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Educational Research and Development in Europe

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Seen as a whole, European educational research is poorly developed, qualitatively and quantitatively. In many universities, the academic level of schools of education is low. Most European primary and secondary school teachers do not enjoy basic training in research and hence are unable to read research reports and comprehend the statistics in them. In some countries, like Belgium, there are neither national research institutions, foundations, nor a network of regional laboratories.

This poor development has both historical and political explanations. One of the main tasks of educational research is empirical and critical analysis of existing philosophies, institutions, and methods of education. Since the institutions of a country reflect the values of its dominant political forces, a critical research conclusion can be interpreted as a negative attitude toward the political authority. This perhaps explains why educational research flourishes only in societies that have reached an advanced stage of economic development and in which mature democracy has evolved.

As long as democracy is more apparent than real, educational research remains secluded in universities and has a strong if not exclusively philosophical character. Provided research does not concern itself with hard empirical facts, it is no real danger to a government. Only when democracy has become a way of life and an accepted national philosophy does research play a vital role in the transformation and functioning of education. Sweden and to a

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somewhat lesser extent Great Britain provide examples of such a high level of development.

Until recently, teachers have been regarded as second-class citizens of the academic world, and the status of education in universities has been judged inferior to that of most other established disciplines. A good example is the situation in France, where psychology is now academically accepted but education remains in low esteem.

We shall try to document a number of points. Many European countries have centralized school systems that have been favorable to the development of coordinated national research activities, but opportunities to do research have not often been seized. Accordingly, the level of financing of research is in many cases very low. While Unesco considers that 2% of the total educational budget should be devoted to research and development, an optimistic evaluation indicates that Belgium, for example, spends less than .10% on the direct financing of research. Because the dissemination of research results among administrators and teachers also is unsatisfactory, their impact on educational practice is limited. Further, the theoretical framework, the experimental design, and the statistical analysis of many projects are of poor quality. Failures are often observed in the operationalization of objectives and hypotheses. The same ill-formulated problems are tackled over and over, and the conclusions reflect beliefs more than fact-supported conclusions.

As already suggested, these points apply to a much lesser extent to Great Britain and the Scandinavian countries. In several other countries, such as Austria, Belgium, France, Italy, the Netherlands, Switzerland, and West Germany, the situation is likely to change soon and is in fact already changing. Based on their few existing highly qualified research centers, these countries can and probably will develop their educational research activity. If they succeed in exploiting their rich academic traditions to nourish the theoretical framework of well-conceived empirical research projects, spectacular progress can be expected. One example of this trend (De Landsheere, 1973b) is shown in Belgium's projects in the remediation of socioculturally handicapped children of preschool age.

The concept of European educational research is a misnomer. This may seem anomalous in light of the convergence of priorities stated by the ministers of education of the Council of Europe countries or by the researchers themselves. (See the section below on areas of research.) This community of interests, however, does not indicate that all the problems are tackled by qualified researchers in all countries.

Politically, economically, and culturally, Europe is an intricate diversity. That is why a reliable picture of educational research can only be a mosaic of segments, each devoted to the situation in a single country. Furthermore, the weight of the different segments would not be correlated with the size of the countries. It should always be borne in mind, for instance, that the 25 Swiss

cantons have their own governments, educational systems, and research policies (if any).

The documents gathered preparatory to writing this chapter reflect this diversity. Research institutions and activities in each country must be inadequately described, even though use is made of responses to standardized questionnaires of international organizations: Unesco Conference, Organization for Economic Cooperation and Development (1969), Council of Europe (1971-1973), European Cultural Foundation. The information provided is often incomplete, and the data are not comparable from country to country.

We shall have to deal separately with Western and Eastern Europe. Documents issued by communist countries are so different from those of Western European countries that a parallel treatment is impossible. For Western Europe we have abstracted, from highly heterogeneous sources, qualitative and quantitative information and ordered it under the following headings: priorities, policies and coordination, research institutions, researchers, and areas of research.

WESTERN EUROPE

Priorities

The surveys made by the Council of Europe are our main source of information (Council of Europe, 1971a, 1971b, 1971c, 1971d, 1972, 1973 a, 1973 b). All participating countries except Italy and Ireland mention national priorities. These are all related to the general educational policies of the countries concerned; in some cases, they directly reflect some features of the national economies. In Italy, educational research is said "to remain a field of spontaneous initiatives." In Ireland, the situation is likely to change soon, for a Committee of the Department of Education will determine main orientations and develop and coordinate short- and intermediate-term research programs.

The organization and structure of school systems are major policy problems and are mentioned everywhere. The traditional segregation of kindergartens, primary schools, general technical and vocational schools, art education, and higher education and, at this latter level, between the many forms of higher education, is more and more being analyzed as the institutionalization of a frozen class society.

Reforms of the educational systems have been and are still often decided on the basis of ideological or philosophical opinions largely determined by historical and economic factors. Sweden is so far the only country where the political authorities receive empirical data prepared by researchers before main decisions are made. In Great Britain, the white books have a similar but not so direct and specific influence. The little attention given among the priorities to school administration and economics is striking. Does it indicate that Western European researchers have not yet learned the necessary skills for such

inquiry, or that it is seen as a source of political confrontation—and thus avoided?

In many cases, no clear difference is made between conclusion- or decision-oriented research (Cronbach & Suppes, 1969). Furthermore, many poorly controlled and inadequately evaluated innovations in methods or changes in organization are characterized as development. Only countries most advanced in educational research clearly mention priorities for conclusion-oriented research, and they do so only rarely.

In contrast to a sort of ideal linear movement from fundamental research to development, development problems often seem to get the first priorities. Educational authorities lack the necessary methods, aids, and evaluation techniques and devices to implement reforms underway. Then comes decision-oriented inquiry: Which measures and methods should be generalized? Only when the school machinery or reforms run into trouble do governments feel the need for more fundamental research. This situation is dangerous. Cut off from conclusion-oriented research, innovation and school practice easily degenerate in gadgetry, recipes, and the like. As is so often the case, it is not a matter of either-or, but of both. In all research and development, quality control and evaluation should be rigorous and permanent.

Policies and Coordination

It has been stated that in Denmark (Council of Europe, 1971b), “Experimentation is carried out in most fields by central as well as by regional authorities and by interested schools, but research activities have only to a certain extent been influenced by administrative decisions regarding priority fields of innovation and development” (p. 4). It should not be assumed that this statement gives a true picture of the general situation in Europe, however. In fact, member countries of the Council of Europe can be divided into two groups: those in which there are a national policy and coordination (Denmark, Finland, France, Ireland, Norway, United Kingdom, Sweden, Turkey) and those in which coordinated action cannot be detected (Austria, Belgium, Federal Republic of Germany, Italy, Netherlands, Switzerland). Important differences exist among countries within each group, however.

It is easy to understand how difficult it is to develop national policies in federal or confederated states in which most educational decisions are made in total independence by local authorities or bodies, as in Germany, Switzerland, and Austria. Since the end of World War II, the principle of research freedom has been especially emphasized in Germany and Austria, and their constitutions reject political or ideological pressure on the scientific world. Existing institutions and organizations responsible for national policies and coordination have only recently been launched in Europe, mostly after 1960 and mainly between 1965 and 1970. In other words, educational research in Europe is just getting organized.

In Switzerland, two recent (1969) creations can be considered as an acknowledgment of the need of coordination on a broader or even national basis. The Swiss conference of the cantons' heads of public education departments has founded a Coordination Center for Educational Research (headquartered in the city of Aarau). The purpose of this center (Council of Europe, 1971c) is "to help in defining the educational policy of Switzerland and to promote relations with foreign educational research centers" (p. 266). The Institut Romand de Recherches et de Documentation Pédagogique, in Neuchâtel, is now a focus of the educational research and development activities of the cantons of French Switzerland and the Tessin. The Institut Romand is an information center for teachers and researchers which is especially interested in teaching methods (reading, foreign languages, and mathematics) and in school organization.

In the Federal Republic of Germany a similar trend can be observed. After an amendment of Article 91b of the Constitution and an agreement between the Federal and the *Länder* governments, a commission for educational planning was created in 1970. Its tasks are to prepare development projects, plan research, and facilitate the necessary arrangements between the central and the local bodies for the implementation of research and development projects. Curriculum development and evaluation, organization and evaluation of "pilot" experiments in schools and universities, and promotion of educational research and development seem to be the main fields of activities of the commission. Other coordinating agencies in West Germany are the Federal Institute for Vocational Educational Research recently established in Berlin, the School Building Institute, the Education Council, the Science Council, and the Conference of West German Society for Educational Sciences.

In a small country like Austria, the directors of institutes of education and of vocational education keep in touch easily and coordinate, from time to time, their research activities.

National policies do not yet really exist in Belgium, Italy, or the Netherlands. Research depends almost exclusively on the initiative of universities or other institutes of higher education. In Italy, few universities have developed the necessary research structures. In Belgium, as in the Netherlands, the ministries of education sponsor a few research projects in line with their present school policies. In Belgium, the need of regional laboratories coordinated by a national research commission has often been stressed and is more and more being recognized.

In the Netherlands, an Educational Research Foundation was created in 1965 to plan, program, and coordinate educational research. Government financing amounted to 2,700,000 guilders in 1969 and 6,500,000 guilders in 1970. At the end of 1970, it was suggested that the Educational Research Foundation be transformed to a National Foundation of Research, Development, and Experiments. In any case, in all three countries, the lack of a

national research policy is seen as an obstacle to the progress of education and is often denounced.

In France, Ireland, and Turkey, a national research policy is formulated and implemented through ad hoc ministerial commissions. In France, "it appears from the organization and goals assigned to the new structure created at the Ministry that future research is to be strictly centralized" (OECD, 1969). The Committee for Research and Development at the Ministry of National Education defines the policy and supervises the educational research planning. The Direction de la Pédagogie and the Direction des Personnels control school experiments and the schools where they take place. The Service des Etudes et Recherches Pédagogiques is a part of the National Institute for Educational Research and Documentation (INRDP), placed under the authority of the minister of education.

On request of the directors and services of the Ministry of National Education or at its own initiative (but always with permission of the ministry), the Service des Etudes et Recherches Pédagogiques undertakes applied research in order to improve teaching methods and curricula, school organization, and the observation and evaluation of pupils' behavior and achievement (Council of Europe, 1971c, p. 88). Some projects of more fundamental character can be carried out at the demand of the service by universities or by teams working at the Centre National de la Recherche Scientifique (CNRS).

Contrary to my own opinion (I think that most educational research should take place at the regional level), an OECD (1969) report suggests that the trend toward centralization may be beneficial at the present stage: reinforcing large national institutes seems preferable to supporting a proliferation of smaller organizations. Anglo-Saxon and Scandinavian countries, especially sensitive to the danger of strong political influence likely to bias research, avoid strong centralization (Council of Europe, 1973a; Dahllöf, 1972; Husén, 1968; Wall, 1968). In Great Britain, policy and priorities are directly formulated by national and regional councils for research and development. The statutes and roles of these bodies vary, but as a rule they are led by boards or committees composed of representatives of all interested circles: political representatives, public and private school authorities, teacher associations, industry, trade unions, and research and higher education institutions.

Some organizations finance research in Great Britain and thus exert a directing and coordinating influence on universities and other research institutions. For instance, the Educational Research Board of the Social Science Research Council, a quasi-governmental organization created in 1965, is especially interested in teacher education and utilization, nursery and preschool education, minorities, further education, evaluation, and new approaches to education. (For the period 1969-1970, the Educational Research Board financed 23 new projects at a cost of £221,211.)

Other organizations develop their own research programs more independ-

ently. The National Council for Technology was created in 1967 by the Department of Education and Science, but it is constitutionally independent. The National Foundation for Educational Research (NFER) in England and Wales undertakes research projects of national importance or of great urgency. It is concerned with problems that arise at all levels within the educational system, and its current projects cover preschool, primary, secondary, further, and higher education. The major emphasis of its work is on evaluation. It also provides an advisory and information service for its members and for other researchers. The Scottish Council for Research in Education, an independent research institute, is mainly financed by the Scottish Education Department, the school authorities, and the Educational Institute of Scotland. It concentrates on secondary education, examinations and assessment, environment, and further education. There is also a Northern Ireland Council for Educational Research (1967).

In Sweden, research and development priorities are permanently reconsidered by the responsible bodies and their advisory committees. These bodies distribute research funds. The Council for Social Science Research (1969) and the Bank of Sweden Tercentary Fund (1970) are oriented toward fundamental research. Applied research and development projects are financed by the National Board of Education (1962), the Office of the Chancellor of the Swedish Universities (1969), and the Swedish Board for Technical Development (1970). The role of these agencies is not limited to funding; they also have to make sure that the research results are taken into account in the educational planning and decision-making processes.

In the other Scandinavian countries, the coordinating agencies depend more heavily on government and are mainly oriented to development and innovation problems. Important agencies are: in Finland, the Research Council for Social Science, the National Board of Schools, and the Council for School Research; in Denmark, the Board of Experimentation of the Public Primary and Lower Secondary Schools and the Planning Board for Higher Education; in Norway, the Department of Planning. (The Norwegian National Council for Innovation in Education is an independent advisory body.) Other research centers of national importance also play a political and coordinating role: the Institute for Educational Research of the University of Jyväskylä (Finland) (which became a national center in 1968) and the Danish Institute for Educational Research (1958).

Educational Research Institutions ¹

Information from 14 countries participating in an international conference organized in 1967 by Unesco on the role of research in educational change

¹ In this section, we borrow mainly from Yates (1971, pp. 23-43). We also use answers given to the Unesco questionnaire by Belgium, England, France, Germany, Scotland, and Sweden, which are reproduced in the same book (pp. 115-220).

was used by Yates (1971) to suggest an analysis of contemporary structures of research which seems valid for Western Europe. However, important variations exist among research institutes in their administrations and modes of funding. Generally speaking, educational research is done by universities, national agencies, or governmental departments, and by special institutes independent of universities and in many cases separate from governments. A lesser but not unimportant role is also played by research institutes financed by local or regional authorities, confessional or nonconfessional professional associations, and teacher-training colleges.

The Universities. In several European countries, the influence of the universities on governmental decisions and school practice has been very modest. It would be unfair to deny, however, that in many cases there would not have been and would not now be any educational research at all if universities had not forged the concepts and developed the research methods and techniques and had not valued high-quality experimentation in education. On a continent where most teachers and their supervisors have not learned the foundations of educational research methods and statistics, and where most university professors have not had any pedagogical training, it is not surprising that research results are frequently rejected or ignored. In the Latin countries, for example, the great majority of primary and secondary school teachers do not even master the concepts of descriptive statistics. Many have never administered an objective achievement test, and they ignore the existence of standardized measurement instruments for the subjects they teach.

The contribution of the universities is twofold. One, university schools, institutes, or faculties of education carry out an important part of the educational research and development. Two, faculties outside the schools of education also undertake research related to education. This research is mostly basic research.

The influence of university schools of education varies considerably from country to country. In France, a *licence* in educational sciences was legally created less than ten years ago (1967), but the objectives of the *licence* are far from precise (Léon, 1971-1972). While its curriculum is an unclear mixture of courses aimed at school practice and at research, in fact the French *licence* is mainly geared to the advanced pedagogical training of teachers (OECD, 1969, pp. 3-4).

Schools of education in Austria, Germany, and Switzerland are also much more centered in teacher training than in research. In contrast, the Belgian faculties or institutes of psychology and educational sciences carry nearly all the weight of educational research. (The former are higher institutes of pedagogy founded in the twenties, even before autonomous schools of psychology came into existence.) These faculties or institutes, however, only train teachers of education, psychologists, or researchers. In Great Britain, in the Scandinavian countries, and to a certain extent in Germany, the university schools

of education participate in the training of the teachers but have educational research departments.

Furthermore, the weight of the respective contributions of the schools of education and of the other faculties varies greatly in different countries. For instance, of about 250 French university research projects listed in 1971-1972 (Julien-Binard & Dufoyer, 1972), less than one-third belong to teaching and research units of education and more than two-thirds are carried out, in order of importance, by departments of psychology, sociology, law and economics, humanities, science, and medicine. For the same period, Sweden had 108 projects (National Library for Psychology and Education, 1973); of these, 93 belong to departments of educational research of university schools of education, eight are undertaken by the Department of Psychology of the University of Stockholm, and two are under the direction of the Department of Sociology and the Department of Political Science of the University of Umeå. (Generally speaking, the integration of psychology and sociology into the educational sciences is a Swedish characteristic.)

The relative importance of the role of universities in educational research is far from equal in West European countries. The list of research institutes taking part in the survey of the Council of Europe indicates that university research is most important in Austria, Belgium, Finland, Ireland, and the Netherlands. The role of universities is also great in Sweden, but nearly all research projects are controlled and financed by national agencies outside the universities. In England, Norway, and Scotland, the universities are either balanced or outweighed by other institutions. In Denmark, France, and Switzerland, the role of universities is comparatively small compared to national or cantonal institutes or governmental research centers.

We know little about university educational research in Turkey or in Greece. As for West Germany, it began a period of expansion after the long silence of the Nazi era and the decade that followed. At the university level, the Deutsches Institut für Internationale Pädagogische Forschung (Frankfurt), founded in 1951 with the help of the United States, has developed a large spectrum of studies. In 1963, the Max Plank Institute for Educational Research (Berlin) was created to promote interdisciplinary research. It is composed of four departments: education and psychology, sociology, economy, law and administration (Yates, 1971).

Still other differences in the roles of national agencies can be mentioned. While some, as in Sweden, limit themselves to financing research (mostly in universities), others undertake their own projects. Examples are the Service Central des Statistiques and the Bureau des Programmes in France, the Planning Branch of the Department of Education and Science in Great Britain, and the Research Branch of the Education Department in Scotland. Such departments are, of course, peculiarly well equipped to undertake investigations of the kind often designated as "social bookkeeping." Large-scale surveys

involving the collection and analysis of data on school enrollments and the assessment and prediction of available resources of manpower for teaching and other educational activities, tasks frequently carried out by government agencies, are a necessary component of the efficient planning of an educational service (Yates, 1971, p. 26).

National Agencies and Governmental Departments. Universities have, beyond any doubt, created educational research and demonstrated its potential value to solve some of the problems met by school administrators. They have also developed the pioneering methods and techniques that help to improve the quality and progress of research. Nevertheless, the universities alone cannot meet a steadily increasing research demand, for lack of the necessary means. Traditionally jealous of their independence and autonomy, the universities do not always facilitate the progress of the national research policy and of the coordinated action that governments often deem indispensable in dealing with national educational problems.

To avoid the usual heavy teaching responsibility and focus on research, some institutes or centers that have originated from universities have won independence to the extent that they no longer come under the jurisdiction of the schools or faculties, as is necessary in the case of a large-spectrum teaching institution. Benefiting from the intellectual and material infrastructures of the universities, these research centers specialize in one or a few areas of research. The usual budgets of university departments do not suffice to finance such research centers. These centers therefore have resorted to direct public funding and have become more and more associated with governments (Yates, 1971). The Institute for Educational Research of the University of Jyväskylä (Finland), for example, now has the status of a national educational research center. It would be an exaggeration, however, to say that everywhere in Western Europe educational research is financed and thus controlled by national agencies, as in Sweden.

National Institutions. Besides the university research departments and other specialized centers working mostly in connection with institutes of higher education, some countries have national research institutions. Examples are the National Foundation for Educational Research in England and Wales, the Danish Institute for Educational Research, the Institute for Educational Research in Finland, and the French National Institute for Educational Research and Documentation (INRDP). These institutions are very active and in some cases, as in France, are the leading educational research agencies.

Centralization of research activity is being attempted in several countries. This trend has probably a twofold explanation: the search for efficiency and the wish to keep things under control, which is certainly not easy with universities. The dangers of strong centralization are obvious: politicizing and bureaucratization, loss of contact with human realities and contingencies, and, as a consequence of this loss of contact, loss of meaning of the results.

The Role of Private Foundations. The role of private foundations, while not so great as in the United States, deserves separate treatment. In small countries like Belgium without educational foundations of importance, financing research can be extremely difficult. It is certainly not an exaggeration to say that many highly promising projects are interrupted before they can yield results, or are not even started.

Educational research in Great Britain seems to receive the most help from private foundations. Help is rather easily granted by American foundations like Carnegie and Ford, and Great Britain also has important foundations of its own: Nuffield, Leverhulme, Gulbenkian, Wolfson, and Rowntree. The Nuffield Foundation has been particularly influential in stimulating research and development on the curriculum (Council of Europe, 1971a, p. 4).

In Germany, the Volkswagenwerk Foundation promotes research and teaching in science and technology, partly finances the Unesco Institute for Education in Hamburg, and subsidizes German participation in other projects, such as the survey of the International Association for the Evaluation of Educational Achievement (IEA). The Dutch Bernard van Leer Foundation specializes in research on deprived children and finances projects in several European countries. In Italy, several foundations (Agnelli, Olivetti, Cini) sponsor educational research. Finland and Sweden also obtain help from private foundations, but the contribution seems marginal. Finally, the Gulbenkian Foundation in Portugal could play an important role in the near future.

Researchers in Institutions. Before closing this section, mention should be made of a difficulty that is well known in the United States and has begun to affect West European research. When it is the main source of financing, private sponsorship of short-term research projects creates instability in the staffing of research teams. This creates a paradoxical situation, especially in countries in need of solid research center networks: the few existing qualified researchers often encounter great difficulty in achieving career stability. For cultural (especially language) reasons and lack of better working conditions in other countries, mobility is limited. Consequently researchers often take teaching or administrative positions, with the result that the few existing research teams with high potential and member qualifications tend to disintegrate.

The educational situation in Europe could be dramatically improved if the strategy of development in economics were applied to it. This would mean developing and stabilizing a few dynamic regional research centers or laboratories and using them for the training of researchers and the organization of other centers. The assumption is that an irreversible movement of educational progress could thus be created. Today, for lack of resources, most of the research demands, many of which are crucial for educational revitalization and innovation, must be turned down by the few efficient research teams.

There is now an alarming shortage of researchers in Europe. We define a

TABLE 1
Numbers of Researchers in Selected Countries

	Full Time	Part Time
Belgium	87	41
Denmark	80	1
France	284	246
Italy	4	38
Netherlands	142	78
Switzerland	88	42
Sweden	157	39
Turkey	21	—
West Germany	294	52
NFER England and Wales only	53	—

researcher as a person knowledgeable in one subject and possessing a mastery of research methods and techniques, including research design and multivariate statistical analysis. If one bears in mind that teachers or other unqualified persons associated with or even in charge of projects are often counted as researchers, an examination of some of the available statistics reveals a disturbing situation.

An analysis of the Council of Europe survey data was made to determine the number of active educational research people in the various countries. The figures mentioned are approximations only. Among the reasons for this lack of accuracy is that the description of the staffs of the research centers has not been carefully standardized in the survey. Furthermore, not all research centers have been reached by the Council of Europe, while some of those mentioned in the document hardly deserve their names. Only the least ambiguous data have been considered. It also happens, as in France, that the same persons are listed by several institutes. Finally, the nonprofessional researchers (graduate students and primary or secondary school teachers occasionally cooperating with research projects) have been omitted. The resulting data are given in Table 1.

Although they are small, some of these figures must still be considered as inflated or misleading. For instance, a certain number of persons tabulated as full-time researchers in Belgium do not meet the definition we have adopted. Typical examples are owners of the equivalent of a B.Ed. or M.Ed., with a major in educational history and teaching methods, who are nearly ignorant of inferential statistics, sophisticated experimental design, modern measurement methods and techniques, and the advanced research literature on their research problems. A similar statement can be made about France.²

² Note that the Educational Testing Service of Princeton, N.J. has more people and money for research than most European countries do!

Areas of Research

Not long ago philosophy and history still possessed a sort of theoretical monopoly in education, while pedagogy was mainly considered an art, or a practice founded on intuition and inspiration. An empirical approach was excluded. Research was limited to the formulation of educational policies and to the construction and defense of pedagogical doctrines, which were themselves eclectic syntheses of general principles, rules of thumb, and heterogeneous psychological and sociological observations or hypotheses. So-called school experiments preparing for the introduction of new curricula, structures, methods, and materials were done without serious design and evaluation. Protagonists resorted less to scientific trial than to propaganda. In fact, they were conceived to create enthusiasm or at least acceptance of innovations that were deemed to be good, since they were in the line of the dominant philosophy.

There is everywhere an observable trend away from this sort of "research." But it would be naive to believe that it has entirely disappeared. In Belgium, the present reform of secondary education is mainly a philosophical construction, while in several other countries the new mother tongue and mathematics curricula are to a great extent of doctrinal origin. Any educational reform of importance, of course, raises philosophical and political problems, for it is at this higher level that all decisive orientations are chosen. Our criticism concerns mainly the means selected to reach the ends. One *believes* that they are appropriate, though they have not been empirically tested.

In France, education has not yet been fully acknowledged as a university discipline (Léon, 1971-1972). Pedagogy remains the field of teachers, a craft occasionally fed by psychology, sociology, history, and philosophy of education. It is striking to observe that more than half of the research projects appearing in the OECD statistics (OECD, 1969, appendix, pp. 11-13) belong to these disciplines. In a list of 314 doctoral dissertations in education for the period 1944-1967, 72 are in history of education, 69 in comparative education, 46 in psychology, 45 in sociology, and 32 involve teaching methods. No mention is made of curriculum development, while only two theses are on educational objectives and four on evaluation.

The real home of scientific educational research is in the Anglo-Saxon and Scandinavian countries, where contemporary measurement methods and techniques (further developed or invented during or after World War II) are widely used. In these countries, the success of the first national surveys of school achievement and of associated psychological factors (Swedish Council for Social Science Research, 1973; Walker, 1968; Yates, 1971) has quickly convinced the educational authorities of the usefulness and the tremendous benefit of empirical educational research. Of course, the high level of development of statistics and the tremendous possibilities offered by computers have also

had a dramatic influence. Exploiting the advances of these countries in the use of surveys, the International Association for the Evaluation of Educational Achievement (IEA) has demonstrated the feasibility of international empirical comparative research and has contributed significantly to the methodological development of the other European participating countries: Belgium, Finland, France, Hungary, Italy, the Netherlands, and West Germany.

The rather slow penetration of educational measurement and statistics in Latin countries can be partly explained by the fact that in those countries psychology is profoundly influenced by the work of Jean Piaget and the great French and German clinicians. (However, the influence of a definite technological retardation, especially in data processing, and of the philosophical tradition, now illustrated by the institutional theories, should not be underestimated.)

Two further explanations must be considered: one of a deeper cultural character, the other of an institutional character. Saying that Anglo-Saxons are men of action or empiricists while continental Europeans are theorists is more than a cliché. Striking examples, among others, are the differences in the way students are evaluated, in the spirit of the schools of engineering, and in business methods on both sides of the Atlantic. Institutionally, the rigid centralization at the national or at the Land or canton level with a uniform curriculum everywhere is certainly discouraging experimentation. Another institutional aspect is that while soon after World War I primary and junior high school teacher training in America began to take place in colleges of higher education, this movement is just starting in continental European countries.

The largely apprentice-type training of most teachers and supervisors probably explains why so many educational meetings and conferences in Europe possess a strong visionary or dogmatic flavor. To indulge a bit in caricature, one might say that the Holy Ghost and the soul of the child frequently are independent and dependent variables.

This does not mean, however, that Western Europe is ignorant of the latest developments in education. In fact, one can hardly imagine a contemporary research theme or topic that is not treated somewhere in Europe. The difference is that while practically all the themes are tackled by many individuals or teams in the United States, in many cases one has to search all Europe to identify the few persons who deal with the same problems, in most cases with small means. Examples of such problems are teacher behavior analysis, objective evaluation of sociocultural handicap remediation, computer-assisted instruction, mastery learning strategies, and empirical study of microteaching. The use of specific analytic techniques is also a good case in point: the semantic differential, Q methodology, canonical correlation, and path analysis, for example, are rarely used.

It is impossible (and uninteresting) to list all the headings under which

European research projects can be categorized and to try to evaluate the production of each. Only areas considered as most important and aspects that may yield interesting comparisons between America and Europe will be considered. Since 1967, analysis of the common problems raised by the Conferences of the Ministers of Education of the Council of Europe member countries indicates five important problem areas: the social factors of aptitude for education, curriculum development and evaluation, teacher initial and inservice training, technology of education, and postsecondary education, including further and recurrent education.

The organization of the equivalents of the U.S. Seminars on Learning and Educational Processes (SOLEP) in Europe (Munich, 1971; Pont-à-Mousson, 1970; Stockholm, 1968) gave an opportunity to identify the main preoccupations of the leading European researchers. They include the topics given above but add four more: educational research methods, cognitive development in relation to social and cultural factors, psycholinguistics and quantitative analysis of verbal communication in educational perspective, and national and international surveys of school achievement. Great interest is also manifested in the new mathematics, science, and mother tongue curricula.

Outlines of national school organization and research priorities are given in Tables 2 and 3. These tables offer a picture of R and D trends in Western Europe. Another indicator is the areas in which the majority of projects are

TABLE 2
School Organization Priorities

<i>Areas of Interest</i>	<i>Countries Adopting Priority</i>
Preschool education	Austria, Netherlands, Norway, Sweden, United Kingdom ^a
Compensatory education	Belgium, ^b Finland, Netherlands
Transition between preprimary and primary education	Belgium, ^b Netherlands
Primary education	Netherlands, Norway
Transition between primary and secondary education	Denmark, Netherlands, Norway, United Kingdom ^a
Secondary education	Austria, Denmark, Federal Republic of Germany, France, Netherlands, Norway, Switzerland, ^c United Kingdom ^a
Transition between secondary and higher education	United Kingdom ^a
Vocational education	Denmark, Norway
Higher education	Denmark, Finland, Sweden
Adult and lifelong education	Federal Republic of Germany, Sweden, United Kingdom ^a

^a This priority was deduced from the activity programs of the national educational research agencies.

^b This priority is explicitly mentioned, though Belgium states that no definite national policy in the field of educational research existed in 1969 and 1970 (Council of Europe, 1971c).

^c No national policy. This priority is deduced from the list of research projects just completed or in progress.

TABLE 3
Research Priorities

<i>Research Areas</i>	<i>Countries Adopting Priority</i>
I. School guidance and evaluation	France, Switzerland, Turkey, United Kingdom
a. Examinations and testing	Belgium, United Kingdom
b. Other evaluation methods	Belgium
c. Youth problems and dropouts	Turkey, United Kingdom
II. Curriculum	
a. Curriculum revision and development	Denmark, Finland, France, Germany, Netherlands, Norway, Switzerland, Turkey, United Kingdom
b. Methods of curriculum development	Germany, Sweden
c. Curriculum evaluation	Finland, Turkey
III. Teaching methods	
a. Revision or development of methods	Austria, Denmark, Finland, France, Norway
b. Teaching and learning processes	Finland, Netherlands, Sweden
c. Evaluation of methods	Finland, Sweden
IV. School technology	Switzerland
a. Teaching aids and individualization techniques	Norway
b. Audiovisual means	Austria, France, United Kingdom
c. Programmed learning	Austria, France
d. CAI	Denmark, United Kingdom
V. a. Evaluation of school achievement	Austria, Finland
b. Experimental pedagogy	Finland, Germany, Sweden, United Kingdom
VI. Teacher training	Belgium, Switzerland, United Kingdom
VII. School administration	Norway
VIII. Educational economy	Turkey

carried out in a given country. For instance, in the Council of Europe survey (1971a), of 131 projects mentioned by Great Britain under 31 different headings, 36 are on curriculum development and eight on social factors of education. More precisely, D. Pidgeon (Butcher & Pont, 1970) categorizes as follows the recent projects of the NFER: school organization, educational environment, communication research, teachers and teacher education, educational and vocational guidance, national and international surveys, and examinations and test results.

The 1971-1972 inventory of 108 Swedish projects seems to indicate a different emphasis: 71 of these projects are on the comprehensive school, 21 on teaching aids, 15 on special education, 14 on school adjustment, 12 on handicapped children, and 10 on preschool education. Among 123 Finnish projects,

10 bear on teacher education, 12 on teacher behavior and evaluation, 16 on teaching methods and organization, and 11 on school achievement.

As for France, a sophisticated research classification system has been elaborated by J. C. Asselain for the National Center of Scientific Research (CNRS) and for the Service of Educational Research and Studies (Julien-Binard & Dufoyer, 1972). Some of the detailed information available using this classification system can be summarized as follows (number of projects in parentheses): aims and objectives (17), school organization (65), study of the sociocultural environment (35), child psychology and cognitive processes (60), teaching methods and subject matter (138), evaluation and achievement (28), cost and productivity of the system (8), teacher training (107), lifelong education (17), and equality of opportunity (69).

Britain seems to concentrate its efforts on curriculum development, evaluation of attainment, school organization, examinations, and educational guidance. This may be because the British educational system is probably the most independent from the central authority and also allows the greatest liberty to teachers in curriculum development and teaching methods. Research is to an important extent inspired by administrators, who feel the need to help teachers develop an adequate school curriculum, to evaluate efficiency of instruction, and to make teacher-made examinations results comparable. In short, one can detect in British educational research a trend toward technocracy.

In Sweden, the will to attain a more democratic order in which every individual has the opportunity to exploit his abilities seems to explain the main lines of R and D activity. The emphasis is on psychological diversity of the pupils, adjustment to school, and all aspects of special education. Priorities go to preschool education, comprehensive "fundamental" education, and higher education.

As a highly centralized state with a long intellectual-elite tradition, France concentrates more on subject matter and on planning framed by the needs of the dominant economic system, which is carefully defended by successive governments.

This sketchy presentation does not help to detect projects of special value; only a series of monographs could give adequate descriptions of them. A good example in this line is E. Malmquist's (1970) survey of reading research. Furthermore, tables like those given above do not show which local centers may be significantly active. In its latest R and D activity report, for example, the Laboratory of Educational Research of the University of Liège (De Landsheere, 1973a) lists seven projects on compensatory early childhood education, four on teacher behavior analysis, eight on readability and TV intelligibility, six on programmed learning, ten on formative evaluation, and two on national achievement surveys. Last but not least of the difficulties encountered in collecting information on European research is the publication of the reports in local or national reviews in more than 15 different languages. So far, there

is no comprehensive European review that offers a picture of the R and D activity of the Continent.

EASTERN EUROPE

The severe limits of our study of educational research in socialist countries must be stressed. We have extracted as much information as possible from rather meager documentation and some direct communications from research agencies. Only for Hungary and Rumania does the information give a picture of great educational research activity. Two surveys (Birzea, 1972; Novak, 1970), published by the Unesco Institute for Education (Hamburg) in the line of the Council of Europe's surveys, were not too useful, since they offer only gross compilations.

As a whole, the educational research situation in Eastern Europe does not look especially bright. One point that deserves mention is that it is obvious that some East European researchers have a thorough knowledge of the Western scientific literature and are acquainted with Western current research and development projects: they quote abundantly the latest publications in English, French, and German. Where are the Western Europe or American researchers who could do the same for the other side? How many West European researchers know their distinguished colleagues Luria, Stolurov, Adam, Agoston, Vaideanu, Slama-Cazacu and many others? Of course, the language barrier is a central problem, and the international publications of the socialist countries are not of much help because they contain more philosophy or ideology than detailed descriptions of research projects.

Nearly all research institutions are under the direct authority of the governments, mainly of the ministries of education, culture, and sports. This administrative and financial dependence is also clear in the selection and planning of the research projects. Though many Western European countries also have centralized systems, the control is much weaker than in the East. It is not exceptional that the highest political authorities solemnly delineate future orientations. For instance, after six years' preparation, the Yugoslavian Federal Assembly made public, on March 26, 1970, the Resolution on the Development of Education on Self-Management Basis, a sort of educational research and development charter (*Pedagogy*, 1970). In November 1971, at the Plenum of the Rumanian Central Committee of the Socialist Party, Ceaucescu stated that "teachers should relate much closer to teaching practice, research and production" (Barsanescu, 1972). This directive is often analyzed and commented upon by educators and teachers, who dialectically infer the benefit and implications for innovation and research.

Like the orientations provided for economic development and the school system, research priorities are formulated by political executives. In turn, the research institutes suggest definite projects within the priorities and submit

them for approval. Besides this official program, some institutes undertake sponsored research projects of their own, but they do not exceed 10% of the total resources. Research done in the universities is planned by academic authorities and also follows governmental direction. Initiatives seem more easily taken in the university than in other institutions, however.

Socialist universities do not invest as much in educational research as do those in Western Europe, and this lesser investment is sometimes regretted (Agoston, 1970-1971). Generally, there are no schools or departments devoted exclusively to education. Educational research is done by professors of general pedagogy or didactics who teach in faculties of philosophy or art, or in teacher-training colleges.

The centralized policy is reinforced by a tight cooperation between all research agencies within a country and also between the socialist countries. In Yugoslavia, this strict centralization, also called bureaucracy, has been felt as a handicap and, as mentioned before, self-management is now recommended (Novosel, 1969; Schmidt, 1970).

The research themes most widely reported and frequently mentioned are related to the continuity of general or technical secondary education with compulsory fundamental schooling. The connection with life-long or adult education is often made. In Yugoslavia, preschool and primary education also attract much attention, while in the U.S.S.R. special education is widely studied at the Pedagogical Academy of Moscow. The absolute priority given to ideology explains the wealth of studies in history of education, comparative education, general pedagogy, and the philosophy of education.

In connection with curriculum development, numerous institutions seek to increase the efficiency of teaching methods (Nicolescu, 1970; Vaideanu, 1970). In this context, a special effort is made in educational technology. Audiovisual techniques and programmed instruction are carefully developed and widely used. More than in other parts of the world, however, coordinated action and reflection can be observed in the field of technology, since the whole instructional process is conceived as a technological system, all the parts of which are optimized. It seems that the most important contribution of the socialist countries to the progress of education is likely to be found here.

Finally, the importance given to the evaluation of the productivity of the educational system in relation to the economics of the nations explains the importance attached to school and vocational guidance and counseling, which are the objects of many studies in numerous specialized institutes. Standards of selection for higher education seem to remain severe, and more efficient screening is sought (Agoston, 1972). All this indicates that more place is given to development than to research. Indeed, most researchers are former teachers specially selected to become researchers.

Research institutes are generally specialized and limited to one research

area. Members of such institutes frequently have teacher-training duties. Contrary to nearly all West European research centers, the socialist institutes have their own network of experimental schools. With a far from sophisticated empiricism, new curricula, teaching methods, techniques, and aids are tried in the experimental schools, which also act as demonstration centers and models for other schools.

To consider that there is nothing but educational development in socialist countries would, however, be misleading. While pedagogy is identified with and limited to practical goals, psychology, physiology, linguistics, and sociology are not. Fundamental research is done in learning and cognitive and affective development. But the situation is not uniform.

The wish for greater methodological rigor in educational observation and experimentation is occasionally expressed, and measurement is recommended (Palov, 1972). The earlier opposition to psychometrics is disappearing, and achievement tests are being constructed (Orosz, 1972; Zorgo, 1972). Finally, the worth and virtue of sophisticated statistical analysis are recognized (Sagadin, 1972).

The use of achievement tests seems already well accepted in Czechoslovakia (Novak, 1970), while Hungary is a member of the International Association for the Evaluation of Educational Achievement (IEA) and launches national achievement surveys deemed of great interest for the development of curricula, the preparation of school books, the evaluation of teaching methods, and the management of the whole school system (Orosz, 1972).

According to Malmquist (1973, p. 93), the Soviet situation can best be described as one of transition from traditional, small-scale academic research to systematic, large-scale, client-oriented R and D. In fact, the movement is the same as in other Eastern countries and probably inspires it. Malmquist, who stresses the limitation of research freedom in the social sciences in the U.S.S.R., concludes that "Soviet ER works under severe restrictions due to its subordination to Marxist-Leninist ideology," but he also says that there is nevertheless "some scope for objective and empirical study" (p. 98). His conclusion that Soviet ER is developing along lines in many respects similar to those found in the Scandinavian countries and the United Kingdom can be misleading if it is not added that the gap between the two blocs remains quantitatively considerable as far as research products, utilization of research results in the schools, and the availability of qualified researchers are concerned.

CONCLUSION

If one considers Europe as a whole (although, as we have seen, this is somewhat artificial), European educational research is qualitatively and quan-

titatively insufficient. Of course, some countries are exceptions, and some strong individuals or local teams are of high quality, but this does not change the general situation.

The most basic explanation of the insufficiency seems to be that education as such is not yet considered a science, and educational research is seen as a minor scientific activity. People often want more and better education but do not realize how outdated many school curricula and practices are. Remembering their own school experiences, they do not criticize present practices because this may mean accepting the idea that one's own education was unsatisfactory. Furthermore, it is often hard to convince parents and authorities that education is such a sophisticated enterprise that research of the same complexity as that used in medicine or engineering is necessary.

The reactions of the learned world, personified by university professors, are not very different. Expertise in subject matter and some pedagogical feeling seem to them the alpha and omega of education. They not only cherish this attitude but transmit it to their students and reinforce it on every occasion. Once again, there are exceptions, but not enough to be of real weight. In short, many Europeans still think that if a sufficient number of teachers are trained as practitioners and "good" school books and buildings are available, the most basic educational problems will be solved.

All this has important and unfortunate consequences. First, though nations spend a considerable part of their resources on education, efficiency and attainment are hardly controlled. Second, the best students are not attracted to educational careers because they offer neither prestige nor large-scale research opportunities. Third, the mass media deal more and more with education, but on the practical side. There is a sort of research saga for physics or medicine, but who has ever seen an educational researcher as a hero? Fourth, as a rule, politicians follow the pressure of public opinion and do not take the leadership to form it. Why should they interest themselves in a domain with so low a political payoff as educational research? Fifth, education remains the most powerful instrument of indoctrination in the hands of political leaders. As indicated in the beginning of this chapter, educational research leads easily to a level of criticism that only the most mature democracies can tolerate.

We have repeatedly observed that Great Britain and the Scandinavian countries are the most advanced in educational research. Research plays an important and effective role in these nations. Then there are countries with very different situations. Belgium, France, and Switzerland, for instance, have few research centers and few highly qualified researchers. The direct impact of educational research in these countries is thus weak. Germany is approximately in the same state, but a rapid development seems to be in sight.

An evaluation of socialist countries is not easy because adequate contact with their educational situation is lacking. Officially, the importance of educational research is acknowledged and, in the U.S.S.R., there is even a model

for a national research centers network. In practice, however, the impact does not seem greater than in many West European countries. Furthermore, there is definitely access to Western European and American research and statistical literature, but it seems to be limited to a few individuals or groups.

Spain offers still another picture. Here, the important role of educational research is clearly stated in the new school laws. An institutional network has been developed. It seems that in Spain, a tree has been planted and grows, but the fruit is still more promise than reality.

Can a rapid change be generally expected? Probably, though not overnight! Nations will have to support educational research because there is no way to avoid it. The growing multiform needs in education created by our contemporary cultures are impressive: both to keep social peace within their boundaries and to avoid being intellectually colonized by more efficient neighbors, the countries must systematically innovate, evaluate the output, and optimize the effectiveness of the educational system. Under such circumstances, research is a necessity.

Coordinated research projects at the European level are still dreams. The Council of Europe, OECD, Unesco, and the Unesco Institute for Education (Hamburg) do not launch European empirical research projects but play an important information role. Thanks to many conferences, colloquia, and expert meetings, leading European researchers meet and communicate. They also meet U.S. colleagues, and much important information is exchanged.

It seems that a critical step toward "European research" could be the organization at regular intervals of long-range European research seminars such as the European Seminars on Learning and Educational Processes which Unesco organized in Stockholm, Pont-à-Mousson, and Munich. In all cases, the success and yield of those seminars were definitely greater than the output of many dozens of conferences. The launching of a few all-European projects, the feasibility and great methodological benefit of which has been demonstrated by IEA, can also have a strong impact.

In any case, it is still a long way to large-scale educational research in Europe and to the dissemination and utilization of the results of such research. While there are a few hopeful signs of progress, particularly in Scandinavia and England, they are too few. It is no great exaggeration to say that educational progress in Europe will be hampered because of lack of empirical educational research and, perhaps more important, lack of understanding and appreciation of the importance of educational research.

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