just the educated European whose views of reality and knowledge were positivistic. The shift from metaphysical to physical definitions of reality and from “why” to “how” approaches to knowledge had permeated every continent, and almost everywhere technological advance had become associated with human progress. Scientists, rather than clerics or philosophers, had become not just the providers of the most useful kinds of knowledge about the world but also the fount of the most important truths about reality.

Listed below are twelve features of the positivist enquiry paradigm, compiled from a number of sources, which are relatively non-controversial. The one or two word descriptions in brackets after each feature are intended to alert readers to the variety of criticisms made of positivism. But it should be noted that there are no agreed definitions either of the philosophy or of the method known as positivism, and that few people proclaim themselves as ‘positivists’ even if that is their chosen approach to enquiry.

1. There is only one world, one objective reality “out there”, the facts of which are the same for everyone and the laws of which are valid for all time. *(Naive Realism).*

2. Every aspect of this reality, including the human mind, is essentially machine-like, analysable into its constituent parts or particles. *(Mechanism).*

3. The mechanisms which constitute reality, whether analysed at the macro-level of planetary systems or at the micro-level of the smallest particles, consist of entities and forces which are in principle measurable. *(Atomism).*

4. These lifeless entities and forces - matter and motion - are all there is or ever can be; they are what is “really” real, and the universal laws which govern them are fundamental to all genuinely scientific explanation. *(Absolutism and Reductionism).*

5. Eventually science will establish the laws that govern all reality, i.e. all matter and all motion: ultimate and unshakeable knowledge based on proven facts. *(Determinism).*

6. Reality can only be apprehended by the senses, and all “facts” exist before they enter our minds; but “theory”, to explain those aspects of reality which are hidden from our direct observations, can be generated in the form of testable hypotheses. *(Empiricism).*

7. True scientific knowledge consists of such empirical facts about physical entities, complemented by well-founded rational theory, and no other "knowledge" is ever as valid or as true, e.g. personal or tacit knowledge, spirituality, wisdom etc. *(Reductionism and Physicalism).*

8. Knowledge is acquired by standing apart from the world as a dispassionate and objective observer; the knower must always be separate from the known, and the enquirer has a duty to stay detached from the object of enquiry. *(Objectivism).*

9. Reality can be described in a universal scientific language which corresponds to the facts of the external world in an unambiguous, one-to-one relationship. *(Literalism).*

10. Geometry, formal logic, statistics and mathematics provide the model for a truly scientific language to express knowledge which is truly reliable. (*Rationalism*).

11. Facts are separate from values, thought from action, intellect from emotion, mind from matter. (*Dualism*).

12. Enquiry must always be value-free, with observable and measured behaviours given precedence over mental states. (*Behaviourism*).

The case against positivism

There have been many arguments made against this scientific world-view and its associated enquiry paradigm, and they began long before Comte coined the word. Pascal (1623-1662), for example, was a contemporary who challenged Descartes' emphasis on the rational intellect as the foundation of all reality and knowledge with his claim that 'the heart has its reasons which Reason knows not of.' Even at the height of industrial society, when the positivist message was at its peak of influence, there were dissenters and critics often characterised as "romantics". Artists and writers like Blake and Goethe, Keats and Dickens ensured that the atomism and reductionism of this paradigm did not go unchallenged in the eighteenth and nineteenth centuries. How, they asked, can scientists possibly want to reduce all the layers and mysteries of human existence to inanimate pieces of matter and measurable facts? But they never became more than an influential minority in the world at large. Theirs was seen as a largely emotional response to a world in which the Cartesian intellect had pronounced itself as the sole arbiter of truth, reality and knowledge. We can regard Marx, Darwin and Freud as more typical of mainstream nineteenth century thinking, and as much more influential shapers of twentieth century worldviews, and each of these intellectual giants had a positivistic belief in the possibility of discovering scientific laws which would explain history, evolution and the human unconscious respectively.

Philosophical critics of positivism represented even more of a minority viewpoint, but their arguments were perhaps stronger. Kant (1724-1804), for example, convincingly demolished the empiricist and dualist model of a detached and separate mind - a tabula rasa - waiting for sense

impressions to write their picture of the world on it. On the contrary, he proposed, the mind itself has a structure which it imposes on the world. There is a sense in which mind gives its own shape to, or even creates, reality. But what the mind apprehends must necessarily always be the appearance of reality, reality shaped by its own fixed and inbuilt categories; actual reality itself, 'das ding an sich', must always remain beyond the grasp of the human mind. However, the most telling blows to Comte's positivist dream of discovering objective truths about an objective reality came not from philosophers like Kant but from the hard sciences themselves.

At the beginning of the twentieth century Einstein's theory of relativity undermined the certainties of Newton's laws of physics, while a few years later quantum theory appeared to undermine the notion of objectivity itself. Heisenberg's indeterminacy principle asked questions about positivist epistemology and methodology. In its simplest form this states that there can never be a completely separate or detached observer, because the observation process itself - for example, the light from a microscope - will always have an influence on what is being observed. The inability of theoretical physics to establish whether light really consisted of waves or particles cast similar doubt on the ontological assumptions of positivism. It became clear to twentieth century physicists that reality is not simple or absolute, and Kant's view that reality, knowledge and mind were inseparably interconnected became confirmed by the new physics itself. In fact, the urgent need for a new worldview to replace positivism stemmed from the very discipline which had initiated and maintained the paradigm over three centuries. In the context of educational and other

social science enquiry the following question is bound to occur when pondering this intellectual revolution in physics: if the knower and the known, the researcher and the researched, are in some degree interconnected even in the physical sciences and in the physics laboratory, how much more so must they be when the enquiry is taking place in a human or social environment like a classroom?

Starting in the 1930s Karl Popper developed a highly influential philosophy of science, based on the new understanding that even the most firmly entrenched scientific theories, such as Newton's, finally fail and are falsified. His new epistemology had the non-Cartesian premise that there is no such thing as absolute or certain knowledge and that all knowledge is tentative and conjectural, including those scientific facts or theories which currently seem most unassailably true. There are no timeless and universal laws of nature, no certainty of correspondence between our best theories and the truth of the world. The most we can do as enquirers is to submit all our theories to relentless scrutiny in an attempt to falsify them and thus enhance our knowledge: we should never be trying to prove them only improve them. Scientific rationality lies in this process of relentless criticism, not in the positivist dream of building an impregnable edifice of knowledge out of atomic facts and propositions. In the 1960s Thomas Kuhn was responsible for popularising the idea of 'paradigms' and for an extension of the Popperian analysis by showing in detail how scientists actually operate. Science does not progress in a seamless or incremental fashion, adding new discoveries to established 'facts'. Scientists are normally reluctant to change their previously acquired version of the 'truth' of their views of reality and knowledge, until the evidence in favour

of some new theory or paradigm becomes overwhelming. Intuitive leaps, emotional defensiveness and other kinds of non-intellectual activity are heavily involved in the process of scientific advances. Knowledge is as much a construction as a discovery, and to a great extent a social construct.

Much of the thinking behind the non-positivist enquiry paradigms we shall be discussing below is derived from Popper's and Kuhn's dismantling of some of the basic tenets of the positivist worldview. But to be non-positivist is not necessarily to be, in every respect, anti- positivist. For example, Popper himself left intact the ontological reality and objectivity of the world itself, if not of our scientific knowledge about it. His particular version of 'naive realism' assumed that there was definitely an objective reality which could always shout an authoritative 'no' to our conjectures or tentative theories. His method of 'falsifiability' requires such an arbiter or ultimate touchstone of objective truth and certainty. For the more radical anti-positivists this objectivism and realism, together with the correspondence theory of truth on which Popper's paradigm depends, will all have to be discarded, if and when a new enquiry paradigm is to catch up with the new physics, (Skolimowski, 1994).

The case against positivism could take up many more pages. Attacking it has been a pre-occupation of much twentieth century thinking. The phenomenological tradition of Husserl, Heidegger and Merleau-Ponty found unacceptable the positivist exclusion of consciousness from science and scientific endeavour; anthropologists and ethnographic enquirers pointed to the different ontologies and epistemologies of non-western peoples and associated the positivist enquiry paradigm with an unwonted

arrogance in its assumptions about its universal superiority and correctness; feminist writers added to the charge sheet a crude masculinity and an imbalance in favour of linear, decontextualised and ego-dominated thinking; the disciplines of sociology of knowledge, hermeneutics and linguistics have all contributed telling criticisms of the absolutist epistemology and of the notion that language can ever accurately mirror the real world or provide unproblematic communications about it; the contrast between the 'early' and the 'late' Wittgenstein testifies to the way in which one twentieth century genius lost his initial belief that positivism could provide an answer to all philosophical questions; the corpus of recent work known as 'post-modernism' can also be seen as a further indictment of the entire positivist worldview with its notions of foundational truths and universal laws. Finally, the work of Habermas on how knowledge is constituted, showed how positivist approaches - in common with all epistemologies and all enquiry paradigms - are deeply imbued with a fourth and largely unacknowledged 'ology', which is Ideology.

The underlying assumptions of positivism are also attacked for the large and important areas of human experience which they do not permit to be scientifically studied, because they deny that they are fundamentally real. When true knowledge is confined to that which is discoverable and measurable and expressible in objective language, much of our lived reality must be excluded from any serious enquiry. Mainstream science has nothing sensible to say, for example, about humour and play, art and aesthetics, religion and spirituality or love and wisdom. According to its positivist ontology and epistemology these are epiphenomenal aspects of

life, which would require an analysis or breakdown into more tangible and quantifiable phenomena to be adequately explained. Some might want to add human learning and personal development to the list of things unilluminated by conventional science. We merely reflect that many of the most influential psychologists of the past century have chosen to stay firmly within the positivist mainstream, and that their quantitative testing of the mental performances of dogs, rats and pigeons as well as of children has had a particularly large influence on education policy and practice. (Note 2)

Because of some or all of these substantial criticisms, Comte's dream of a positivist science of human beings and human society can be declared dead. It would be hard to find any educational researcher who openly espoused a belief in the positivist principles listed above. It is significant that Carr and Kemmis, writing in the mid 1980s, found no recent advocacy of the positivist agenda in the educational literature and had to draw on writings from the early 70s and long before. Yet we are faced with the irony in Britain that our recent educational policies, and therefore nearly all the current educational research which governments commission and respond to, have been more positivist in approach than at any time this century. The assumption remains very powerful that education is a technical and measurable activity, no different in principle from driving a car or running a factory or organising a production line with maximum efficiency and effectiveness: activities on which all logical, rational people can agree policy once the facts are established; activities where the complex and moral question, 'why', is always subordinated to the simple and technical question, 'how'.

Consider, for example, the paradigmatic assumptions which underlie the practice of OFSTED inspections or ‘enquiries’. There is an assumption of a reality to be discovered, measured and graded numerically by objective observers according to pre-conceived and universally valid criteria. Generalisations and comparisons are derived from this data in order to predict and control school policy and practice. Ideology is not admitted as a key element in the inspection process, for it is seen as technical rather than political. The idiosyncrasies of any particular school or context or teacher have to be ignored, as do any values which cannot be observed or demonstrated to have been 'added'. And to argue against such enquiry procedures can be made to seem like an argument against common sense, especially when the case for them is couched in the familiar language of teacher accountability and taxpayer ‘value for money’.

In looking at other enquiry paradigms we have to be aware that positivism still has this hold on our everyday existence and thought processes. It is part of the air we breathe. It largely defines what we mean by ‘common sense’. For example when we think, quite rightly, of research as needing to display rigour and validity, we are likely to start with a deep attachment to the positivist versions of these concepts. The problem which faces any alternative paradigm is how to be systematic and intellectually rigorous, how to demonstrate the truth and validity of enquiry findings, in a world where most of the audience for research is conditioned to see these things through positivist eyes. Nevertheless, for the past twenty years alternative and non-positivist approaches have found an enthusiastic response among professional practitioners in general and teachers in particular. Intuitively

many teachers have long since believed that conventional scientific method is not helpful in making sense of the complex realities found each day in the classroom and staffroom; that consciousness, mental states and intentions cannot simply be excluded; that facts never come free of theories or of values; that generalisations do not apply in every school or for every pupil, and that the individual case is often too important to be statistically discounted. In short, that there must be another and a better way.

Alternative enquiry paradigms: interpretivist

Early in the century, Weber defined sociology as a 'science which attempts the interpretive understanding of social action' (Weber, 1964), and many other social scientists have shared his non-positivist belief that social science could not proceed without taking into account the subjective meanings which actors give to their own actions. Where positivism regards mental states and human intentions as things to be explained by science, because they have been caused by fundamental physical entities and relationships which are in principle measurable, the contrasting non-positivist approach assumes that they are themselves a potentially significant part of any explanation. The subjective consciousness becomes a crucial causal factor in human and social affairs, even if it is also in some senses 'caused', and needs therefore to be seriously studied by scientists rather than treated as a secondary phenomenon to be explained, or explained away. The social scientist in this perspective must try to *interpret* or to *understand (Verstehen)* the actors and the contexts which are being studied, as opposed to attempting to *explain* or *quantify* them in

order to aid prediction and control. This is often referred to as a qualitative rather than a quantitative approach to research. Scholars in several different disciplines have developed a number of alternative enquiry methodologies based on this distinction, whereby values are seen as inseparable from facts and interpretation as an inescapable aspect of description and explanation.

Twentieth century historians, for example, whose nineteenth century predecessors were encouraged by Comte's positivist contemporary, Ranke, to be factually objective and 'to tell it how it really was' (wie es eigentlich gewesen war), have been compelled to recognise that any facts about the past are always embedded in complex contexts, and therefore need interpretation. Objectivity remains important to historians, but it is no longer a simple or unproblematic concept. Similarly, the anthropologist or ethnographer who visits a tribal culture and asks, 'What is going on in this situation?' knows that he or she will have to interpret the unfamiliar routines, rituals and actions in order to make sense of them.

Hermeneutics (the science of interpretation) and phenomenology (the philosophy which insists that human consciousness is as real as any other investigable phenomena) have for a long time provided the human and social sciences with different ontological and epistemological bases for research into human affairs; on these bases enquiry paradigms have been developed that are no less rigorous than mainstream positivist science but considerably more likely to provide enquirers with meaningful insights and relevant theory. The best known of these alternative paradigms of enquiry has, like positivism itself, almost as many names as it has

advocates, but we shall follow many other writers in calling it *Interpretivist*. It is also called 'phenomenological', 'anthropological', 'historical/hermeneutic', and 'ethnomethodological', among other names.

Two other non-positivist enquiry paradigms, each of which makes a claim to go beyond straightforward interpretivism, are briefly introduced below under the headings of *Critical* and *Participatory*. But there is no general agreement in the academic community about when a 'new' worldview is coherent or developed enough to be accepted as an enquiry paradigm, and the field is hotly contested by experienced researchers and theorists. For example, our own preference in favour of an eclectic 'case study' approach, which is discussed in more detail below, is both a pragmatic and a principled response to the special factors and complexities encountered by educational researchers and practitioners as they try to apply the various research ideas and approaches that are currently available. But some educational enquirers, especially if they are wedded to a particular version of "action" research, as depicted in either the critical or the participatory enquiry paradigms, might regard case study as too inactive, too politically neutral or too researcher- led for their purposes. The debate continues. Novice researchers can expect, therefore, on entering this field, that once they have become familiar with the issues their contributions really could have the potential to make a difference; to put it another way, the ontological, epistemological and methodological questions mentioned earlier are not much nearer to any final resolution than they were 2500 years ago.

For newcomers to the debate, however, the most useful first step probably lies in developing an understanding of the basic assumptions and principles of enquiry which are common to all non-positivist or 'qualitative' paradigms, rather than in any detailed exploration of their differences from one another. Table II provides a simplified list of such assumptions and how they contrast with the 'quantitative' or positivist versions.

The following characteristics of interpretivist research will help to make clear some of the practical implications for the conduct of enquiry which are implicit in the paradigmatic assumptions above, but which may not be immediately apparent. (Of course, tables like ours above are themselves part of our positivist tradition and are better regarded as a suggestive introduction to the issues rather than any kind of definitive treatment of them.)

- **Human Contexts for Enquiry**

Enquiries in this paradigm are always carried out in natural settings and not in the artificial environments associated with the physical sciences. This means that variables cannot be controlled and that situations cannot be predicted in every detail, however carefully the study is planned. In a world of unique individuals, of actions that are related in complex ways to the contexts in which they take place and of multiple realities and perspectives, there is little chance of having a research blueprint which is adhered to from start to finish. This requires researchers to be *more* disciplined than their positivist counterparts, because they have to take into

account so much more of life than is ever found in a controlled laboratory situation, and they have to do their planning in the expectation that their study may take unexpected turns and that their initial design will almost certainly have to be altered.

- **Human Instruments of Enquiry**

The instrument of enquiry into these human situations is always another human being. While this gives several important advantages, - for example, the possibility of seeing the 'big picture', of responding more deeply to complexity, of operating at several levels simultaneously, of empathetic and intuitive understandings - it also provides the main ammunition for the positivist attack on interpretivism. The human enquirer will bring to the enquiry a body of personal knowledge that is neither propositional nor testable, and no other human being would ever be able to do the same research in precisely the same way; he or she will have conscious and unconscious preconceptions and biases, which must affect both the processes and the findings of the enquiry; the human instrument cannot be 'road-tested' and refined in the same way as a questionnaire or an intelligence test. These are powerful criticisms. Allowing subjectivity a major role in an enquiry paradigm leads inevitably to the problems of relativism, and of how to distinguish good enquiry from bad.

Nevertheless human researchers can certainly learn, can improve their performance over time and can profit from experience. It is the lens of positivism and its focus on just one acceptable method of enquiry which makes 'humanness' appear such a big disadvantage.

> If rational behaviour in social enquiry is not equated with *scientific* rationalism - that is with the possession of some special method or criteria for discriminating genuine knowledge from mere belief - but is founded instead in the ordinary actions of everyday people as they struggle to come to terms with conflicting views and opinions, then professional social enquiry cannot claim special status based on special knowledge. (Schwandt, 1996, p.68)

When it is acknowledged and made transparent, subjectivity may become a strength. By being aware of the dangers of bias and by being open about the extent to which the context of the study may have been 'disturbed', or the data 'contaminated', by their presence the qualitative researcher is acknowledging the deeper ontological understandings of the new physics: there is never a pure and uncorrupted objective reality to be discovered where human actors are concerned, either as the investigators or the investigated. Moreover, such a researcher is potentially able to draw out from multiple perspectives and a complex reality insights and interpretations which must forever be denied to the mechanical quantifier of a single and simple reality. But such insights, understandings or 'findings' are always subject to further dialogue, questioning and exchange of views. Knowledge in this paradigm is constructed inter-subjectively and enquiry is seen as a particular form of conversation, which never expects to reach a final conclusion and has no criteria for deciding what such a conclusion (*the* truth) would look like. But this is not a relativist position; there is no suggestion that 'anything goes' or that one view is as good as, and no better than, any other. On the contrary, all contributors to

the ‘conversation’ have to persuade others of the rightness and the quality of their particular interpretation; ethical commitments to beliefs and practices are firmly held and argued for, even while they are being relentlessly scrutinised and argued against by other enquirers. Any dangers in such an approach to knowledge and truth lie not in relativism, but in cynicism about the possibilities of human betterment through such dialogical and moral enquiry processes. (Note 4)

In recognising their own subjectivity, and the inescapable part it is playing in the construction of knowledge, qualitative enquirers will actually be living, and not just asserting, the advantages of their paradigm. The positivist is stuck in a closed paradigm which can never be used to criticise its own unchanging criteria of truth or its deepest assumptions about reality and knowledge. Qualitative researchers, by contrast,

> recognise the continual two-way interaction between culture and science and the fact that, as the personal characteristics of scientific investigators change (because they are living in a changing culture), what is an acceptable epistemology will also change.’ (Harman, 1996, p.37)

- **Ethical and Practical Issues**

The enquiry data collected in a non-positivist paradigm will seldom be straightforward; by definition, it will require ‘interpretation’. Therefore any ‘findings’ and any claim to understanding or knowledge on the part of the enquirer will need to be carefully checked with other people who have

either inside or expert knowledge of the context, including those respondents who may have been earlier sources of information. This has profound implications of an ethical nature, as well as practical implications for data analysis and theory building and for the way research evidence and the researcher's conclusions are presented.

A lot of these implications are discussed in detail in the section on case study below. It may be worth stressing here, however, that an interpretivist approach to research does not preclude the use of quantitative or statistical data where it is appropriate. The paradigm differences discussed here go deeper than the use of particular research methods or tools. A 'qualitative' paradigm seeking new understandings rather than replicable proofs is not hamstrung by the same dogmatic certainties which cause some positivists to proclaim particular methods to be either scientifically acceptable or unacceptable. The quantitative/qualitative distinction which matters most occurs at the start of an enquiry, when researchers explore the particular slice of reality or aspect of the world they want to know about, and how they intend to acquire knowledge of it. This initial thinking will lead them to articulate their enquiry paradigm, and consequently the values which will inform their research design. It is these philosophical starting-points - not the later choice of particular methods to collect data - which will determine whether the research is essentially qualitative or quantitative.

- **Validity Issues**

The issues around validity probably cause the most difficult problems for non-positivist enquirers, if only because we have been so strongly

conditioned to regard the positivist criteria of validity as the sole way of establishing the trustworthiness of research processes and findings. Positivist enquiry has very well developed criteria for establishing confidence in its products - conventionally known as:

- Internal Validity, or How far do those who have been providing the data and those who know the context of the enquiry also recognise the truth of the findings?
- External Validity, or How far can the findings be generalised, or applied, to other contexts or other respondents?
- Reliability, or How far would these findings be consistently repeated if the inquiry were replicated in the same or similar contexts?
- Objectivity, or How far have the findings avoided the biases, motivations, interests and perspectives of the enquirer(s)?

Some well-respected non-positivist researchers in the interpretivist tradition have struggled to provide an analogous set of validity criteria. Guba, for example, translates internal validity into ‘credibility’; external validity becomes ‘transferability’; reliability turns into ‘dependability’; and objectivity into ‘confirmability’. Credibility is established by techniques like triangulation and member checking, transferability by ‘thick’ description and purposive sampling, and dependability and confirmability by an ‘audit trail’ of different kinds of data and ways of recording it, carried out explicitly as part of the inquiry. (Lincoln and Guba, 1985).

Although many researchers have found this approach useful, especially perhaps when justifying their choice of a qualitative methodology to sceptical colleagues, it is criticised by others for not keeping faith with the very different ontological and epistemological assumptions of non-positivist enquiry. There is an implicit acceptance of absolutism and objectivism in this approach to validity issues: of some static and external truth or reality to be discovered and verified by an enquiry's respondents, or 'checked' by its members. But in the new paradigms truth and reality are assumed to be always in flux, in a continuous process of being constructed or co-created, not least by qualitative investigators and those being investigated. Whatever truths and realities existed before the enquiry will in some degree be altered by the process of enquiry itself - they have no objective existence needing verification, whether by enquiry insiders (respondents) or by outsiders. For more radical non-positivists it is a mistake therefore to start with conventional criteria of validity; the authenticity and trustworthiness of research projects have to be demonstrated in different ways.

Heron, for example, refuses to accept the positivist hi-jacking of a useful word, but he also makes the important point that validity issues cannot simply be ignored by serious enquirers:

> "Validity" is a healthy term in ordinary discourse, and is not to be abandoned in social science because of its abuse by positivism ... Research findings are valid if they are sound or well-grounded, and have been reached by a rational method - one that offers a reasoned way of grounding them. What is important is that researchers are

> clear about the grounds of validity they are claiming and critical about the extent they have reached them. (Heron, 1996, pp.158/9)

However, it is not just on issues of validity that interpretivism is sometimes accused of being insufficiently true to its non-positivist assumptions, and we shall finish this section by briefly introducing two other enquiry paradigms and their claims to be distinctive.

Alternative enquiry paradigms: critical

For Carr and Kemmis the interpretivist approach has a major theoretical weakness in that it focuses on subjective meanings and understandings without sufficient emphasis on the underlying structures and historical forces which shape these multiple realities and perspectives. The best research should unite theory and practice in a way that leads not just to new understandings but to changes in practice. It will be 'action' research. Researchers who explicitly espouse interpretivism are likely to be motivated more by intellectual curiosity, and by a desire to formulate social theory about human actions, than by any desire to change or improve current realities or practices. In the educational context this can never be enough, because education - as we have suggested earlier - is above all a practice. It needs committed practitioners who use theory to improve practice, rather than detached scholars who study practice to derive theory. Enquiry should be *for* education rather than *about* education.

Educational enquiries in the critical paradigm aim therefore to do more than increase awareness of the many different understandings which exist in a given situation, though this may be a necessary starting point. They aim to improve the practice of education by helping practitioners to alter their actions as a result of critical and self-critical reflection. The hope is that as a result of their new understandings practitioners will want not only to emancipate themselves from the taken-for-granted world of education dominated by external (government) agency but also to find ways of emancipating others as well, including colleagues and pupils. By actively engaging with the injustices and inequalities which shape the wider world, and with the dominant 'interests' which constitute knowledge in the mainstream curriculum, 'school communities must become, and see themselves as becoming, participants in a general social project by which education and educational institutions may be critically transformed in society at large'. (Carr and Kemmis, p.159/160)

This enquiry paradigm has a political and moral core shaping its epistemological assumptions. Knowledge is neither objective nor subjective, but both. Practice and theory are inseparable, not just in the sense that for practitioners, 'practices are changed by changing the way they are understood' (Carr and Kemmis, p.81), but also in the deeper sense explored by Habermas' investigations into the ways in which ideology has always created human knowledge. There is no escape from power and political interest, because our world, our knowledge of it and our ways of thinking about it and acting in it have all been constituted by different 'interests'. Consequently, interpretivists are misguided to focus in a neutral manner on subjective interpretations of a constructed reality. The

meanings made by individuals are certainly important, and the positivists are even more mistaken in their assumption that social reality can be known independently of the knower. But social reality is more than just the sum total of these individual meanings. There *is* an objective reality and it does need to be explored scientifically, but it is not the objective reality which our dominant positivist world-view takes for granted and the kind of science needed to explore it must take the radically different form elucidated in *Becoming Critical*.

Alternative enquiry paradigms: participatory

Carr and Kemmis make the case for a distinctive action research approach to educational enquiry and suggest that education has been ill-served by the prevalent assumption that there are only two paradigms and therefore only two possible ways to do social science investigations. Heron and Reason extend much further the arguments for a moral and political core at the heart of all enquiry. Not just should research be *for* the actors in a given situation, it should be *with* them. The ethical starting point for enquirers should be the democratic ideal of a community of equal and autonomous individuals, whose flourishing depends on mutual and participative decision-making. No knowledge should be formulated *on* people (positivist approach), or even *about* people (interpretivist approach), where those people have not been fully involved in its formulation. In this perspective all participants in a project have the same status of 'co-enquirers' and do not divide into researchers and research subjects, or investigators and informants. It is not the researcher who provides all the thinking, and the research subjects who contribute all the

actions; all participants are expected to be critical and self-critical actors and practitioners operating in both roles, 'moving in cyclic fashion between phases of reflection as co-researchers and of action as co-subjects', (Heron, 1996). All theory is lived, rooted in practice and in the concrete situations of the participants. Any knowledge claims or findings which emerge from such a pure form of action research will have been shared and discussed with all participants as autonomous co-researchers. The products of the enquiry will be as much their possession as they are the property of the initiating researcher or originator of the project. This is a long way from the 'member checks' used to check the accuracy of their data analyses and interpretations by more conventional qualitative researchers.

The implicit attack by this paradigm on the limitations of interpretivism lies in the assertion that it is only such participatory forms of action research which have the potential for fully human enquiry into all aspects of the human condition. The 'participatory' notion applies not just to its methodology, in which collaboration and democratic principles are essential, but also to its post-Kantian ontology, in which mind participates in shaping or 'co-creating' reality, and to its extended epistemology in which there are many kinds and levels of knowing and always a participative relation between knower and known. There is also an explicit political agenda which extends the concept of participation to the wider eco-system and which highlights the threats to the biosphere caused by our culture's continuing attachment to positivist ways of thinking. Participatory researchers are exhorted to contribute to 'a revisioning of the dominant Western view of knowledge' (Reason, 1996, p.25), not just

because of the structural inequalities endemic in the human world but also because of the damage being done to the natural world on which all life depends. The suggestion is that the whole of society has been let down by de-politicised and 'de-moralised' versions of scientific enquiry and the rejection of positivism receives its most complete statement in this paradigm.

One epistemological assumption of the participatory paradigm is that serious enquiry into human activity must necessarily engage with fundamental forms of non-linguistic, or tacit, knowing which precede and ground the use of language itself. In this way it is more radical than the critical paradigm which assumes with Habermas that all rational knowledge can be traced back to original language activity, and that our current ideas about what constitutes meaningful knowledge can be regarded as ideological distortions of pure 'communicative actions' found in 'ideal speech situations'. In its extended epistemology, the participatory paradigm denies the centrality of human language as the original and only source of human knowledge.

Recent systemic theories of mind, consciousness and rationality have identified cognition not just with human 'speech acts' but with the full process of life. Mental process, conceived systemically as a self-regulating network of inter-relationships, applies not just to humanity but to all life forms, from bacteria to large-scale ecosystems (Bateson, 1979, Varela et.al., 1993). There is a profound form of knowledge which human beings share with non-human life forms: human beings are full participants in, and utterly dependent on, a 'more-than-human' world; and far from being

something detached and separate from the human mind, this living world also has a 'mind' which, when the metaphors are changed from atoms and machines to patterns, relationships and self-organising networks, appears to operate in a fundamentally similar way (Capra, 1996). In this perspective the human consciousness, with its abstract thoughts and symbolic concepts (language), arises out of deeper cognitive processes that are common to all living organisms. Knowledge, therefore, is not confined to human mental representations of the world through language, nor is the 'ideal speech act' the essence of rationality. Perceptions and emotions are as significant as the workings of the intellect in a fully functioning and completely rational human being, and there are significant sources of knowledge in the way the human body interacts with the natural world which precede and supersede language use. (Abram, 1996)

From this radical epistemological starting point the participatory paradigm has developed its emphasis on "axiology" - or theory of value - whereby all human flourishing, including the entire well-being of the planetary eco-system, is said to depend on participatory relationships. The quest for knowledge in this perspective must always have a moral purpose: a concern with what is good, not just with truth. 'Being values' are seen as even more important than truth values. The role of propositional knowledge and the part played by formal theory in enquiry are both reduced, and the 'primacy of the practical' is elevated. Researchers in this paradigm should not just be aiming to contribute to some academic field, they should also be aiming to 'do good', to 'take sides', to be 'of use' and to 'ask and attempt to answer real questions of real importance to real human beings'. (Lincoln and Reason, 1996, pp.8-9). What these questions

are must arise in dialogue, however, and be firmly rooted in the experience and practices of those with whom enquirers are working. In this perspective, enquiry is not just about helping people to criticise and see more deeply into their taken-for-granted realities or even about helping them to improve their future practices, although it may well include these aspects. It is also about actively challenging the dominant worldview and using the enquiry process itself to give participants a real-life insight into more fulfilling ways of thinking and being and relating - a lived example of its paradigmatic assumptions and democratic values.

Unsurprisingly, words like 'utopian' have sometimes been used to describe the novel approach to enquiry described by Heron and Reason. They assume that democratic and fully participative communities of enquirers can be created, although there are comparatively few examples of the paradigm operating in any complete or pure form as yet. Also, and ironically perhaps, Heron and Reason make their case for emphasising non-propositional forms of knowing in highly academic and propositional language which some students may find difficult to follow. However, the issues of being fully human with which they are wrestling may resonate with many professional educational practitioners, as they try to define their deeper purposes or to establish what it means to educate people as 'whole persons'. Many practitioners also share a common 'green' agenda with these qualitative and action researchers. Nevertheless in our experience most newcomers to enquiry, and especially most teachers, will probably find themselves too constrained either by the politics or by the practicalities of their situation to engage in such a demanding form of action research, and our recommendation to all first-time researchers

would be to explore the possibilities of the equally rigorous but rather more eclectic approach to enquiry described in the final section of this work.

In this part we have introduced the notion of ‘paradigm’ and explored the ways in which all enquiry must be intimately tied in to a particular set of philosophical assumptions about the nature of reality, the nature of knowledge and the forms which knowledge of reality can take. We have also suggested that many of these issues have a particular relevance and resonance for educational enquirers and their research projects. We next elaborate in Part Three on the connection between education and research by looking at the factors which make research genuinely ‘educational’ as opposed to merely *on* or *about* education.

Part Three

Criteria for Educational Research

In what way may the adjective “educational” qualify the noun “research”? we believe that four main senses may be discerned. We further believe that the future for educational research is intimately bound up with progress in all four dimensions.

(1) Educational research must be *about* education.

This criterion may seem obvious. Yet there are important differentiations to be made among the many topics which bid for teacher’s attention as researchers. There are commonplace distinctions between “education” and “ training”. These distinctions have been greatly eroded, and perhaps rightly so, by the development of vocational and other non-academic emphases in schools during the last fifteen years. We cannot rely upon purely conceptual distinctions here but need to consider possible research topics in relation to our own underlying educational values. Some believe that educational practice has its own distinctive specific character. It is concerned to liberate and empower rather than to bring learners into conformity. But the character of education can surely not be understood in terms of any one form of traditional practice. In times of change it is tempting to cling to the past. Nostalgia for a grammar school curriculum, as in some way at risk in a comprehensive world, must not be allowed to cloud our judgement. Nevertheless, it will be important for readers of research as well as for those proposing their own research projects, to

search out the educational values inherent in research work. What underlying concepts of human development, social life and professional activity are involved?

(2) Educational research must be of practical educational benefit

This again may seem a truism. Unfortunately, however, too much educational research resembles military intelligence presented long after the war is over. Much research also appears to reach intuitively obvious conclusions through circuitous routes. While such criticisms as these are not always fully justified on closer inspection, there is an obvious sense in which we must look for practical benefits from research efforts. This is particularly the case, of course, when practitioners themselves undertake their own educational enquiry.

It is important in this context not unduly to narrow the scope of research for there may be shorter- and longer-term benefits. There may also be benefits which are felt elsewhere than in the immediacy of the classroom. For example, there is a need to consider staff morale and inter-school relationships. Topics such as these are of obvious relevance to teachers' work in a social and political environment where a "discourse of derision" for education, public accountability, competition and sheer pressure of work are key features. Much significant research is also likely to be less immediately visible than action research undertaken with pupils or students. Moreover, there is an equal need to peruse research in the policy environments which bear upon practice. It is to our mind important that teachers-as researchers have licence to roam widely. The separation of

policy from practice is dangerous to professional progress and educational policy badly needs to be informed by the professional perspective.

(3) Educational research must be intelligible and useful to those "researched"

This is perhaps our most radical suggestion. Just as much medical research is conducted on passive patients and captive medical students, much educational research fails to consult and involve those who are its subjects. In this area, it is important for readers and writers of educational research reports to consider the extent to which collaboration and co-operation with research "subjects" has been sought and achieved.

We hold this criterion of exceptional importance for the following reasons. Education is a social activity which cannot properly be understood under an individualistic perspective. That is to say, the achievements of teachers can only be fully understood within the context of their schools and the wider system. In this sense, education is necessarily a social activity involving the interests and energies of others, including professionals, pupils and students and the wider clientele. It is interesting to note a connection between our criteria at this point. Arguably, educational processes involve the willingness and wittingness of those involved. This would link our concept of education (1) above) with the notion that our research efforts should be as fully collaborative as possible with colleagues and learners.

But a further consideration must be entered. It will not always be possible for our research to be fully intelligible to all parties. There are varying levels of pre-existing understanding among those involved. There are also sometimes reasons for a less than full disclosure of a researcher's intentions and activities. This raises the general area of ethics, which will always require systematic attention.

(4) Educational research must be educational for those who conduct it

This criterion comes into particular focus when research leads to an academic award.. It is, of course, also bound up with our first criterion relating to the concept of education itself. In any case, within the university context it seems to be important not only that work of significance is conducted but also that the professional teacher is enlightened by it. Let us not be simplistic, though, for it will never be enough simply to have learned a great deal personally without at some time having presented work of more than private significance.

There is also a deeper reason for this criterion. Without the learning of individual practitioners it is hard to see how the practice itself can grow. The furtherance of any professional service is not and cannot alone comprise the achievements of an elite but must consist in the continuous development of individual practitioners. This much is entailed by our characterisation of ‘practice’ in Part One.

Lest the argument thus far appear altogether too iconoclastic, we wish now to stress that both the rigour and creativity of research work in education

derive from established traditions and these exist across a wide range of research practices from highly "scientific" or positivistic" work through to qualitative, action research and other more newly emerging forms of work. Our argument is not an argument against established forms of enquiry. That would be arrogant in the extreme. Rather, it is an argument concerning how established forms of enquiry are to enter into professional practice. Our contention is that case study is a means of reconciling a number of different traditions within the research community without distorting professional educational practice as we have explored it here.

Part Four

Case Study as Educational Research

June 17, 1972. Nine o'clock Saturday morning. Early for the telephone. Woodward fumbled for the receiver and snapped awake. The city editor of the Washington Post was on the line. Five men had been arrested earlier that morning in a burglary at Democratic headquarters, carrying photographic equipment and electronic gear. Could he come in?
(Woodward and Bernstein, 1974, p.13)

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I wrote Cathy the same way I do most of my writing. I filled a hard backed spring binder with bits of quarto paper which had the headings of the various sections of the film on them, such as caravan slum, luxury flat, mother-in-law, courting, the first Home for the Homeless, the second Home for the Homeless. Then I worked from a very large number of newspaper clippings that I had accumulated through the years, transcripts of tape recordings, actual tape recordings, notes
of people I had met, and places I had been to - picking them out at random, seeing if they fitted what I wanted to do or not. (Sandford, 1976, p. 11-12)

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I began my work at Beachside Comprehensive in the autumn term of 1973, starting with a period of general observation and familiarization. At that time the first-year cohort of pupils was divided into ten parallel mixed ability forms plus two remedial forms, while the second and third year cohorts were divided into 'bands' one, two and three, according to ability. My aim like that of Lacey (1970) was 'to locate a number of strategic areas that would enable me to gain a clear picture of the processes taking place within the school'. This involved a steady focussing down from a general acquaintance with the school to concentrate on specific cohorts of pupils and particular forms, and in some cases particular groups of pupils and teachers. My participation in the daily life of the school, apart from observing of lessons, etc., was by supply-teaching in the first year of field work plus four hours of time, and three periods of time-tabled teaching in the second year of field work. I also accompanied forms on school visits, went on one school trip, invigilated in exams, took registers for teachers, played in the staff v. pupils cricket match, and so on. (Ball, 1981, p. xviii)

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What have All the President's Men, Cathy Come Home and Beachside Comprehensive in common? Answer: they are all case studies of great repute and significance. All of them studied a single case, coming to conclusions which are long remembered and leaving their field of endeavour a little better for the attention of a serious researcher.

Bob Woodward and Carl Bernstein were journalists on the Washington Post when they were presented with a burglary at the Watergate Building to report. What began as a case of burglary turned out however to be a major political scandal resulting in the resignation of the President of the United States. Woodward and Bernstein became central figures in a political drama, their investigations being part of the story and taking unpredictable turns as events, including of course the infamous cover-up, developed. 'Watergate', indeed the suffix '-gate', became a synonym for political duplicity.

Jeremy Sandford was living in Battersea in the early sixties and became acquainted at first hand with the plight of homeless families in 'emergency accommodation'. He made a radio programme using recordings of homeless people and officials. Reaction was 'absolutely nil'. He went with the photographer Donald McCullin to a Reception Centre where the LCC prohibited sound recording and photography. Finally he wrote *Cathy Come Home*, a dramatised documentary based on his own researches. The film was directed by Kenneth Loach and first shown on BBC 1 in late 1966. It caused social uproar, a special Cabinet meeting and pressure on the BBC, which was resisted, to apologise. It ended the practice of separating families in emergency accommodation.

Stephen Ball was a full-time doctoral student at Sussex University from 1973 to 1976. His supervisor Colin Lacey had himself written an important case study, Hightown Grammar. In school for three or four days a week over the first two years of his research, he observed lessons, interviewed pupils and teachers, administered questionnaires and

analysed school records and registers. His book became a landmark in the thinking about comprehensive school practices, particularly in the grouping of pupils, in relation to educational ideology and the social structure.

All three of these instances are case studies. They highlight distinctive features of case study work, which will be discussed below.

- They engage the researcher in enquiries they cared about.
- They are concrete and practical enquiries in real life contexts with important practical results.
- They are all contained in boundaries of space and time, having a beginning, a middle and an end.
- They draw upon a great variety of methods, in more or less opportunistic ways. They raise ethical problems, not all of which are resolved.
- They are written, as end products, in ways that attract and engage the reader.
- Above all, they are purposeful enquiries, marked by care and diligence in their use of evidence.

Of course, there are differences among these studies too. Woodward and Bernstein are journalists driven by the commercial imperative to sell newspapers, so their copy had to be accessible to a mass audience; but they were also driven by a sense of the public interest. Sandford was motivated by powerful personal experience and sought a specific set of reforms. He found that fictionalised presentation of his case as television drama achieved an impact beyond all expectation. Ball's is an

academic study, the only one of these works offered to a traditionally academic audience. But it was none the less fuelled by his own concerns as someone interested in social justice. All three studies derive from particular traditions in their own fields of journalism, television and academia respectively. Differences among them spring from the particular requirements and features of the contexts in which they are produced. Otherwise they are surprisingly similar endeavours. For our purposes here, there is much to be learned for academic case study work from these examples. The steadfastness and integrity of Woodward and Bernstein, their investigative indefatigability; the moral force of Sandford, his use of fiction as a route to truth; the sheer compulsiveness of both; these are qualities which will complement and unify the standard range of social science techniques usually proposed as comprising educational research. Case study has the capacity to achieve such results, transforming research on education into truly educational research by engaging the practitioner in practical enquiries resourced by appropriate theory and leading both to better personal understanding and improvements in practice.

This part argues therefore that case study, properly conceived, is uniquely appropriate as a form of educational research for practitioners to conduct. It has the potential to relate theory and practice, advancing professional knowledge by academic means. But case study is too often misconceived. The most important task for the researcher is therefore to attain clarity on the rationale for case study; only then can a satisfactory research design or strategy be found, appropriate research techniques deployed and modes of data interpretation and analysis developed. We need to answer 'why' questions before going on to 'how' questions.

For such reasons we first consider matters of definition. There follows a discussion of research design before going on to more technical questions concerned with evidence and data collection. Interpretation and analysis, the whole relationship with theory, is peculiarly integral to case study work and demands particular attention. Ethical questions also loom large in the study of individual cases which must be conducted in a social world not a laboratory. Finally, there is the matter of case study reports, presentation and writing strategies. Here again, the close relationship of the researcher to the matter in hand will suggest particular approaches to self-expression. In all of these areas research work takes a distinctive form derived from the precise nature of the case study genre.

There is an underlying argument in what follows that case study has an important contribution to make to the whole development of educational research, particularly insofar as teachers and other practitioners are to become more fully engaged in it. While the principal purpose of this work is to guide educational researchers, particularly teacher researchers, to successful conclusions, this is only part of a continuing programme of developments in educational research whose future is, we believe, very much bound up with the case study approach.

What is case study?

Three examples of case studies have already been given. These illustrate the diversity of work which may go under the case study heading. Woodward and Bernstein were at first involved in a case of burglary, later of a cover-up. Sandford created a fictional girl, a case of

homelessness. Ball's was a case of a comprehensive school, particularly its grouping practices. What, though, characterises these different works as case studies?

All were empirically (not merely theoretically) investigating real-life events, which were contemporary (not historic) and which required explanation. Yin summarises these features as follows.

A case study is an empirical inquiry that:

- investigates a contemporary phenomenon within its real-life context; when
- the boundaries between phenomenon and context are not clearly evident; and in which
- multiple sources of evidence are used. (Yin, 1989, p.23).

Such a definition has two major merits. First, it makes it clear that case study is not the name of a method; many methods are possible within a case study. Often enough, case study is taken to be synonymous with qualitative methods such as participant observation and interviewing and to rule out quantitative methods such as statistics. In fact, it is an open question what methods are to be used in any individual study and in what combination. Methods should be dictated by the need to understand, not selected on doctrinal grounds.

Second, Yin's definition differentiates case study from other research strategies such as experiments, surveys and histories. To the extent that social science aspires to the character of physical science, it needs to

control variables and minimise the importance of context. Case study is appropriate where it is not yet clear what are the right questions to ask. There needs to be a sense of perplexity, problems to be addressed, and a sense of the researcher's interests in those problems. But premature closure is inimical to good case study. Similarly, case study is usually contemporary rather than historic, though there is no reason in principle why a particular historic case may not be re-examined.

Selecting your case

A case must always be a case, or example, of something. What that something is, is of course the intellectual heart of the research problem. There is no obvious limit on the kind of thing a case may be. An individual pupil, teacher or parent may be a case (but of what?). So too might a class, a department, a school or a whole town or local education authority. There are as many cases, in principle, as there are nouns in the language. Your selection of a case to study is therefore a highly sophisticated business. It will be driven by your interests which are themselves a product of experience and understanding, having deep roots. A good deal of analysis of your reasons for selecting a particular case to study is called for.

Identifying a case to study implies already that you are seeing it in relation to a wider set of ideas. You see your research topic as a case of something or other. But good case study work will not be a merely mechanistic procedure in which a case is taken simply as an illustration of something already known and understood. Rather, it will start from some provisional understanding of the case and investigate it further.

At the outset, then, interrogate your own reasons for the study you propose. Give an account of your interests and thinking about the questions arising in the case you are studying. Good dissertations contain some such account, reviewing the starting points in the biography, values and interests of the researcher.

Generalisability

Critics of case study work will say that it lacks the first requirement of research, indeed of all academic work, namely that it cannot be generalised beyond itself. It tells us only about one instance, whereas science requires a great many if there is to be confident generalisation. There is, as we have shown in Part Two, a large and important literature on the principles of scientific and social scientific enquiry. The slightest familiarity with any of this will encourage resistance to simplistic positivistic induction (the idea that building up sheer numbers of 'data' can suffice). The literature will also urge caution in adopting equally simple minded opposites to the positivist point of view.

A popular oppositional response to positivism is to claim that case study is concerned, not with general laws or theories, but with portraying uniqueness. This is such a serious error that it must be carefully refuted here and now. In doing so we shall discern important implications for all aspects of case study from conception through to execution and completion.

Particularity not uniqueness

Viewed from a positivist standpoint the great objection to case study is in the area of generalisation. How can we generalise from a single case? The reply to this question is to deny that generalisation must always occur through the accumulation of instances (though no doubt that is one legitimate form of generalisation in some contexts). To study a case is to observe it closely and to render it in some way intelligible. Intelligibility is not principally a matter of looking but, inseparably from looking, a matter of inspecting the lens through which we look. The lenses through which we look are not our optical apparatus alone but the concepts and interests that guide us.

Case study is, then, not the study of uniqueness but of particularity. That is to say, case study is concerned with intelligibility, which in turn is a matter of connecting the case with others of its kind. This is done by language, sometimes by numbers. I am tempted to say, in considerable ignorance of aesthetics, that to capture uniqueness is what art is about. Certainly, to contemplate great art is not mainly or at all to see something (a yellow chair, a vase of flowers) as a member of a class of things, understood because named; the artistic experience is more one of wonderment that the thing exists at all. One enters into the being of a still life's subject, comprehending it in ways that transcend the verbal or scientific. It is an experience not unlike love, where persons see one another as uniquely themselves, not loved as members of certain classes or groups but, so to speak, for themselves. This response to uniqueness in personal love is perhaps why love is so inexpressible. There is nothing to say (or count) about uniqueness.

Our ambitions in regard to particularity are on the face of it less awesome. They are nonetheless important as part of the everyday human impulse to understand. Particular things, (which may include objects, events, institutions, persons, emotions - we have said the list is indefinitely long) are seen as examples of general cases. It is only because they are so seen that it is possible to say anything about them at all. Language makes possible our understanding of things and their relationship together. It may be helpful, by way of clarification of this centrally important point, to take the example of history.

What is history concerned to do? Is history in search of the unique or the particular? Elton has it thus

> As for history's preoccupation with the particular, that must be seen in its proper light. It is often asserted that the special distinction of the historical method is to treat the fact or event as unique. But frequent assertion does not create truth, and this statement is not true. No historian really treats all facts as unique; he treats them as particular. He cannot - no one can - deal in the unique fact, because facts and events require reference to common experience, to conventional frameworks, to (in short) the general before they acquire meaning. The unique event is a freak and a frustration; if it is really unique - can never recur in meaning or implication - it lacks every measurable dimension and cannot be assessed. But to the historian, facts and events (and people) must be individual and particular: like other entities of a similar kind but never entirely identical with them. That is to say, they are to be treated as peculiar to themselves and not as

> indistinguishable statistical units or elements in an equation; but they are linked and rendered comprehensible by kinship, by common possessions, by universal qualities present in differing proportions and arrangements. (Elton, 1969, p.8)

What are the implications of this view of case study as the pursuit of particularity rather than uniqueness?

The first implication is that it is important to have a reasonably precise idea at the outset of what sort of a case it is that you are investigating. In other traditions of research this would be called having a hypothesis. Your hypothesis is a judgement concerning the nature of the case. It must also be a judgement capable of being tested by investigation. It will be no good having a view unless you are able to specify in general terms what would count both for and against such a conclusion.

A second implication is that your hypothesis itself needs to be inspected. What leads you to believe the judgement you have made? What assumptions have you made about the connection of key ideas in your beliefs about the case?

A third implication is that since your views do not come from nowhere but are part of your experience rendered into language there is likely to be literature on your topic. Countless researchers have begun by assuming that their problem or topic comes fresh from heaven (or hell) to them alone, only to find on the first proper search in the library that others have been there before. Of course there is nothing on the uniqueness of your class or school, but there is plenty on classes or

schools like it. It is that very 'likeness' that propels your literature search.

The importance of these initial steps cannot be over-estimated. For a clear set of ideas at this stage equips you with purposefulness. Perhaps paradoxically, clear ideas based on sound thinking and a clear relationship to previous work should also make you the more ready to amend and develop the case study as it proceeds. You must believe something at the outset in order that you believe more and perhaps quite different things as you proceed. This is reminiscent of the adage that those who do not believe in God do not believe in nothing, they believe in anything.

On method

Case study is not the name of a method of educational research.

Methods of educational research include, among other things, surveys, interviews, observations, documentary analysis and questionnaires. There are very many varieties of all of these activities and there are various ways of classifying them. For example, there are quantitative and qualitative, participant and non-participant, naturalistic and non-naturalistic methods. There are many debates about methods, too often characterised by simplistic dichotomies equating one approach with enlightenment and the other with all that is evil in education. There is an arts and science split in our field as elsewhere, which is cultural and social as well as theoretical. Education, on almost any ideology, has broad terms of reference including such things as promoting tolerance

and social cohesion; it is moreover a very broad field indeed containing a vast array of activities of different sorts. It is therefore much to be hoped that educational research, after all the cutting edge of educational advance, will profit from and utilise the diversity of methods available to it instead of consuming energy on futile theoretical debates about methods. No method is good or bad in itself. It is the framework of understanding within which new findings make sense that ultimately justifies the use of one or another of the many methods available.

Case study, not being one competing method among many, is particularly well suited to help resolve the historic hostilities and rivalries that run through educational research. For case study refers only to the determination to relate a single phenomenon to the collective understanding by means of systematic study. All methods are in principle admissible in a case study. None is ruled out. How then is a choice of methods to be determined?

This is no easy question for case study deals essentially with cases that are not fully understood at the outset. Otherwise, why pursue them?

The general answer to the question of choosing research methods forces us to consider the very basis and purpose of doing educational research at all. The improvement of practice seems very generally agreed to be the justification for educational research. This agreement stretches even to those who research matters perhaps a long way from the immediate practical concerns of teachers. When it comes to teacher researchers or the research of other practitioners such as inspectors, advisers, even governors and parents, the motivation can scarcely be in doubt. Their

audience is not an academic peer group, as is the case in university research, but in a broad sense the practising community. Moreover, this is no passive audience of readers, critics or consumers; it is an active audience that wants to know what to do about educational problems. Case study suggests an academic approach to practical problems can be of real, practical significance. The significance of case study is not, however, that of a straightforward solving of problems. Some versions of action research might offer such a thing. But case study's promise is rather that practical problems can be investigated in ways which might allow us to reconceptualise the problem, understand more fully its wider significance and act more intelligently in resolving it.

Understood in this light case study takes on added importance for practitioners. Consider the daily work of those who study cases. Doctors, lawyers, detectives, journalists and teachers all deal continually with cases. They all start from a practical and concrete situation that presents itself, implicating flesh and blood individuals as patients, clients, suspects or witnesses, interviewees or pupils. Essentially, what these professionals are seeking is an appropriate way to act in relation to these individuals. They are interested not merely in knowledge, but in action. The appropriate professional action they seek is determined through an understanding of the predicament of the individuals concerned. The professional can be encapsulated by saying that professionals are trying to see the unique situations before them as examples of general cases. Those general cases are contained in the body of professional knowledge built up through experience and documented, to a larger or smaller extent, in the professional literature. The professional asks, is this a case of x or y? Placing a name on the

case is shorthand for having made it intelligible and, crucially, for knowing how to act in relation to it.

Case study is synonymous with professional activity; it is what professionals do day by day. Educational research by case study can be seen as the pursuit of professional excellence through academic means. In such an endeavour it is important to recognise that it is not the having of a body of knowledge that is the hallmark of professional activity but the accessing of that knowledge in relation to particular cases. The practitioner seeks to understand the individual case in relation to the generality. This is done by enquiry, the most simple form of which is the diagnostician's interview. Florence Nightingale pinpointed this as follows

> How few there are who, by five or six pointed questions can elicit the whole case and get accurately to knowledge and to be able to report where the patient is. (Nightingale in Pedder, 1993, p.48)

In medicine, diagnosis can in principle be reduced to the sort of flow chart found in medical encyclopaedias and now finding its way in more sophisticated form on to computer software. Having a diagnosis is the necessary step to having a treatment and this logic applies to other areas of professional activity too. Though the logic applies, the complexity of educational problems is of a different order, more akin to investigative journalism or detective work than medicine. Educational problems are practical rather than theoretical; they are concerned with what to do. But educational problems are uncertain in another sense also; it is often not clear what the problem is and therefore how to go about solving it.

There may be competing, perhaps moral, views on the matter and for that reason there can be no final answer that will satisfy all parties.

It is well to think, therefore, of educational case study work as resembling detective work more than medical diagnosis. In detective work it is wise to have a number of lines of enquiry, not to succumb to tunnel vision, to examine your own prejudices in case they blind you to possibilities. No particular techniques or methods are ruled out and all informants and all kinds of evidence worth considering. The answer is not in a book or to be derived directly from a body of theoretical knowledge. The individual case must be related, under proper rules, to the law. The evidence that provides this link will very probably be heterogeneous; that is to say, it will consist of items that cannot simply be added up to make a total but which must be weighed and judged one against the other.

Advice to researchers deriving from these ideas on case study may be couched in the form of the following questions

- What case are you investigating?
- What would count as evidence one way or the other for your answer?
- What alternative descriptions of what presents itself to you are possible?

Designing case study

From the foregoing considerations about the nature of case study much follows. With an initial idea of what case you are investigating you will

be in a position to shape a research design. A number of fundamental questions need to be answered here.

Single site or multiple sites?

A case study may be firmly located in one place, as in Beachside Comprehensive School. Or it may take the researcher far afield geographically, as in Cathy and All the President's Men. The physical place is not the core of the matter; a school-based case study could well take you far and wide, for example into parents' homes, in search of retired former staff or to the headquarters of the LEA. There is no doctrinal reason for staying in one place if evidence relevant to the case is to be found elsewhere. What is important is that wherever you go, you go with a sense of what you might find of relevance to your study. For example, a case study of a travelling child might by definition have to pursue that child with the travelling community. The case study being of a single child, the study goes where the evidence goes and to a good measure that is where the child goes!

Single cases or multiple cases?

Though a case study is by definition the pursuit of a single instance, there is an argument sometimes for comparative studies of instances which are similar in important respects but interestingly different in others. Such comparative studies can sometimes be economically accomplished within an overall plan. But a word of caution. Comparisons are often over simple and breadth bought at the expense of depth. Resist all temptations to add more 'instances' in the misguided

hope that you will be improving your 'sample'. That is to fall victim to a paradigm in which you are not working. It will not satisfy the positivists either! It is likely that the lone teacher researcher will produce the best results by focussing on depth on a single case conducted over a defined time span.

Time span?

Life is continuous. There is always a tendency to think that the latest news is the most important. But resist the desire to extend your case study accordingly. Practical considerations alone mean you must set time limits to the beginning and end of your study. Sometimes these will be obvious, for example a term's work at school or a residential weekend. There is no theoretical lower or upper limit on the length of time a case study may be concerned with. There are historians who have spent lifetimes studying periods of a few decades in the fourteenth century and aircraft accident investigators who spend investigator-years on what may have occurred in seconds. Distinguish therefore the period of time which constitutes your 'unit of analysis' and the period of time you are practically able to spend on your investigation.

Historical or contemporary?

Valuable case studies can be done on historical events. And of course contemporary events have their own history. You need therefore to decide how far back you think you need to go in your study. Again, there can be no theoretical limit here; it is a matter of judgement. Avoid plodding chronologies.

To summarise these factors in the basic structure of a case study we can say that at this stage we attempt to define a 'unit of analysis' or 'bounded system' (Stake, 1980, p.277) that constitutes an instance of a phenomenon or set of phenomena for investigation. We attempt to specify what our case study is a case of. At early stages there may well be a number of possible and competing answers to that question. They deserve to be articulated at the outset and borne in mind when moving to the collection of evidence.

Evidence in the case

The selection of a case to study and finding a design for an overall enquiry are extremely sophisticated intellectual endeavours, as should by now be abundantly clear. But how do we go about collecting evidence? This too is a highly discriminating process. It is illusory as well as naive to believe that you can collect 'all the data' and select at a later date what with hindsight appears relevant. Selection necessarily goes on continuously. This is a basic fact about human perception not just a piece of good advice. This does not argue against making a collection of miscellaneous materials, observations etc. Quite the opposite, it argues instead for a high degree of self-consciousness and a continuous interrogation of material. What do you take to be the relevance of the various items you collect? Consider them always in relation to the overall aims of the study as reflected in your current draft of your Abstract.

You might consider all the material, observations, documents, questionnaire responses, interview transcripts etc. that you collect your 'data base'. But data are not evidence until they have been interpreted as such. Stenhouse (1980) considers data ‘commensurable’; that is to say meaningful numerical comparisons can be made among them. Measures rely on standard units. But the evidence that comes into a case study is also qualitative; that is to say, comparisons can only be among the various items of evidence by an act of judgement.

You have then 'data' and a developing idea of what they mean as 'evidence'. Your research diary will keep a continuous record of the latter. The distinction is similar, in a contemporary study - one conducted in real time - to that between a chronicle and a history. A chronicle is a record of events; a history an interpretation. Your study of your evidence is the final form of the research as written up.

The researcher's relationship to the study

This is a fundamental factor in design. You need to come to terms with the individuals, the institutions and the processes that constitute the study. As likely as not, you will be in a close relationship to the action studied, perhaps a member of staff at a school which is a research site. This is increasingly the case as a higher proportion of educational researchers are part-time while engaged fully in a professional job of teaching. For such people there are both costs and benefits. Being close to the action gives very good access, yet insiders easily overlook matters, through familiarity, that visitors find startling. You therefore need good

procedures for ensuring (as far as possible) an appropriate form of objectivity.

At one extreme, in-house researchers will sometimes be researching parts of themselves. Indeed, there are very good reasons for seeing oneself as part of the study even when your own practice is not directly involved. For the broadening or educative effect on the researcher, his or her heightened sensitivity, can be very much part of the value of research. That a researcher is looking with different eyes towards the end of a project is something a reader needs to understand in order to make a proper appraisal of the work. In this regard the research diary can provide a source of evidence from which to document such self-study and personal development as part of the overall study.

The implications of the researcher's relationship to the project for the manner in which results are presented, including writing styles, are pursued below.

Quality control: validity and reliability

There are a number of ways in which case study design can move towards objectivity. This term, 'objectivity', is certainly a weasel word in education as elsewhere. The most obvious pitfall in this important area is to set criteria for objectivity which can only be met in experimental science (if indeed there). We need reasonable procedures that diminish, to the extent that it is possible, factors such as observer bias, atypical events being taken as typical, false inferences and shaky generalisations. Some of the considerations to bear in mind here are the following:

Construct or internal validity

This refers to the need for correct and appropriate measures or methods for the construct being examined. Construct validity needs special attention in case study research because a failure to develop a sound set of measures or criteria leaves the researcher open to the criticism of subjectivity or impressionism in their conclusions. Among the ways of guarding against these errors are using multiple sources of evidence (corroboration is always important in a court of law and stand-alone confessions are especially shaky) and checking all crucial evidence back with informants, for example key interview transcripts.

External validity

This refers to the big issue of generalisability. It is a mistake, here again, to attempt to judge case study by alien positivistic criteria. A general case has been made above for the idea of case study as essentially an exercise in making the individual case intelligible. This is done by understanding the case as an example of a wider set of theoretical ideas. Yin (1989, p. 38) calls this process 'analytic generalization' by contrast with 'statistical generalization'. The generalisation is qualitatively to ideas, not principally quantitatively to law-like statements. Well conducted studies discuss the case with reference to the literature, which after all represents the stock of collective knowledge on the underlying questions presented by the case.

Ball, for example, has a very dense twenty-one page Chapter 1 which sets out his understanding of the principles at work in comprehensive reform before moving on to describe his own case study setting and the banding system which is one of his principal interests. His concluding chapter relates his work to the work of earlier researchers in the same tradition and to general theory. His conclusion that the debates about comprehensive schooling seem irrelevant to the realities of its practice is one that politicians of the day and those who have followed may have found reassuring (there was no revolution in sight). Reformers too would have their less disciplined fantasies challenged by this work.

Reliability

Reliability refers to consistency in procedures and findings, that is the degree to which they are replicable. The case study researcher hopes that readers of the work will, first, recognise the authenticity of the case studied, that is to say it will chime in with the reader's experience in similar situations elsewhere. Since no two cases are identical (there is always uniqueness; to be identical is to be one and the same), what is recognised are similarities across different contexts. Second, the case study researcher hopes that readers will be able to investigate their own situations, in so far as they are in similar situations, and (using the same techniques) come to similar results. Reliability is the thin tissue that connects different experiences in different contexts under common frameworks of investigation and analysis.

Reliability is sought, in a technical sense, by careful and explicit documentation and the construction of a separate evidence-base or

archive of source material. This should, ideally, enable other researchers to follow the steps and processes taken in the case study work and to transfer them to their own contexts. Attention to these matters is the pursuit of quality. It cannot be said too strongly that case study work is not just about portraying a case but also providing a research community with the wherewithal to benefit from it in terms of further enquiries elsewhere. The utmost possible clarity is therefore required at all stages.

Sources of evidence

Case study is open-textured in that, not being the name of a single technique or even of a family of similar techniques, it admits any activity that can further understanding of the case studied in relation to the common stock of knowledge. There is the further requirement that techniques used should be also usable elsewhere, otherwise replicability is lost.

Similarly, the sources of evidence are potentially very various including participant and non-participant observation, interviews and questionnaires with key personnel, diaries, documents and artefacts.

Which sources of evidence are sought and the balance of evidence from different sources are strategic decisions for the researcher to take. In such decisions there is always a large practical element. One ought not to be ashamed of maximising the particular opportunities available in virtue of a position as an insider, for example, nor expend precious energy seeking out remote sources of evidence unless they appear vital. Avoid also the belief that there exists somewhere the one true source, the

key document or the all-knowing individual. Especially, do not delude yourself that some very senior person has the complete overview in terms of which all will fall into place. All informants have their perspectives, all items of evidence their relevance.

All the same, this is not a free for all. Quite the opposite, for rigour demands that sources of evidence and the research techniques brought to bear upon them are selected and integrated in conformity with the principles of validity and reliability discussed above. A common term for these aspirations, now part of the slippery jargon of educational research, is triangulation.

Triangulation

In both navigation and surveying, techniques are used to fix geographical positions. The Ford Teaching Project first popularised the notion of triangulation by organising three observation standpoints in Primary classrooms, the teacher's, the participant observer's and the pupil's. In such a way what was happening could be discussed from three points of view. But there is no magic in the number three here and in any given context there may well be a case for more than three perspectives. In any case, the reason behind triangulation is clear: no one point of view is final, all have their contribution.

The Ford approach may be called observer triangulation. But note that observation here is not simply a matter of what is to be seen with the eyes, the raw data (so to speak) of perception. The interest is at least as much in what is judged and felt. In fact, of course, the two are

practically inseparable. The term 'point of view' is interestingly ambiguous between the idea of a place in three dimensional space from which events are observed and, on the other hand, having an opinion or belief about a matter in hand. While you cannot have the one without the other, it is true to say that the latter emphasis is that of most case study researchers.

Methodological triangulation

If observations may be triangulated, so too may methods. Here lie some of the most interesting questions confronting the researcher. Simply using a variety of methods does not guarantee validity or reliability. Different methods produce different sorts of evidence, so the challenge becomes one of how to integrate methods inside a rationale for the work and a developing understanding as it progresses.

One common way of integrating methods is to use a questionnaire, in part, to identify both interviewees and the interview topics. Thus two methods are related together in a developing enquiry. A prior requisite, however, would be to demonstrate the origins of the interests pursued by the questionnaire. Are they current issues in the research institution, in the researcher's own experience, in the wider educational community? If so, what evidence is available within the school, in the researcher's autobiography and in the theoretical literature on the nature of the questions in hand and as they arise in these different contexts?

Ethics

Ethical questions arise whenever people interact. There is a moral principle of respect for persons, well established in western culture. This means always respecting the dignity of others, observing in a more formal sense their human rights, and in general treating them in the philosopher Immanuel Kant's phrase as 'ends' not 'means'. We encapsulate all this in saying one ought not to 'use people'.

Such general principles underlie all our conduct. That they are all too often breached is in a sense their point: moral principles apply precisely where we are most likely to go fundamentally wrong.

Research is a special case of truth seeking and truth-telling. Research design, methods and techniques are specialised ways of testing beliefs and opinions and getting at the truth of things. Yet the dangers of falling into moral traps in the pursuit of truth are great. Case study work is for three reasons most delicately placed. First, it is to a degree necessarily flexible and opportunistic. Second, it is necessarily embedded in 'real life' social settings. Third, by comparison with some research approaches such as opinion polling, it has less of an established tradition and ground rules. For these reasons case study researchers need to maintain a constant watch on the ethical dimension.

The fundamentals are openness and honesty. Departures from these absolutes are found necessary in everyday life and it would be surprising if the specialised concerns of researchers and the specialised interests of educators did not cast them in a particular mould. Several sources of tension, arising at different stages of a case study project may be anticipated.

At the outset of a project, the principles of honesty and openness indicate making all your intentions apparent to all concerned. There may well be a need for permissions from people in key 'gatekeeper' positions which will require honest disclosure of intentions and methods. Several factors complicate the processes of initial discussion of a project. The level of understanding of the kind of work proposed may be limited by prior assumptions about research. How far you attempt an educational task in seriously attempting to have people understand your proposed work is a matter of judgement. Often it is necessary to leave things in an agreed but not fully comprehended condition, if only for reasons of pressure of time. You should not feel guilty that not all those involved have it in them, in the particular circumstances of their professional lives, to understand fully what they are committing themselves to. At such points is it important morally that you do not misrepresent yourself, however tempting it may be to side with particular individuals. You cannot answer, though, for every possible interpretation or assumption about what you are doing.

Perhaps more seriously, those involved often have interests at stake in the project. There may be the possibility of professional damage or advantages from case study processes and, especially, from conclusions when they are published. Such 'micro-politics' need to be understood and taken into account. Research implies proper neutrality. It is not an arm of advertising or partisanship. For an outsider doing a case study this element may present no serious dangers. But for an insider, with a past and a future in the case study institution, there may be a real temptation to use research as a vehicle for personal advancement or for

the advancement of ideas or causes in a crusading spirit. The case study researcher must be prepared for results which are personally or professionally discomfiting and owes it to the researched community to be ethically clear on this.

A further ethical dilemma follows from the uncomfortable fact that full disclosure of the aims, structure and possible outcomes of a research project to all concerned can sometimes alter the nature of the subsequent project. To the extent that those involved know what you are looking at, they are likely to present that part of their work in the best possible light. Thus you end up looking not at what is 'naturally' the case but at what people present as the case. You may then be studying not the case you intended to study but to some degree a series of relatively 'set pieces'. In the face of such considerations, it is probably better to be open about intentions but to allow for the resulting behaviour. Also, the longer the project takes, the smaller the effect of 'unnatural' behaviour.

At the beginning of a project, then, it is ethical to make a full disclosure of its aims, methods and the form that its results will take. All likely to be involved need such information. Permission is needed from those holding responsibility and this should extend particularly to the nature of any publication of results. These matters may be taken care of in a variety of ways, through individual and group meetings, the presentation of written statements and by obtaining signed letters of permission. The level of formality and rigour in all this is again a matter of judgement.

The course of a project, like that of true love, does not run smooth. Situations arise that create ethical dilemmas. For example, information

and material often comes to hand in the course of a project that is either given in confidence or is such that its wider dissemination would not be in the best interests of the institution or staff involved.

With regard to confidential information, it is doubtful that such material ought ever to be purposely sought. The nature of confidentiality means that it is difficult to use such information. It becomes what the Watergate investigators called 'deep background', not quotable but valuable as context and as part of the texture of interpretation of what is explicit and 'on the record'. Confidences are, then, to be handled with care. It is personally flattering to be on the inside, especially if without the research 'hat' you would be on the outside. But the knowledge gained is dangerous because potentially damaging and from a research point of view embarrassing, because it cannot be made publicly available.

At the conclusion of a case study project publication of findings may include information or judgements detrimental to individuals or institutions. There will have been initial agreements, as suggested above, concerning the form of the results. A common measure here is to present findings anonymously, naming no individuals or institutions. Remember, though, that anonymity is not unrecognisability. Indeed, the better the case study the more identifiable it will be, even if anonymous. There is therefore no final escape from the truth; only secure ethical agreements at the start, careful monitoring of processes throughout and moral courage at the end can carry you through.

Writing

Case studies are undertaken and written for a diversity of purposes. For example, evaluation reports are often conceived as case studies and case studies are often used for teaching purposes. We are concerned here, though, with case studies as academic exercises having particular professional value in educational research. It has already been argued that case study has the unique capacity to serve both academic and professional purposes and to integrate two interests in educational research, which have been apart for too long. This coming together of theory and practice in a new form of educational enquiry presents important matters for consideration when it comes to writing a dissertation.

There are certain features of academic dissertations, which are commonly taken for granted yet are challenged by case study work. Traditionally dissertations are presented as general theory or abstract knowledge, perhaps illustrated by reference to case studies as examples. In case study work as here presented, the emphasis is on the particular and concrete understood in relation to the general. It is likely therefore that the bulk of a case study dissertation will be concerned with the particular case and thus presented in concrete terms. There will be much description within such studies.

Now, traditionally, the term 'descriptive' is a criticism of dissertations. But in case study reports a great deal depends on the quality of description found in the writing. We understand the individual case through the vehicle of language, which contains general concepts. This is the stuff of Yin's 'analytic generalisation'. Academic quality is not so much a question of description versus analysis but of the quality of

analysis found within the description. In extreme cases a description can even suffice as a whole study. These are extremes where the story is so well told that it, so to speak, needs no moral. Parables and fairy stories are like that. For most case study writers, however, there will be a need to relate the story to common knowledge through a formal discussion. In such a formal discussion it can be expected that a cooler, more abstract tone will prevail.

Case studies inevitably involve the researcher in close relationships with individuals and institutions. Case study researchers are often members of the institutions under study and they acknowledge the effect of their presence and perspectives on the study itself. Thus they are in a sense part of the study and not detached from it. These facts mean that writing styles cannot be restricted to the cold third person.

We can therefore expect to see a variety of writing styles in any one case study. Among these writing styles are the following:

- Autobiographical background

Since it is important for the reader to know the standpoint and perspective of the author a personal introduction is necessary. This ought to describe how you became interested in the questions at issue. What were your motives in the enquiry and how did they derive from your own educational and other experience? This introductory section ought also to include an account of your relationship to the institution and personnel studied.

- Narratives of the enquiry

The reader is entitled to understand the course of events that constituted the case study enquiry. Though the study ought not to consume its own smoke, there does need to be a clear sense of the history of the project. This can be achieved in the first person and/or through testimony gathered systematically as part of the research process. Such a history can be written and rewritten at periodic intervals through a project. Some attempt at a late 'history', rather than a mere chronology is also required and this might appear among the summarising conclusions to your project. To the extent that the study is about the developing concerns and understandings of you, the researcher, this section will have more or less prominence in the final work.

- Presentation of evidence

All kinds of evidence are possible in a case study. It follows that all manner of modes of presentation of that evidence will be permissible. Both quantitative and qualitative material will likely be available and you should use the standard forms of analysis and presentation of results.

- Theoretical discussions

Case study is valuable as a form of educational research to the extent that it informs us beyond the confines of the studied case. We have earlier discussed the problem of generalisation, suggesting that this is to be achieved through a sense of the representativeness or typicality of the

case studied. Relationships to the general experience are achieved through discussion and mediated by the relevant literatures.

It should be clear that these different sorts of contribution call for different writing styles. They will, for example, be more or less personal in style, more or less analytical. A dissertation ought to be able to accept different sorts of contribution, its unity deriving from the author's identity and continuous interest in the study. To preserve this sense of continuity a number of devices are available. There can be a linking commentary introducing each element in the work, describing its purpose and provenance. This would be written last and present the author's final overview. Other devices have included clear sectionalising of the work, different print styles and even different coloured pages to indicate different types of work and writing within the dissertation as finally presented.

Much of this contradicts one assumption in traditional dissertation writing, namely that a dissertation is 'written up' as a final and definitive set of findings. In case study work such an assumption has less of a justification than in more traditional forms of enquiry. The writer may wish readers to make up their own minds, do their own reading of the case to some extent and bearing in mind the filter that is the author. For such reasons, case studies may contain material produced at various stages of a project, linked by a commentary but not finally pronounced upon. It is likely anyway that there will be many threads undisentangled, many paths unexplored; simply recognising them as such entails an open textured style.

All the same, the romance of mysteries undispelled ought not to cloud the issue. A dissertation needs to establish the case as a case of something (or, more probably, of many things). This is done through sustained discussion, which is the true value of a successful case study.

Quality in case study

There are many features of academic excellence in common between case study and other forms of educational research. However, given the characterisation of case study presented above, a number of pitfalls along the path to quality in case study can be marked out. Some common weaknesses are as follows:

- Uniqueness, rather than particularity, is pursued. Some case studies become enchanted with their own subject matter and, while interesting as art, have little claim to more generalised importance.

- Too much material seeking too few explanations. Here the tendency to gather information without a sense of its contribution to theory tends to run away with the researcher. While there is a case for serendipity and for the collection of miscellaneous material, there is a continuing need to prune detail.

- Case 'data' and 'evidence' not well distinguished from the case narrative. Here evidence is presented without a sense of its meaning in the overall research story. Moreover, the relationship of data and evidence to the research questions (the study) is unclear.

- Sources of evidence not clearly identified. Sometimes, admittedly, it is hard to identify what is known about a case. This may be because there are a number of informants or different sources of evidence, such as documents or other published material, 'commonness' etc. Nevertheless, it behoves researchers to identify sources, even if anonymously (see Ethics section above).

- Inadequate discussion of typicality, representiveness. This is the crucial question of generalisability and it is intimately related to the following point.

- Poor reference to literature. Literature may be cited but not analysed or sifted with reference to the case under discussion. It is also all too common to find too narrow a literature base in use.

- The interests and values of the researcher not made explicit or discussed. This is a serious defect in case study work since these factors are ineradicable. Rather than attempt to minimise 'observer effect', it is better to take it fully into account.

- Topic initially vague and never closely focus. This is a way of saying that case study needs to clarify its own agenda continuously.

By contrast and in relationship to the above points, it is possible to identify characteristics of a good case study. Some of the more important are as follows.

- A significant, not trivial, focus. Finding this focus may take time during the project rather than exist as a starting point. But in any case quality must be achieved, even if (as is likely) in a small area of enquiry.

- A sense of completeness about the study but with a sense of what further enquiries are indicated as having been opened up by the work.

- Points of view other than the author's are considered and evaluated. There is a delicate balance to be achieved between case study as a personal crusade and as a neutral form of enquiry. An open minded yet purposeful approach is recommended and is found in successful case studies.

- The author's own interpretations subjected to discussion and integration.

- Evidence marshalled, together with counter evidence, in a systematic and economical fashion.

- Writing in an appropriate variety of styles; relevant material from sources other than the author's own hand within the text.

- An account of the ethical principles on work and how these enter into key decisions in the study.

- Successful integration of qualitatively different material.

- The whole study has the 'ring of truth'.

This concluding Part of this volume has defined case study, defended its epistemology as a form of research and suggested numerous considerations worth bearing in mind when undertaking case study research. We have also offered the proposition that case study has particular claims on the allegiance of teacher researchers. We believe these claims are ultimately to be defended in terms of the necessarily holistic nature of professional practice and the necessarily authentic engagement of professionals with both the means and the ends of their practice. At the same time we are aware of many connections not fully made in this work. For example, we have not adequately recognised the social and collegial aspects of teachers' work nor how teachers' research could be more participatory and shared. Moreover, we have not pressed the distinction between the kind of apparently propositional or linguistic knowledge to be found in academic dissertations and the shared, deeply tacit knowledge held by communities of practising professionals. Since the point of educational research is to enhance such practice we need to understand precisely how the academic work of individuals feeds into practice. The case for case study as a collective rather than an individual's task has not been explored here. (Note 5)

Finally

In this work we have explored the relationship between educational practice and educational research. We have proposed a version of professional educational practice which challenges the dominant

technical approach promoted and led by government agencies, but without harking back to any non-existent ‘golden age’ for schools or for teachers. We have suggested several ways in which educational practitioners might choose to conceptualise their activities: with an emphasis on ‘professional conduct’ rather than ‘technical skills’; on personal and institutional ‘contexts’ rather than politicised and official ‘texts’; on the collective tradition of the profession rather than the ideology of any particular time and place. To arrive at the deep understandings characteristic of true professionals, and to develop their own living theory or ‘praxis’, practitioners in education need to be regularly enquiring into their own everyday practices. Hence the link with research and the idea of the teacher as researcher.

But what sorts of research and researcher? We have also suggested that the particular characteristics of educational practice require specific kinds of systematic enquiry. In 1958 Peter Winch in *The Idea of a Social Science*, argued that the social and political realms have to be understood philosophically rather than scientifically. The development of interpretivist and qualitative approaches in all social sciences suggests that this argument has become a new orthodoxy. However, it is our belief that the distinctive contexts and human purposes associated with professional educational practice require a form of research that is different from that developed in the mainstream social sciences. Neither science nor social science as presently conceived can get to grips with 'the whole person' - the educator's domain.

Entering the world of research is not unproblematic, especially for professionals concerned with their own practices and actions rather than

with academic or 'pure' knowledge. Two prevalent research orthodoxies - based on positivist and interpretivist enquiry paradigms - have been compared, contrasted and criticised. Two 'new' paradigms, both derived from an 'action research' tradition, have been briefly described on the grounds that they are coherent with the values of professional educational practice and may have the potential to prove more productive for teachers-as-researchers. But our main contention is that, at present and for the foreseeable future, case study is likely to offer most teachers and other practitioners a manageable and effective form of research for their professional purposes. In the spirit of our own arguments for critical and self-critical reflection, however, we have also suggested some of the possible limitations as well as the many strengths of the case study approach.

Notes

(1) This section, and particularly the reference to Gombrich's work, is heavily indebted to Langford (1985).

(2) For a larger discussion of the influence of positivism on educational research see De Landsheere (1993).

(3) Tables such as these can only be suggestive of the issues. For an extensive discussion see Lincoln and Guba (1985).

(4) This is a very brief treatment of a key issue facing enquirers as well as philosophers: how to maintain commitments and values in a relativist world.

(5) It would be consistent with our thesis to argue, with Burgess (1994), that learning about case study is best undertaken through a study of cases. Published and classic studies worth considering include Whyte (1943), Lacey (1970) and Richardson (1973). At the same time, and in addition to works cited in the text, there is a considerable body of theory contained in the works, of Adelman et al (1975), Atkinson and Delamont (1986), Grosch (1985), Kenny and Groteleuschen (1984), Shostak (1985), Shaw (1978), Simons (1980), Stenhouse (1978, 1980, 1982a, 1982b), Tripp (1985), Walker (1980, 1986). Emergent work of note includes Haack (1998).

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