Educational Research: Which Way?

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I have looked forward to this occasion with some trepidation, and indeed am rather surprised to find myself in this position. This is the fourth annual conference of BERA, so three presidential addresses have so far been delivered. Two were by presidents who happened (by some chance) also to be the current chairman of the SSRC's Education Research Board - men familiar with the corridors of power, and adept at wearing different hats (as the saying goes). The third was Ed Stones who I think of, in relation to BERA, as our founder and progenitor. By comparison, I am a mere maverick - and, if I have more than one hat, they are rather different ones. Those who were at last year's presidential address will know that I never succeeded in gaining my M.Ed. at what was, in the later 1940s, the power house of psychometry, Manchester University's Department of Education; even though I apparently sat on the same benches as last year's president who gained a distinction. One might have thought there would be some kind of ripple effect. But I fled to Leicester, a Department of Education applied to on two negative criteria; first, that it was not involved in psychometric studies in any way whatsoever; second, that the professor was not a member of a group known to initiates then as 'Moberley's underground' (a move to Christianise, rather than measure, education which also by-passed the key issues). As a matter of fact Leicester was about the only department left after applying these criteria. But there was also a positive pull - that it appeared to be primarily interested in *education* per se.

Here, against the background of active educational work, I turned to historical studies as the context necessary to an understanding of the social function of education and the nature of educational change. But, as it turned out, both educational and historical concerns contributed to focussing attention on a particular area of applied psychology which I began to tangle with both intellectually and practically when teaching in schools in the Manchester area - on both sides of the selective division; those interests account for the publication in 1953 of what was no doubt a jejune critique of mental testing. Because this seemed to have become pivotal to the whole school system, indeed to educational thinking at the time to such an extent as to exclude other forms of diagnosis or analysis. No one offered me an M.Ed. for this illicit product of my Manchester studies. Indeed the then consultant to the NFER, A.F. Watts, described the book as 'too silly to merit rational consideration, except perhaps in the pages of a journal devoted to psychotherapy'. But most other reviewers thought the case deserved a serious answer - criticism had been forthcoming from specialist circles and responsible educational psychologists were worried about the misuse of testing. Hence a working party specially set up to review the matter by the British Psychological Society, mainly, I think, at the instigation of Professor Philip Vernon. The outcome, in 1957, was the symposium, *Secondary School Selection,* an uneven and sometimes contradictory compilation but in some aspects of

seminal importance historically in contributing to the breakdown of streaming, early selection and the tripartite system of secondary schools.

For those interested in Gestalt psychology it may be worth recording that my moment of insight came when Professor Warburton - characteristically in shirt and braces turned to the blackboard, in that rather dreary building in Dover Street, gazed at the mass of figures inscribed there, and explained hesitantly that the factor analytic technique utilised had not extracted the desired (and expected) results. In this case, he explained, what we do is 'rotate the axes' - a magical formula, it seemed to me, forcibly recalling the summoning, by Faust, of Mephistopheles who, after his first doglike appearance, you will remember, disappeared in a cloud of smoke only to reappear, duly (or perhaps appropriately) garbed as a scholar. Indeed the parallel in both cases extended to constant repetition of the formula, with slight variations, until the required outcome resulted which, in the case of tests, appeared to be written into the initial material. How many more questionable assumptions then - their origin perhaps forgotten - were embodied in the procedures, or technology of testing? Quite a number, it seemed, when one looked into it. And this was no mere research procedure of concern only to scholars, but a matter of what was happening in the schools in terms of labelling and deciding the future of tens of, thousands of children. For, at the time, the theory and practice of mental testing provided not only the instrumental means but also the rationale for maintaining intact a system to which the process of classification, of streaming and selection, was central to the detriment of education.

There was a growing number of pointers to this conclusion, of course. In particular the work of many teachers both in primary and modern schools operated to expose the detrimental effect of testing. And there were also local authorities, determined to implement the promise of secondary education for all, duly aware of the role of 'intelligence testing' in maintaining the *status quo* in terms of inequality of provision. These were people imbued, it might be said, with certain *educational* values, or a belief in what education can do, and accordingly poised to modify policies in such a way as to allow for a more educational approach in the schools. In this connection it may be observed that if the Great Debate, and various reports in the pipeline, operate to cabin and confine individual and group initiative on the part of teachers, then I hope we will be prepared to raise our voices in opposition. For in spite of some of the discussion in our seminars, where teachers often appear as highly resistant to change, I believe that many of the most fruitful recent innovations have their origin in the initiatives in the schools, while down the years advanced local authorities, ready to try things out, have always led the way, nudging central government into new roads, even if the picture may look rather different just at the moment. It might be argued that this is a matter of self-interest for it is new initiatives that call for educational research, in the proper sense of the term, as against mere systems maintenance. How could the NFER, for instance, have mounted their classic study of streaming in primary schools, if groups of teachers had not quite independently pioneered the way by breaking with accepted practice? Or their research into comprehensive education if certain local authorities had not done the same? In the present context I think it is important to recall things like this.

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I hope you will forgive this autobiographical foray. But it is one way of underlining changes both in education and educational research during the past thirty years. The foundation of BERA - its nature, objectives and membership is, I think, a very positive aspect of the new situation arising from more recent developments. For it marks a coming together from various disciplines, which have themselves developed markedly, of those interested in focussing directly on education. This is to create a new network concerned with educational research whose task it will be to establish norms and procedures - and I would like to look briefly at some of the implications.

New institutions do not arise and develop successfully just because someone or other wills them into being. Certainly the original group whom Ed Stones called together four to five years ago to discuss a new initiative conceived the idea of BERA. Moreover each of these 12 (apostles, they might be called) undertook to write - to 12 others and so the association was born and took on a life of its own. But only because many more felt the need to get together, reach across established boundaries and find new ways of thinking about and conducting research in education. One contributory factor was that new problems do not fit easily into the particular area of psychology, or of sociology, both areas where research has greatly increased and which have generally been held - together with philosophy and history - to be the disciplines informing education, itself characterised as no more than an inchoate 'field'. For this has been a salient recent trend, with which several of us have been concerned - the separating out of component disciplines in relation to educational studies. Indeed there are now associations concerned with the philosophy of education and the history of education, although psychologists and sociologists engaged on the educational front have remained affiliated to the parent associations and it is, of course these latter disciplines that bear most directly on research.

Within the educational field itself the same trend has been apparent. It was in the early 1970s that an informal group concerned with classroom research first met at Lancaster. Teacher research groups have been formed in connection with the University of Birmingham and elsewhere. And research into higher education and teacher education has been institutionalised. There is also, directly focussed on the educational process, the curriculum development movement, well established in the sixties. This, although perhaps not strictly speaking 'research' in some aspects, has certainly had links with researchers and research procedures; from the first Nuffield science projects of the late 1950s through the Schools Council's 100 plus projects to date. To focus on the curriculum and its evaluation is to concentrate on a specifically *educational* aspect, as against organisational forms, and the secondment of teachers to take part in this work has brought many new people from another background and with fresh concerns into the area of research and development - a group well represented at our BERA conference. One child of this movement is the Centre for Science Education at Chelsea; another that for Applied Research in Education at the University of East Anglia where a home was imaginatively found for the Humanities Curriculum Project team with a brief to pursue curriculum research and dissemination. Lancaster University deliberately set out to

develop a Department of Educational Research and the department at Stirling was established with a strong, practical research focus and the corresponding personnel. Moreover the venerable and prestigious department at Edinburgh was somehow transformed into a Centre for Educational Research providing - so I understand - a new type of training and ambience for researchers. In particular, anthropology has entered through this door, as it earlier did by way of the late Professor Gluckman's combined department of anthropology and sociology at Manchester.

Other developments are relevant such as the rise of educational technology and its establishment in certain universities. But of major importance in stimulating new forms of approach, a new focus on education, has been the transition to comprehensive secondary schooling which has also had a profound effect on primary schools. This has done most, perhaps, to call in question previously accepted research models and techniques; indeed might be said to have been achieved, to misquote Harold Wilson, over their dead bodies. For, in the late 1950s, a very distinguished psychometrist announced that the only serious problem facing educational researchers was the final perfection of selection techniques, for which all the necessary tools and techniques, he claimed, were already available.

What this transition to secondary education for all has meant is a shift of attention from the differentiation of children to their education - to what to teach and how to teach it - across whole age groups. Earlier interest had centred on the renewal of the curriculum of grammar schools - this is what the early Nuffield projects were all about. Now it became a matter of renewing the education of children at the secondary stage, and, too, the primary stage freed from the incubus of the 11+. Methodological debates about such matters as the behavioural objectives model in curriculum development were a stimulus to discussion, exchange of experience, the clarification of different approaches, in many ways prefiguring current concerns for the discussion of which BERA, now provides a forum.

We come together from various disciplines within which we have approached education and therein lies the main problem to be faced. The usual mode of establishing norms for research is to start from the position established by a particular discipline, to arrive at norms say for psychological or sociological research conducted in the area of education, But norms have also been established in a particular sub-specialism or problem area of one or other of these disciplines. Indeed, psychometry, which established so great a hold over education, might be said to have developed as a sub-specialism of psychology which in due course became a world of its own centred around a certain leading figure, with its own journal and the rest - with results which are now common knowledge and provide a signal warning, not only of the dangers that can supervene for education but also in terms of the quality, even the scientific probity, of research. This is not to deny that psychometric techniques may not have a great deal to offer, when used judiciously alongside other approaches in the new situation.

There are two specialist tendencies of which, I think, we should always be suspicious. Specialisms are a form of division of intellectual labour which both differentiate and

unite - unifying within a field of study and drawing significant lines between it and neighbouring fields. If the specialist tendency is to draw in the skirts of a subject, or close doors to intercommunication except in one direction, the likely outcome is subservience to the single view entertained; in other words, reductionism, the mark of those schools of psychology whose theories, ruling aside the social and historical, revolve within a biological framework. On the other hand if boundaries are transcended in what might be called an imperialist way, effacing rather than taking intelligent account of other disciplines, there are also dangers ahead. The sociological perspective is a valuable one, for instance, indeed well worthy of respect and use elsewhere. But the sociological world picture - depending on annihilation of history, individual psychology, political understanding and philosophical -questioning - may well be of a kind from which one can only pray to be delivered. The instances relate to the two disciplines bearing most directly on educational research and so underline the point I want to make: that there is something heroic in the attempt to reverse the engines, focus directly on education, to make this the starting point when establishing norms for research; in terms of submerging the undesirable aspects of contributory disciplines while extracting the most from them from the educational point of view.

In this connection I found especially refreshing Professor Nisbet's advocacy of a broad, cross disciplinary, humanist approach to educational research in his address three years ago at Birmingham. This clear recognition of the value of a wide variety of approaches contrasted strongly with the much narrower definitions of the past. Here is the positive response to the new situation I have been outlining which incorporated both changes in educational practice and a broadening of and new recruitment to educational research.

III

There are, of course, many difficulties at both the conceptual and technical level, concerning the methodology of research, when education is firmly placed at the centre of the picture, as we are finding in our discussions. What this involves - as against the view that psychological or sociological, historical or philosophical discourse, and methodology, is the only legitimate, or disciplined, means of approaching education - *is recognition of the specificity of education as an object of investigation.* And what this implies in research terms is the establishment of conceptual and technical norms based on the recognition of educational criteria in this sense.

I have argued the point elsewhere in relation to educational studies designed to induct the intending teacher into the theory and practice of education. Preparation as a teacher involves not only acquiring knowledge but the ability to operate educationally; and at three levels: as class teacher, as member of a school staff, and as practitioner of a profession. This cannot be effectively achieved, as experience has shown, by exposing the student in turn to the discipline of sociology, psychology, philosophy and history, each taught separately and in its own terms. Rather the content of courses must be selected according to educational and professional criteria. Much the same applies, it seems to me, when research is in question. No doubt the separating out of disciplines was a necessary phase which has had positive results - but the negative aspects are now

uppermost. The study of education has manifestly suffered from subordination to disparate modes of approach and methodologies deriving from fields quite other than education which have simply been transferred into the educational sphere, and which, once there, have tended to maintain their distinctive languages and approaches, or pursue their own ends.

Hence the efforts in some quarters to develop a terminology to define educational phenomena more specifically. As an American philosopher who has bent his mind to the issue puts it, what occurs in the classroom, in the process of teaching, is neither a chance happening, nor determined by anything comparable to a law of nature. Here is a *planned, deliberate, explicit intervention* designed to promote learning which may differ from place to place and from time to time, but which is observable and subject to analysis.

It is, surely, in the fight of some such definition of educational phenomena that the researcher must cope with methodological issues. By contrast, if he starts from the established in a particular discipline with corresponding norms of its own, the research is likely to be primarily directed to adding to the capital of that discipline. Conducted by methods evolved within its confines it may well have a direct connection with education only insofar as use has been made in the given way of educational materials. Indeed brief raids into educational territory are considered to be a good means of training the specialist sociologist, or psychologist, even if schools used for data collection are left in disarray. Research of this kind is not, in my book, *educational* research. It is psychological or sociological research conducted with educational materials which may, or may not, constitute a significant contribution to education. Very often not, in terms of practice, since by definition the approach will be one-sided, whether from the point of view of psychology which, as at present constituted, concentrates on individual aspects, or of sociology which focuses on the collective. At the least it is necessary to place the findings of such research in context in order to assess how far they may bear directly on education, as against the mere use of educational materials to make a psychological or sociological point.

I do not think a liberal eclecticism in relation to selecting norms and procedures for educational research is viable. There may be a case for letting 'a hundred flowers bloom' but it seems to me to be impossible to focus clearly on education without coming to grips with conceptual and practical problems at many points. Of course they will not be solved overnight but they cannot be evaded and it is as well to set out on the appropriate road if we wish to reach the designated goal.

When researchers from different backgrounds come together through an interest in studying education they elect to share in problems common to the educational field as a whole, one into which there has been a general immigration from other areas. For under the title 'Professor of Education' there now lurk not only psychologists and historians, as was once the case, but philosophers of a certain school, sociologists from a discipline with its own internal contradictions, experts in administration, comparative study and so on. Accordingly to collect together those professing education is by no means to collect a group whose own specialist formation and training in research methods has been directly

focused on education, but rather one which, with the best will in the world to do the best for education, may pull in different directions. The same applies at the level of advisory bodies responsible for decisions about the funding of research. All this increases the problem of promoting *educational* research in my sense of the term; or in the sense it is understood by teachers and others directly involved in thinking about, practising, administering education. And relations with such people are one of the prerequisites of successful educational research.

In an article in the *SSRC Newsletter* in October 1976, my predecessor, Jack Wrigley, writing as chairman of the Education Research Board, made some, interesting points about the problems of promoting and disseminating research. 'Some would maintain', he wrote, outlining different attitudes, 'that the primary duty of researchers' concerned with education 'is to produce research results for the community of scholars within the researcher's own discipline and that, given shortage of funds, all else is luxury'. It is a legitimate point of view, perhaps, but only, I would contend, on the Psychology or Sociology Committees of the SSRC which are specifically concerned to promote research in those fields. As for the Educational Board, its job, I would think, is to promote *educational* research; to refer psychological and sociological research conducted in the spirit outlined to the committees directly concerned with those disciplines, reserving funds intended for education specifically for education, especially if they are likely to be reduced; as we understand from the latest SSRC Newsletter, they already have been.

It is not only in terms of the form of research conducted, its approach, the methods considered viable, and the nature of the findings, that the distinction I am trying to draw is important, but also in relation to the presentation and dissemination of findings. Jack Wrigley went on to say that one of the main problems here is 'the difference in attitude between the educational researchers and their audience' and listed five possible audiences: 1) other researchers in the field, 2) teachers in the classroom, 3) policy makers at local and national level, 4) the general public interested in educational matters, 5) the press. The press must, of course, be borne in mind. But no reputable researcher would wish primarily to address himself to this fourth estate - a medium of communication with a vested interest in making capital out of the matter in its own terms. And this applies to specifically educational as well as general newspapers and, too, it might be added, with recent experiences in mind - to publishers and the kind of publicity in which they indulge which may misrepresent the significance of findings. 'Other researchers in the field' hardly need to be specially addressed, I think; and findings of interest only to those in a small specialist area are unlikely to be fit for dissemination beyond the ranks of the stockholders anyway. Moreover it seems to me that the major misapprehensions that arise among the public and teachers with or without the intervention of the press derive from the publication as educational research of such specialist findings; when they are, usually, psychological or sociological findings relating to education, or a partial view of the matter from a specific angle. If the question of dissemination should arise, then clearly this essential limitation should be stressed, and the one-sided approach placed in context to indicate how partial it is. I once raised the point in the *Times Educational Supplement* when sociological findings were regularly being presented as findings of educational research - and was surprised how many wrote to agree how damaging and

confusing is failure to maintain the distinction; particularly given the relatively large quantity, but by no means uniformly high quality, of sociological research using educational materials. On the other hand, I have been severely taken to task by some sociologists for criticising apprentice research of this order, duly publicised as described, as deleterious to education. To them this seemed clear evidence of an a-scientific, if not politically biased, attitude. They utterly failed to appreciate how partial such research can be in relation to education since, in sociological terms, it passes muster as an overall view, just as the methodology seems beyond reproach within the given confines of thought. This is the imperialist stance referred to earlier, once adopted by psychometry. It was common form, before the more extreme claims made for 'intelligence testing' had been discredited, to refer to critics as 'left-wing' as in the BPS report mentioned earlier, or to deplore the reduction or educational discussion 'to the tub-thumping level of party politics' - to quote a particular instance. To keep things as they are, of course, is not political; to call for change is.

There remains for purposes of dissemination the audience involved and interested in education - whether in the classroom, lecture halls, school and college common rooms, education offices, education committees, ancillary services with an educational component and so on; an audience extending to include parents whose interest, however uninformed it may sometimes be said to be, is very personal, direct and involved. All these, I think, share my sort of view of educational research; that is, conceive of it as investigation and enquiry conducted in the light of an overall understanding of the educational field and directed towards a closer understanding of education with a view to improving it. The prospectus of one well known centre of educational research firmly nails its colours to the mast in this sense. It is, it says, 'centrally concerned with the problem of achieving improvements in the schools, and other educational settings'. This, indeed, is the broad aim of our own association, which is defined as, 'to encourage the pursuit of educational research and its applications for both the improvement of educational practice and for the general benefit of the community'.

There is no conflict between research of this order and dissemination; they hang together, since researchers and the publics concerned share a common view - that education is the matter in hand, the specific object of investigation, the area to which findings directly relate. And indeed it would be curious if educational research were not considered proper for dissemination, given that education enters into the lives of everyone and dissemination is of the very nature of education. At any rate by contrast with other areas more securely embedded in an academic setting with correspondingly less concern about what goes on outside, where dissemination at large for use may be regarded as a vulgar, even profligate, activity by comparison with preservation among a select body of scholars.

Here then is a clear standpoint, that the focus of educational research must be *education,* and that its overall function is to assist teachers, administrators, indeed all concerned in the field, to improve the quality of the educational process - and, in so doing, enhance the quality of life. This is in no way to take a Utopian stand and deny that there are restraints on the educational process - economic and social, political and ideological - which

require analysis. Rather, I would say, it assists researchers to take the necessary overall view so far as education is concerned, including due recognition of these restraints, to which close attention should certainly be paid. It is to my mind the 'neutral' researcher who, aspiring to objectivity in an inappropriate way, endeavours to exclude supposedly extraneous 'values' - whether in terms of educational aspirations or the shifting policies of central government - who is guilty of refusal to face up to restraints; of putting the educational problem at issue into the laboratory and dissecting it into parts which do not add up to the whole.

When I venture with the phrase 'to improve the quality of the educational process', with a view to enhancing the quality of life', I am taking a firm stand on ground history has led me to; or recognising education as the characteristic mode of development of human beings in society, a process qualitatively different from the form of adaptation in the animal world governed by biological laws. After all, what differentiates the human species is that experiences and understanding of the world are not stored in physiological terms to be passed on by the infinitely slow process of heredity. Knowledge is stored in an external, exoteric, form in language, libraries, science, art, given a corresponding development of the human brain, and this represents a qualitatively new stage of evolution in terms of activity and control of behaviour. Hence the relatively rapid process of historical change and, too, the crucial importance to humanity of education, specifically in childhood, more generally throughout life. Yet we still know all too little about it. It is with a more effective penetration into the extraordinarily complex dynamic processes involved, at many levels, that *educational* research is concerned.

IV

To indicate how far feet can and must be on the floor, although brains can plan ahead, may I now turn to the immediate context of our work which I fear, means attention- to - additional, practical, problems. This conference takes place in the context or in the wake of, the Great Debate; indeed has been planned in relation to it with sessions concerned with the content of education, assessment, teachers and professional training. But, however grandiose the title, as the Great Debate has unfolded, it has been seen, not without reason, as something between an astute political move and a carefully constructed public relations exercise, mounted at the very moment when the funding of education is being systematically cut. (And, according to the latest reports, greater cuts are in prospect.) In this context it is not the perspective to enter on new educational developments, although there may be a shoring up of certain weak spots, such as provision for the 16 to 19 age range. Rather attention is focussed on consolidation of the system, eyes turn inwards, there is criticism of education on the grounds that there have been new initiatives and because expected results have not been attained, indeed because, so it is said in some quarters, there has been a 'decline in standards'. And this, in turn, is partly laid at the door of teachers recruited during the rapid expansion of the 60s some of whom, it is inferred, fall short either in efficiency or dedication. Meanwhile no reference is made (at least, officially) to reduction in the real value, for instance, of capitation allowances which materially reduces the resources teachers need to pursue new methods with success; nor to the readiness to see classes increase in size while carrying a heavy

load of teacher unemployment, rather than seeking ways of using expensively trained capacity to the benefit of education.

Now standards are a matter about which educational researchers know a good deal, by comparison with the average politician or publicist, and the public who can easily be led astray. We know the methods of gauging them in use and just what the limitations are. We therefore have a special responsibility in the present situation. And in this connection, all credit is due to Bruce Choppin of the NFER (and of BERA) for protesting publicly about the misrepresentation (and distortion) of a whole set of NFER research findings relating to this matter in the 1975 Black Paper, which received wide publicity.[1] If you remember this related specifically to the vexed question of reading standards, and to research into various aspects of comprehensive education where data was misrepresented to claim NFER authority for Black Paper claims about the effect of comprehensive reorganisation on educational standards.

We all, I would imagine, wish to improve cognitive learning in the schools, for which there is certainly scope. I believe there is no more important question and it is central to most aspects of educational research. Although not to be forgotten is the important and related matter of improving the quality of school life more generally, both of pupils and teachers; a large issue which has attracted little research although it bears essentially on creation of the conditions for learning. But if one thing has clearly emerged from recent debate, the Green Paper summarising issues, and actual developments within the schools and local authority systems, it is that what is going to be officially stressed is assessment. The Green Paper specifically calls for a greater extension of testing procedures. And it is my latest information that over 40 local authorities in England and Wales have decided to introduce mass testing over the next year or two - using for the most part traditional-type achievement tests concerned with the three Rs, for *all* pupils on two or three occasions during their school life.

The imposition of mass testing of this kind, an entirely different matter from the legitimate use of such tests for research purposes, raises central and difficult problems for researchers still in process of clarifying views about the designation of educational criteria and appropriate methodology. For there is, of course, a danger that a servicing or 'hired hand' operation may be mounted on the lines proposed in the Rothschild report which puts the matter bluntly enough. I quote: 'Applied R and D ... must be done on a customer-contractor basis. The customer says what he wants; the contractor does it (if he can); and the customer pays'. Since the customer in this case wishes to save money the search is on - I am authoritatively informed - for the cheapest available tests and some private firms are in the running.

It should also be recognised that the determination to impose mass, supposedly 'objective', testing in whole local authority areas is not unconnected with local government reorganisation. For this has brought about an introduction of corporate management which in turn calls for quantifiable measures of outcomes as criteria for decision making in terms of the distribution of resources; and among what, given the present rate support grant system, are now competing but often essentially non-

comparable services. The stress on managerial methods is one aspect of a growing tendency towards centralisation at different levels. And right at the centre we have the clear assertion in the Green Paper that the DES is determined to pursue a new role of leadership in relation to educational, no less than administrative, issues. This is the context of the new emphasis on assessment of pupils in the schools, ostensibly as a measure of the efficiency of the educational process.

Similar pressures in the United States - and many hold that what happens there follows here at an interval of a decade - have led to the publication of school by school lists based on the results of mass testing. Schools are judged by the public - and by administrators - according to the levels pupils reach and so it becomes the teachers' objective to maximise results, since administrators regard these as a measure of teacher competence. Consequently teachers teach to the tests - as many of our primary schools once taught 'intelligence' to get children through the 11+. Inevitably the tests come to dominate, to determine the nature of the educational process, or figure as the be-all and end-all of the school's efforts. The chief historical parallel is the system of 'payment by results'. And so well is all this recognised that it is categorically denied that anything of the kind is in mind; indeed the Green Paper specifically warns about the very dangers outlined. But it is actions that count, rather than words, and things are moving very fast at this level. That children should be tested three times during school life is strongly pressed as official policy of one of the two main political parties, not the one responsible for the Green Paper. Naturally enough the National Union of' Teachers has registered opposition, by conference resolution last Easter. Their resolution condemns 'universal testing of children at particular stages of education, either at local authority level or nationally'. But it must be recognised that it is hard for teachers to register objection without being accused of self-interest or covering up. All the more important, then that educational researchers should shoulder the responsibility of making the issues clear.

There is no need to enlarge, in this assembly, on the very real weaknesses of traditional-type norm referenced testing and the difficulties involved in interpreting findings. Ed Stones spelt out many of these in a recent article[2] and the matter will undoubtedly be under close consideration in the sessions on assessment. It is precisely because of such weaknesses that researchers have been working out new procedures appropriate to *educational,* rather than managerial, objectives. These are essentially concerned to provide the teacher with some degree of systematised feedback as to the level or degree of skill, or mastery, across a wide spectrum of activity, including new areas. At Leicester, we have been tangling with this question as an aspect of classroom interaction research, as others have been elsewhere. The object is not, repeat not, to measure educational improvement in terms of specific outcomes. It is to assist the teacher to penetrate into, or identify, the development of specific skills or abilities. This approach is still in its infancy and the procedure does not lend itself to simple quantification of results - which is what the managers, or politicians, are looking for both locally and nationally. While the research community press on into this difficult area, in an endeavour to supply teachers with feedback about individual pupils known to them personally and intimately in the classroom situation - indeed, in order to be able to cultivate this new approach - there is a need to make known the deficiencies of available instruments on which mass

testing must rely. In this matter there is a direct conjunction of interest between researchers into education and the teaching profession, itself an indicator of the extent to which links have been forged. I have become very conscious of this new understanding and base for effective collaboration in the research into primary classrooms in which the Leicester team is engaged, as, I know, many of you, have also in different areas,

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I have picked out the 'standards and assessment' chapter of the Green Paper for special comment because, besides being a crucial area for researchers, it is clearly here that the impact of present policy on education - on schools and classrooms, children and teachers - is likely to be most immediate and far-reaching. I would add that the work of the APU appears different in character and is a specific aspect which I am not concerned with here. But I cannot pass by the definite indications in the Green Paper that steps will be taken to find a scapegoat, that some procedure will be sought to enable dismissal of teachers for incompetence. This may sound a simple, commonsense, idea to those unaware of the failure to arrive at criteria for judging teacher effectiveness, in spite of really massive research efforts over a long period. If standard procedures are to be established 'for the assessment of teachers' performance' (to quote the Green Paper), criteria must, of course, be very precisely spelt out, but there are as yet none to hand - a point of which those directly engaged in initial and in-service teacher training are only too aware.

In face of issues and pressures of this kind, what stance should the educational researcher adopt? It has been the burden of my remarks that he/she can take a firm stand in terms of placing education in the centre of the picture. In other works the touchstone can, surely, be whether a contribution is made to clarifying and improving the educa*tional process,* as against merely consolidating the educational system. It was essentially use of this touchstone that relegated the 11+ and mass testing encouraged by selection, almost from entry to school at the age of 5. While this contributed admirably to consolidating the tripartite system it clearly contributed nothing to clarifying the educational process. Indeed it was an inbuilt assumption that education is essentially ineffective by comparison with innate 'intelligence'. No information whatsoever was provided about any child's development, or by what means he had reached a given IQ. This merely marked a position on a scale by comparison with other children at a given point in time. A very similar issue arises in the case of achievement tests still in use. It is not easy to explain the point to laymen but efforts can be made to find ways of doing so, for clearly administrators do not have the time to go into the matter, nor do county or borough councillors, nor has the average parent, who is so directly interested, the means to grasp the complexity of the issues involved.

Why does not BERA - it has occurred to me in putting together this talk - set up a working party, similar to that established by the BPS twenty years ago - to examine the matter and monitor developments, so ensuring, in advance as it were, no misuse either of tests or findings? Anyway, it is a suggestion, one way of realising our responsibility as researchers and of operating practically to uphold an educational perspective.

And it is worth remembering here that the scientific community has dug in its toes in relation to the Rothschild R & D approach, and by no means only in terms of a traditional academic concern for 'pure' as against applied research. The real issue is whether scientists are to be allowed to operate as scientists, educationists as educationists, researchers as researchers; or whether all are to become service personnel, waiting cap in hand for orders in response to which appropriate methods will be sorted out to produce acceptable results or conclusions. The specific point at issue here is that what the customer wants - in terms of the policy I have outlined - is certainties. In the nature of the case this is not what scientists provide, they can only reduce the area of uncertainty. Indeed it is precisely when certainties are proclaimed that one may be sure scientific probity has gone out of the door.

The point might also be made by classifying educational research, with education, as open ended, by contrast with technological servicing which, like training, takes place within a given set of assumptions and goals, or is, by comparison, a relatively closed system. In effect, educational research is as much about assumptions and limitations as it is about methods and solutions. The pressures now are for technological solutions in the service of certain immediate policies, or for unequivocal statements. But educational research (any research) is good insofar as there is an awareness not only of achievements but also of limitations; insofar as researchers 'come clean' and make explicit not merely findings but what they haven't done and can't do, even if this means the customer gets a dusty answer for his money, or for asking the wrong kind of question.

So I end, as I began, by reiterating how important is the work on which BERA has embarked, and how good it is that the task of clarifying educational criteria and norms for educational research has begun before 'the testing time' - in more than one sense of the term - we are all in for. It is going to be a very challenging period, but I hope and believe that, whatever the pressures brought to bear, and I think they may be considerable, we shall manage to stick to our last.

1. *Educational Research,* January 1976.
2. *British Journal of Teacher Education,* Vol. 1, No. 2.