The subject I have to tackle is too broad for any comprehensive treatment in the time available: I shall have to try to review - far too briefly for your satisfaction or mine - the development of research in the main branches of educational study, and to provide such detailed information as does not seem suitable material for oral delivery on duplicated sheets. These will, I hope, provide some assistance for anyone led in his or her field into British educational writings.

Research in educational psychology grew from early work about the turn of the century, inspired by pioneer work in general psychology such as Francis Galton's *Inquiries into the Human Faculty* (1883). The development was exemplified by the foundation of the British Child Study Association (1893), whose organ, *The Psycologist* (from 1908 renamed Child Study) commenced publication in 1899. It is no longer published, and it may be that there has been some shift of emphasis away from child study in the course of the century, often impelled by the desire for more rigid quantification of material.

This desire for quantification first found satisfaction in the field of mental testing. This developed with a sudden impetus at the end of the first decade of the century. In 1911, Miss Johnson's English translation of the 1908 Binet Mental Scale was published, and Cyril Burt's work, begun in Liverpool between 1909 and 1911 culminated in his publication of *Mental and Scholastic Tests* in 1921. Dr
P.B. Ballard, a London County Council schools inspector, was impressed by the possibilities of the use of standardised tests, and in 1914 and 1915 he standardised "one minute tests" of reading and arithmetic for the use of teachers.

About the same time W.H. Ginch studied methods of subtraction, phonic as against whole word methods in the teaching of reading and similar topics, using tests to establish his results. Although his tests were not properly standardised, his work pointed the usefulness of standardised tests as instruments of measurement in educational research.

Mental testing contributed at two levels to the body of educational psychology. On the one hand, it formed the basis for the theoretical contributions of C.E. Spearman, the pioneer of factor analysis, who, having sketched his point of view in the American Journal of Psychology in 1904, was able to expound it in *The Nature of Intelligence and the Principles of Cognition* (1925) and *The Abilities of Man* (1927). On the other hand, mental testing provided a ready technique for research in more practical settings.

Its use in this latter context was greatly enhanced by the development of standardised group tests which resulted from the pioneer work of the American Army Testing Service during the first world war. In England, Burt's work in London attracted attention, and helped to popularise testing by familiarising the teachers with the concepts of test norms and subject or educational age.

By the twenties public recognition brought about the use of tests in the applied field. The real beginning of large scale applied testing in the schools came when, in 1921, Northumberland County Education Authority commissioned Professor
Godfrey Thomson to construct group tests of intelligence for use alongside traditional English and arithmetic papers in selection for secondary education. In 1925, Professor Thomson moved from Newcastle to Edinburgh and from him grew the Moray House Testing Service (named after the Edinburgh teachers' training college associated with his university department), still in existence and supplying a wide variety of tests which are principally the work of the staffs of Edinburgh University and the Edinburgh Moray House Training College. In 1920, there had been founded the National Institute of Industrial Psychology, which has a vocational department producing tests which are often particularly valuable for use with older children and adults. In 1923, Ballard produced The New Examiner, which contained standardised attainment tests.

This rapid development and some of its possibilities were recognised in the Board of Education's Psychological Tests of Educable Capacity and their Possible Use in the Public Schools (H.M.S.O., 1924), and it is fair to say that mental testing has probably been the most heavily exploited research area in educational psychology. Its use in selection has been most in the public eye and there has been some withdrawal from testing recently on the part of the Education Authorities following criticisms. Some of these criticisms have been social in origin: others have been the result of research into such problems as the effects upon coaching upon intelligence test scores. The whole issue has been complicated by ill-informed discussion and by the sheer volume of research in the field, but the position at present is well summarised in the British Psychological Society's survey of secondary selection, published in 1957 under the editorship of P.E. Vernon. It
must be remembered too that in less emotionally charged contexts than that of secondary selection, tests have been used as an essential instrument in educational clinics, vocational guidance and pure research.

Still within the psychological field, and stemming from the early interest in child study which has already been mentioned, lies the considerable volume of research devoted to mental development in childhood and adolescence. This is an area particularly suitable in some ways for research by practising teachers and the many studies seem to add to an accumulated store of useful knowledge, rather than to mark clear stages in the development of theory. Indeed, in the past the theoretical structure in this field has been weak, and a good many research workers must have been frightened of it for that reason. If one had to single out individual workers in a branch of study where much must depend on the painstaking accumulation of data by a multitude of unknown workers, one would probably choose to mention Susan Isaacs and Professor C.W. Valentine, formerly professor in Birmingham University, which became a centre of research under his influence. His *Psychology of Early Childhood* is probably the most important individual British work in this field.

At the moment, there is great interest in the work of Jean Piaget, who appears to be attempting to fill the theoretical gap in the study of child development which has already been noted. His contributions are generally felt to be stimulating, but either based on insufficient evidence or supported by insufficient evidence in his presentation, which relies on quotation from individual protocols rather than any statistical treatment of results. Accordingly, there is
at the moment a spate of experimental work in such fields as the strategy of children's thinking, designed to test Piaget's conclusions. It is perhaps worth noting that throughout Piaget's long career much of his refinement of his concepts has been a response to British criticism.

The measurement of attitudes and interests, originating in American research, has also received attention, particularly at degree thesis level, where it seems to have offered opportunities for a coherent yet limited research. Attitudes to most subjects and to different types of punishment in schools have been explored, but there has been a good deal of criticism of methods of measurement here, much of it, one feels, quite justified.

Although there has been a great deal of research into the psychology of learning, it would, I think, be fair to say that the great volume of important research in this area has come from America, perhaps because so many modern learning experiments require the lavish equipment which seems to be more readily available across the Atlantic. Nevertheless, really distinguished work in the learning of skills has been done since the war, including some work on transfer of training which has reopened a number of earlier issues. Much of this work has been inspired by the armed forces. Concept formation and reasoning are the areas of learning which have perhaps made most appeal to British investigators and many of their experiments have been carried out in the context of child development, so that they fall into the group of studies already discussed.

Research into educational practice has not been neglected, and, of course, offers opportunities to teachers,
since their laboratory is at hand. It is not possible to typify research in this field - it is so broad - particularly when we take into account researches devoted to a single school subject or process. Basic reading and number have attracted most attention, but every subject, including military training, needlework and meteorology has had some share. Science and modern languages have drawn increasing numbers of researches. Currently, an attempt to present findings on reading as favourable to phonic methods of teaching has met widespread criticism: it would appear to be the product of an isolated school of thought.

In view of the interests of the present company, I might mention that some research on the teaching of English as a foreign language has appeared in Britain, but most of it is by foreign students working in British universities, and in many cases the research is relevant only to certain language groups, since it concentrates on specific difficulties of students of some particular linguistic background.

Schonell, in a review of educational research in Great Britain (1947-49) outlined the field as follows:

1. Experimental investigations of syllabuses for specific age groups (frequently insufficiently checked by objective measures)
2. Analysis of text-books in relation to usage or demands.
3. Comparison of teaching methods.
4. The place and function of a subject in the curriculum for a particular age range.
5. Psychological analysis of a subject, with investigation of the fundamentals involved in teaching the subject including special aids such as films and concrete
apparatus. (There has been considerable interest in visual aids and the British Broadcasting Corporation educational section has done a good deal of work on the use of radio.)

6. Modified or special methods of teaching subjects to particular pupils or to pupils in a particular type of school. (There has been very keen interest in the backward pupil and methods and materials appropriate to his needs, and a considerable volume of publication here)

7. Remedial work with handicapped pupils.

8. A historical survey of the teaching of a particular subject.

In these fields there is a good deal of un-coordinated material, and the standard of work varies widely.

Research on problems encountered with exceptional pupils of all kinds has been keenly pursued and, since the problems encountered in practice make the applications of research obvious, teachers in this field are commonly more research-minded than most. Delinquency has its own journal and a good tradition of research in a field where Burt's early studies, particularly *The Young Delinquent*, are established as classics. D.H. Stott's work on deprived and maladjusted children has recently aroused some interest. The increasing volume of work which is being devoted to physically handicapped children from the educational point of view tends to be highly specialised as does the complementary medical work in this field. It would be out of place to attempt a review here, but I have included a reference to
a survey of research into the education of the handicapped in the duplicated sheets.

The training of teachers has attracted some research, a good deal of it into the attitudes and interests of teachers in training. The amount of research into the attitudes of graduate teachers to their training indicates a problem area, though the position there is less acute now than it was when a number of graduates were forced into teaching as a condition of their receipt of financial assistance while studying at university. Some information about students in training colleges is accumulated indirectly through training college lecturers using their students as subjects e.g. in testing comprehension.

In the history of education great progress has been made in the ninety years since R.H. Quick declared in his Essays on Educational Reformers that all the books on the subject were German. English education is fairly well covered, though there are plenty of research problems left: Scotland's past has also attracted good work, but while there are excellent studies of different areas and types of schools, there is a shortage of detailed work covering the last hundred years, in part due to the insistence on experimentally based theses for Scottish Bachelor of Education degrees.

In more general history of education there are specialised works for all periods and particular reference might be made to W.H. Woodward's work on the Renaissance and to A.P. Leach's extensive contributions to the study of education in the Middle Ages. Histories also exist of the various different kinds of education, and of the work of religious bodies in providing schools.
Most individual schools of any age have their histories, varying very widely in quality and generally the work of a number of staff or a former pupil of the school in question; there is a growing number of studies of education in particular localities and associated with it, an interest in educational records, local archives and record books of schools, for instance. The development of the curriculum has been studied in relation to the changes in society and other forces which have seemed to be important in shaping the work of the schools. There has even been some attempt to relate the history of school architecture to educational methods and attitudes at the periods when the schools were built.

In general the trend in educational history has been towards a more sociological approach and a broadening of interest. Even school historians tend to be less restricted than they once were. Anyone who is particularly interested in historical work would do well to have recourse to my colleague, Dr Bramwell, who is not only well informed about the sort of work going on, but has recently contributed a distinguished study of his own.

Research in educational philosophy and theory has not been popular. Rightly or wrongly, many of those intimately involved in education feel that philosophy is rather remote from their problems, and even a research organisation listing the areas where research is needed rates philosophical research as a long term project.

There are a number of semi-historical researches into the thought of educationists, some research into the relationship of currents of thought to education, histories
of the influence of particular ideas — such as freedom — on the schools, a number of considerations of education for leisure and various other studies which cannot well be typed. There appears to be an awakening interest in the application of contemporary philosophical analysis to education, but it has not yet developed.

The enterprise on which we are engaged here is, I suppose, an adventure in comparative education, but it is an Anglo-Norse enterprise. Similarly much of the work in comparative education is a product of international co-operation, either informal or organised through such agencies as U.N.E.S.C.O. One would like to think that British educationists have not been slow to co-operate in such ventures, but one would not wish to include them in a survey of research in Great Britain.

There has been continual interest in comparative education in Britain since the reports of Matthew Arnold in the 1860's and Sir Michael Sadler has been described by Professor Kandel, an English export to America, as "the modern founder of the study of comparative education." Dr Nicholas Hans, Professor J.A. Lauwerys and Vernon Mallinson are probably the most prominent English workers at the moment. Since its foundation in 1932 as the brain child of Sir Robert Evans, The Year Book of Education has played a part in the advancement of knowledge in a highly complex subject, but it is fair to note that its contributors are international.

There have been quite a number of worthwhile theses in comparative education presented in the British universities, but while one must pay tribute to the stimulus given, particularly in London, one must also recognise that many of the most worthwhile studies are by foreign students comparing education
in their own countries with education as they have seen it in Britain. It is fair to say that the field is not yet maturely developed, particularly in theoretical approach, but the position is hopeful.

There has not been in Britain anything like the volume of research in educational sociology which one finds in the United States. Our texts are thin and there is a lack of detailed studies, though good work has been done on social mobility, social class, conditions in slum areas and the interrelations of birth-rate and education. At the moment there is discussion about the possibility of founding a British journal of educational sociology.

The influence of press, film and television has been much discussed and there are a few studies which are systematic enough to be called research, though the problems confronting research in this field are formidable. There have been a number of sociometric studies of groups of children, and these will most likely be added to as they are suitable work for short theses. Of course, many purely sociological studies have a relevance for education, but there is a real need for textbooks which will sift these.

At some pains to you, no doubt, I have tried to fulfill my rash promise to survey the field. If I have confused, rather than enlightened, I have perhaps the better prepared the way for a discussion of the co-ordination and organisation of this research. In many ways this topic is more interesting than a general survey can be.

Although there is a close liaison between research organisations in England and Scotland, it is a liaison rather than a regularised union, and the articulation of research in
the two countries is best dealt with separately. Scotland, whether because the Scot is traditionally impressed by academic endeavours or because his country is smaller and more manageable as a unit, was first in the field with an organisation for the co-ordination of research.

Degrees in education involving theses were first instituted in Scotland in 1916 with consequent interest in research and in 1919 the Educational Institute of Scotland, the principal Scottish teachers' organisation, set up a research committee, but there was no real attempt at central co-ordination of research until the foundation of the Scottish Council for Research in Education.

In May, 1927, the Association of Directors of Education in Scotland approached the research committee of the Educational Institute suggesting collaboration in research. A joint meeting was held to which were invited representatives of the Association of Education Authorities in Scotland, and finally the three bodies approached the Scottish Education Department. The Scottish Education Department was interested (it is important to notice that there was no attempt to make the organisation subject to the department), and the Council had its first meeting in June, 1923. Its base had been broadened and in addition to representatives of the three initiating bodies it included representatives of the Association of County Councils, the Association of Counties of Cities, the National Committee for the Training of Teachers, the individual Training Centres and Colleges, the Universities, the Scottish Branch of the British Psychological Society and the Association of School Medical Officers in Scotland. The important points to keep in mind are that it arose almost
before the lack of such an organisation had made itself
generally felt, that it was primarily initiated by teachers,
education directors and education authorities, not by univ-
erseities or professional psychologists, that it was broadly
based, and that it was not formally linked with the Scottish
Education Department.

It was incorporated in 1932. Its finances are
broadly organised as follows: the Educational Institute
pays 7d a member - roughly £750 and provides office accommoda-
tion at a nominal charge. The Education Authorities
contribute £1,600 per annum, there are many smaller contributions
and the Scottish Education Department has granted since
1946 sums ranging from £36 - £3,102. Grants have been made
for specific researches from time to time: £5,157 from the
International Institute of Teachers' College, Columbia Univer-
sity for the international examinations enquiry; £5,000
from the Population Investigation Committee for a Mental Survey
and £1,000 a year for five years for the follow-up of this
from the Nuffield Trust.

At the moment the Council has an honorary director,
a research officer, a secretary and three clerkesses. It
states its aims as follows: to encourage and organise research
work in education in Scotland, and, in particular, to initiate
and control special investigations, making the necessary
arrangements with the relative education authority; to receive
suggestions for research; to allocate problems to suitable
investigators; to finance approved investigations, wholly
or partly; and to authorise the publication of results
and recommendations and to bear the cost of publication.

The Council has a library, but it is not a particularly
distinguished one. It can, however, be invaluable in special
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cases because it buys books needed in the course of an investigation ad hoc, it receives gifts of books from like organisations overseas which are often difficult to obtain in Britain, and it pays half the cost of thesis typing for all Scottish education degree candidates in return for a copy of the thesis. It is thus a useful repository of unpublished work.

The most extensive piece of work undertaken by the Scottish Council for Research in Education has been the Scottish Mental Survey. This consisted of the application of a specially prepared group test of intelligence to all pupils in Scotland born in 1921. The Survey was conducted in 1932, and a further survey of 11 year old pupils was conducted in 1947, using a six day sample of 1,215 children. This was a most valuable undertaking, whose scope is far beyond the possibilities of discussion here, but the publications arising from it have been listed on the duplicated sheets.

The interesting point about the Scottish Council is that it stimulates, rather than executes, research. It has been successful in supporting in-service teachers who wish to undertake research, in securing co-operation of the education authorities and in eliciting the unpaid consultative and executive services of experts who are ready to take advantage of the facilities it can offer. Because of the existence of the Moray House testing service, itself in a favourable economic position because it is based on a university and training college, which cover the basic salaries of its test designers, it has not felt the need to design a wide range of tests. Of course, by the nature of things, not all the work it stimulates is of the highest quality; but most of it
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is very worthwhile.

Typically, a subject is found for research, either because someone anxious to do the research applies to the Council for support, or because the Council itself sees the need for a particular research and looks for someone to do it. It is the better able to find workers because it has close contact with the four universities, the training colleges, and, of course, those who have worked with it in the past. Once the research is initiated the research worker, usually a serving teacher, has the fullest support. In standardising tests, administering them and handling results, he will have access to expert advice in every field. Education authorities will handle his calculations on their calculating machines to relieve him of such onerous mechanical tasks as the routine calculation of correlation coefficients; and in general he will get full co-operation from most counties if he has need to visit their schools. This is not spoon-feeding; it is a recognition that teachers are busy people who are given too little time for research, and an attempt to provide some sort of solutions to their most acute research problems. On the whole, the scheme seems to have been successful, but, while it is operable in such small countries as Scotland and Norway, it is doubtful if it could work in England. In any case the corresponding English organisation was shaped by different forces.

The National Foundation for Educational Research in England and J.les grew indirectly from the International Examinations Enquiry. This in itself developed out of a conference on examinations held under the auspices of the Carnegie Corporation, the Carnegie Foundation and the International Institute of Teachers' College, Columbia.
University at Eastbourne in 1931. Committees were set up in England, Scotland, France, Germany and Switzerland. The English Committee was directed by Sir Philip Hartog under the chairmanship of Sir Michael Sadler. The principal publications of this enquiry are listed on the last duplicated page. Those of the enquiry in Scotland are starred in the list of Scottish Council Publications (Duplicated Sheets, Section IV).

The committee engaged in this research in England became convinced of the need for a more systematic provision for educational research, and obtained £10,000 from Carnegie, provided they raised a similar sum, the money to be administered by the University of London through its Institute of Education acting on the advice of an advisory council representing the main interests concerned with education in England and Wales. In contrast to the case in Scotland, then, the initiative came from those engaged in research.

Delayed by the war, the Advisory Council first met under Sir Fred Clarke in January, 1945. Much spade work was done in making appropriate contacts and in March, 1945, Mr Lea Perkins was appointed as paid secretary. Under him, administrative foundations were laid and in December, 1945, a delegate conference, drawn from the universities, the local education authorities, the teachers' organisations and the advisory council, met in London.

Thus the National Foundation for Educational Research in England and Wales was founded, as a non-profit-making body relying on corporate and individual membership, principally that of the local education authorities, supplemented by a grant from the Ministry of Education.
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Its principal aims are as follows:

1. to act as a National Research Foundation conducting research directly or assisting financially or otherwise in the conduct of research or in the publication of research done privately or under other auspices.

2. to act as the national liaison body with any international body for research in education which may be established (cp. the examinations enquiry from which the Nat. Foundation grew).

3. to act as a means of liaison with other national research bodies, as, for example, the Scottish Council for Research in Education.

4. to act as an advisory body available to the Ministry on matters pertaining to research in education.

5. to act as a means of interchange of educational ideas and provide information on educational questions, especially concerning research.

It is primarily interested in psychological or at least experimental research and has felt that a condition of its dependence on public money is that it should plan research which is clearly needed, rather than subsidise research workers who are following their own interests.

It is fair to say that this is a body to be regarded much more as an expert agency in the field of research than as a co-ordinating body on the pattern of the Scottish Council. Its staff consists of a director, a senior research officer,
... on the page:

...
an enormous undertaking and thousands of tests are distributed annually. Notable too in the testing service, is the development of a technique for standardising tests in use. By the use of punched card techniques and mechanical calculation, it is possible for the testing service to supply an unstandardised test to an education authority and, ten days after receiving the raw scores for up to 70,000 subjects, supply to the education authority full standardisation data including a standard score for each subject.

Third, the National Foundation, fortunately placed in London, has been able to establish contact with visiting educators and perform valuable liaison work.

It is in the realm of pure research that the National Foundation has encountered most shoals and difficulties. If we survey the ten years of publication, we find that of ten publications, four are lists of researches compiled by A.H. Blackwell, who is on the staff of London University. These lists are invaluable for the co-ordination of research, but they do not emanate from the foundation's staff. The other six publications are derived from four researches, Nos. 2, 6 & 10 being progress reports on a large project. Of course, it is true to say that research is in progress and that ten years is not along time to harvest the fruits of research work. Obviously, in the first few years there will be no crop.

Nevertheless, it is undoubtedly true that it has proved difficult to secure suitable full-time research personnel and it has therefore happened from time to time that researchers have worked for two or three years without at the end of this time producing material thought to be worthy of publication. The
National Foundation has had much heart-searching over this - it is a problem acute in all pure research appointments - and it may find a way out of its difficulties which appear to have grown less with the years. Nevertheless, the problem raises the question whether the Foundation might not better justify its use of public money by encouraging and subsidising research-workers who have their own developed interests, a point about which it has shown itself oddly troubled. One might also wonder whether there are not certain types of research which are most fittingly undertaken by serving teachers and lecturers and others more properly in the province of full-time research workers. If so, along what lines can the division be made?

It has already been mentioned that research by serving teachers is regarded in England as more properly the concern of the Institutes than of the National Foundation. Institutes have responded differently to this demand, and success has been uneven. We in Durham cannot claim to have led the field. Like some other Institutes we have had a number of full-time research workers. From time to time we have encountered here difficulties not unlike those of the National Foundation in this sphere. Some Institutes have been successful in stimulating research by teachers it has often been through a fortunate combination of personalities at an auspicious moment and the results are not consistent. As compared with the Scottish Council in this field, Institutes suffer from division of aim, their prime object not being research, and from their restricted constitutions which do not make co-operation with the local authorities as easy and intimate as it is in the case of the Scottish Council.
Research in Great Britain

Journals must inevitably have a part to play in the co-ordination of research. For many years the only heavy weight specialist journal was published in the field of educational psychology. The Journal of Experimental Education was founded in 1911, became in 1923 the Forum of Education, and in 1931, was taken under the wing of the Education Section of the British Psychological Society, itself a stimulus to research and a co-ordinating force, as the British Journal of Educational Psychology.

It was partly to remedy the lack of an educational journal outside the psychological field, and partly to co-ordinate research in that field in which the National Foundation was not directly interested, that a Conference of Professors of Education and Directors of Institutes was held in December, 1951. The enterprise that was determined upon was introduced in the first number of the British Journal of Educational Studies, published in November, in the following terms: "It is generally felt that the British studies in the various fields of education - philosophical, historical, psychological and pedagogic - need to be better organised and better known. The inaugural conference has now become the Standing Conference on Studies in Education, in touch with the National Foundation for Educational Research, with the Scottish Council, and with a body of advisors and consultants from overseas."

The Conference also sponsored the British Journal of Educational Studies to cover the ground not covered by the psychologically oriented British Journal of Educational Psychology. In practice, it has been weighted in the direction of the
history of education as has editorially reflected whether this is desirable. Certainly, it has performed a very useful function and has attempted to fill a co-ordinative role by surveying research, publishing work on source materials and giving accounts of researches and institutions for research which help to make the student new to the field aware of the scope and possibilities which present themselves.

Finally, there is currently a movement to found a journal in the area of educational sociology. The problems are not easily surmounted and are chiefly financial.

Briefly then the articulated core of British research in education is somewhat as follows:
Norwegian Conference 1958

Educational Research in Great Britain

1 Organisation of Educational Research

The number of organisations making a contribution, direct or indirect, to educational research is too large to allow a detailed examination of each. There are, however, a number of specialist agencies which deserve mention before I plunge into some account of the principal national research organisations of England and Wales and of Scotland.

A. The Ministry of Education has its own research department which does not normally publish, but circulates duplicated documents at usual high level.

B. The B.B.C. has a research and follow-up department working in liaison with the schools, and the Independent television authority has a similar service. A good deal of interesting material on school broadcasting has emerged and the B.B.C. has a number of publications.

C. The British Film Institute has done a certain amount of work on teaching film and the Scottish Educational Film has done work on television as well as films.

D. The Institute for the Study and Treatment of Delinquency is concerned with the problems in its own field and publishes the British Journal of Delinquency.
E. The Special Schools Association, the professional organisation of teachers of exceptional children, both mentally and physically handicapped, has a research committee and publishes a certain amount of research material in its journal, Special Education, until recently known as "The Special Schools Journal."

F. Articles of educational interest appear in Mental Health," the journal of the National Association for Mental Health.

G. The British Psychological Society has representatives on most important educational research committees, has its own educational section and publishes the British Journal of Educational Psychology, the weightiest British periodical in its field. From time to time it may convene.