

COMPARATIVE EDUCATION

Some Considerations of Method

Brian Holmes

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BRIAN HOLMES

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Comparative Education: Some Considerations of Method

BRIAN HOLMES

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Introduction

Nicholas Hans introduced me to comparative education when in 1945–6, as a recently ‘demobbed’ RAFVR radar officer and a student at the University of London, Institute of Education, I was fascinated by his extremely coherent lectures at King’s College London to those of us who had chosen comparative education as our foundations option in an initial training course. Hans had just returned to King’s after war service and in retrospect it is surprising that he could lecture without reference to notes and with a wealth of up-to-date information about education at home and abroad. What impressed me most, perhaps, was the relevance of comparative evidence to on-going English debates. If Hans inspired me, it was Joseph Lauwerys, as my physics method tutor, who stimulated my ambition to make a career in comparative education.

In working towards the achievement of this ambition in 1950–1 I attended the comparative education course as part of the Academic Diploma in Education of the University of London. Hans gave the general lectures and provided a framework within which he consistently worked. He classified the factors influencing educational provision as ‘natural’ and ‘secular’. For him an ‘ideal’ nation was one in which the people occupying a well-defined territory, enjoyed political sovereignty, spoke the same language, shared the same religious beliefs and came from the same race. These factors were basically historical, operated through the exchange of ideas and were the antecedent causes of present practices. For Hans religion and nationalism were the most powerful ideological traditions against which enlightened men had to struggle. His best-known book, *Comparative Education*,¹ was based on these lectures and quickly became a standard work and then a classic. It has been reprinted several times and translated into many languages including Italian, Japanese, Portuguese and Spanish. No review of the literature in comparative education fails to refer to it. *Comparative Education* remains an extremely

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useful analytical tool and its continued popularity among students is well deserved.

Lauwerys had an even greater influence on my thinking. He stimulated my interest in scientific method, introduced me to the progressive education movement and made me want to know more about the American and French systems of education. During the year 1945–6 his course included lectures in the history and philosophy of science, methods of teaching science, the philosophy of John Dewey and comparative education. Under his charismatic guidance the books which contributed most to my conceptual position were H. E. Armstrong's *The Teaching of Scientific Method*, J. S. Mill's *System of Logic*, John Dewey's *How We Think* and Karl R. Popper's *The Open Society and its Enemies* and *Logik der Forschung*² (a second-hand copy of which I chanced upon at G. K. Lewis's for four old shillings). Armstrong's heurism and Mill's logic were frankly part of an older, nineteenth-century, tradition of learning by discovery. Dewey's book presented a different approach to the teaching and learning of science and his other writings inevitably drew my attention to curriculum theory and progressive education in the USA and elsewhere. Popper's *Open Society*, which had just been published, his seminars which I attended as an occasional student at the London School of Economics and his articles in *Economica*³ subsequently published as *The Poverty of Historicism*⁴ gave direction to my understanding of the methods of science and piecemeal social engineering.

As a comparative educationist Lauwerys shared the methodological assumptions exemplified by Hans. Unlike the latter, however, who was a historian-philosopher, Lauwerys was trained as a scientist and brought his analysis of scientific method and the role of science in society to bear on the study of comparative education. His prewar knowledge of American education, the growth of progressive education and the development of social science research in that country made it possible for him to introduce a sociological perspective not only into comparative education but into studies of British education. Indeed *The Content of Education*,⁵ published in 1946, which he helped to prepare, was years ahead of its time. In addition to the contribution he was making to educational theory, his work with the Committee of Allied Ministers of Education⁶ in exile during the war and his significant role in the establishment of Unesco and the definition of its objectives enabled him to establish a worldwide network of connections on which the growth of comparative education was very dependent.

Lauwerys introduced me to the debates which were going on in the immediate postwar period about the reconstruction of British society. Popper's *Open Society*, which embodied many of Lauwerys' anti-Platonic and anti-Hegelian views about society, made a major con-

tribution to debates which in academic terms centred on Friedrich von Hayek and Karl Mannheim.⁷ Mannheim's charisma was enormous. He was appointed professor of education at the London Institute in 1945 and in a series of lectures at King's College and seminars at the Institute he inspired war-weary veterans and young graduates to believe that a future generation of teachers, under his leadership, could help to build a totally planned, free and democratic society. Parenthetically this message appealed to the social reconstructionist professors of education at Teachers College, Columbia, and elsewhere in the USA and helps, perhaps, to explain the vogue enjoyed by Mannheim in these quarters for some time. Popper, of course, shared von Hayek's doubts about total planning and offered his theory of piecemeal social engineering as an alternative.

Thus in very early days I was offered a choice between two methods of scientific inquiry and between two theories of societal planning. I rejected Mill's inductive method in favour of Dewey's reflective thinking (or problem-solving) approach and rejected Mannheim's notion of total planning and accepted Popper's theory of piecemeal social engineering. But the charisma of Mannheim touched me and the intellectual stimulus provided by Lauwerys, Hans and Popper during that year at the Institute has sustained me throughout my subsequent career.

SCIENCE EDUCATION AND THE PHILOSOPHY OF SCIENCE

To date my career falls rather neatly into three periods. Between 1946 and 1953 I taught physics, mathematics and general science in a grammar and in a public school. Then for two years I was a lecturer in methods of teaching science at the Durham Colleges and inevitably my major preoccupation was the teaching of science. During this period, apart from those of Mill, Dewey and Popper, among the books which absorbed my attention those of F. A. Lange, William Whewell, Ernst Mach, Arthur Eddington, Susan Stebbing, Morris Cohen and Ernest Nagel, and Bertrand Russell placed the debates among philosophers of science in perspective. Several of these authors accepted induction as the method of science and Stebbing, and Cohen and Nagel, spelled out in detail the implications of the canons of induction, that is, the methods of agreement, difference, concomitant variation and residues. Russell offered a classical account of the roles played by induction and deduction in scientific method.

Mach and Eddington, however, threw a somewhat different light on science and the nature of the physical world. Mach's phenomenalism and Eddington's conventionalism anticipated among natural scientists the position taken up much later by phenomenologists and ethnomethodologists among the social scientists. Their views should be seen

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against the impact Einstein's theories had on the philosophers of science and the abandonment, in important respects, of paradigms derived from Newtonian physics. It was undoubtedly Herbert Dingle, however, as professor of the history and philosophy of science at University College London who impressed on me the need to assess the impact of Einstein's achievement on attitudes towards the nature of scientific laws and the objectivity of data and measuring instruments. One consequence was that discussions among the logical positivists of the Vienna Circle and particularly the work of Otto Neurath became relevant in my search for a viable position. A. J. Ayer in *Language, Truth and Logic*⁸ offered a clue when he suggested that it was possible to draw distinctions between analytic and empirical modes of verification and between normative and factual statements even though these were often taken to be the same. These commentaries on the nature of science and Popper's criticism of Mill's position in the *Economica* articles served to reinforce my early rejection of induction and positivism as satisfactory accounts of scientific method, as approaches to our understanding of our physical and social worlds and as the bases on which societal planning can legitimately rest.

Since the appearance of *The Open Society* Popper's influence among philosophers of science has been very great and through the writings of R. B. Braithwaite, P. H. Nidditch, Dudley Shapere, Israel Scheffler and Carl Hempel I have tried to keep in touch with some of the debates.⁹ Thomas S. Kuhn's¹⁰ position, however, threw most light on a dilemma I faced when I began to apply systematically the methods of science as I understood them to the study of comparative education. While agreeing to a considerable extent with him, Kuhn drew a distinction between Popper's view of science as necessarily a process of refuting or falsifying hypotheses and normal science as common sense. This distinction was useful in clarifying for me the different social functions comparative education can perform.

Distinguished natural scientists such as Peter Medawar and John Eccles have, of course, accepted Popper's account of how scientists proceed.¹¹ Until recently, however, 'established' social scientists failed to grasp the challenge presented to the natural scientists at the end of the nineteenth century. Now some of them take a view of the social world similar to that taken by Eddington of the physical world, namely, that it was a world of convention or 'mind stuff'.¹² Some of the debates which turn on Popper's radical initiative in discussing the philosophy of the natural and social sciences are well illustrated in the two volumes edited by Paul Arthur Schlipp on *The Philosophy of Karl Popper*.¹³ Many of them are relevant to the development of comparative education as a social science.

THE (WORLD) YEAR BOOK OF EDUCATION¹⁴

The second period of my career started in 1953; the chance to work in the field of comparative education came when I was invited to join the University of London, Institute of Education, as assistant editor of *The Year Book of Education* and tutor in the advanced studies department. For some five years my major responsibility was to help prepare volumes, sub-edit them and see them through to press. Each year a new theme was taken, analysed in comparative perspective and discussed in invited articles from scholars from all over the world. These years were among the most demanding, enjoyable and formative of my life. They brought me into daily contact with Hans and Lauwerys and regular contact with Robert King Hall of Teachers College, Columbia, when with Lauwerys he became a joint editor of the *Year Book*. These pioneers put me in touch with all the established figures in the field who contributed regularly to the *Year Book*. It was an excellent apprenticeship.

The Year Book of Education was founded in 1932 by the chairman of Evans Brothers, Sir Robert Evans, and for the first four years (1932–5) its editor-in-chief was Lord Eustace Percy, formerly president of the Board of Education. Both these men wanted the *Year Book* to provide a forum for the discussion of educational issues in the United Kingdom, the British Commonwealth and elsewhere. The decision to make it lively and stimulating by including non-official impressions of opinion on contemporary subjects was deliberate and found favour with Donald McLean from the Board of Education, who wrote in the foreword to the first volume:

In compiling a yearbook two alternatives at any rate are possible. One may be content with the safe but somewhat unambitious course of compiling a volume of the principal facts and figures relating to education: or, on the other hand, one may go further and adopt the more venturesome and interesting alternative of endeavouring to bring these facts and figures into some sort of perspective and to suggest underlying principles and lines of development.¹⁵

The bolder course was chosen and followed throughout the prewar and postwar periods when it was published eventually in association with the University of London, Institute of Education, and then after 1953 jointly with Teachers College, Columbia University.

Percy also wanted to use the *Year Book* as a way of illustrating problems by viewing them comparatively. He wrote: 'If the common features of British education at home and overseas are to be intelligently observed it is also necessary to study British education against the background of the educational systems of other nations'.¹⁶ This objec-

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tive, namely, the illumination of national problems by examining them in comparative perspective, has remained a major aim among comparative educationists regardless of the theoretical position adopted by them.

Percy held that to achieve it and to help the authorities to formulate policy they should be provided with facts and figures and consequently he argued that the methods of inquiry used to prepare the *Year Books* should be strictly empirical. In the 1930s, in working towards the achievement of this aim, Hans and Harley V. Usill tackled the task of establishing a taxonomy for the collection, classification and comparison of statistical and narrative data about education in the Commonwealth and wanted to extend this service and keep the data up to date on an annual basis. They recognised the difficulties of standardising methods of collecting material but with the co-operation of Commonwealth countries were eventually able to present 'a few comparative tables of the British Commonwealth of Nations'.¹⁷ Graphs and block diagrams were introduced to facilitate comparisons and in using these techniques Hans and Usill anticipated the subsequent work of Unesco on a worldwide scale. The provision of this service by Unesco and the resources required to ensure that relevant data were identified, collected and classified persuaded Lauwerys and Hans, and finally the editorial board of *The Year Book of Education*, that it was not possible after the war to do this and the annual collection of statistics was abandoned in 1952.

The statistical or empirical method did not command universal acceptance. After the *Year Book* became associated with the London Institute Fred Clarke, who succeeded Percy Nunn as its director, took the view that 'The real objection to a statistical method, from the present point of view, is that it must fail to exhibit those differences and resemblances that are truly significant'.¹⁸ Clarke did much to promote comparative education in the Institute and to give it a sociological flavour. The *Year Books* reflected this emphasis and in the late 1930s research theories were examined in comparative perspective but not statistically. Hans and Reinhold Schairer gave the *Year Book* a European flavour and links were established with the USA when Isaac Kandell was invited to become a member of the editorial board. These features, non-statistical or non-empirical analysis and worldwide cover, characterised the volumes from 1947 to 1973.

These postwar volumes owed much to Lauwerys, who was joint editor until he retired in 1970. The first task undertaken by the editors was to review the postwar reconstruction of school systems. In the early 1950s a decision was reached to select for comparative analysis a new theme or problem each year. This policy was maintained during the period after 1953, when Teachers College, Columbia, shared editorial responsibility for *The Year Book of Education* (subsequently

renamed *The World Year Book of Education*). Many of these volumes anticipated research in the sociology and economics of education, innovation studies, educational planning and into higher education and teacher training.

For example the 1956 *Year Book of Education* explored almost virgin land and Friedrich Edding¹⁹ and John Vaizey,²⁰ subsequent pioneers in the economics of education, acknowledged the contribution made by this volume. Early on, in 1950, in the volume to which Jean Floud contributed,²¹ the relationship between educational opportunity and social mobility was examined. The 1957 *Year Book of Education: Education and Philosophy* anticipated the flood of innovation studies in the 1960s. Teacher training and higher education were analysed in comparative perspective in the 1953 and 1959 volumes. All these *Year Books* not only provided a forum for international debate, but made a major and original contribution to the development of comparative education research and stimulated social science investigation into aspects of education.

To the best of my knowledge, however, it was King Hall who first made explicit to me how Dewey's 'problem-solving approach' could be systematically applied to comparative education. For a short time (1953–6) I listened in admiration to the way he analysed problems, placed them in context and discussed ways of tackling them in a rigorous and systematic manner. In particular he brought this kind of approach to bear on the preparation of the 1954 *Year Book of Education: Education and Technological Development*²² which dealt with the moral, cultural, economic, political and technical problems associated with the introduction of new technologies in a variety of national contexts. The analysis turned on the impact of technical innovations (and the hopes and aspirations associated with them) when confronted by traditional beliefs and practices. In this volume the role, successes and failures of bilateral and multilateral technical aid and assistance programmes were discussed by scholars deeply interested in the planned development of education and its contribution to economic growth. Undoubtedly this was a pioneering comparative study, the quality of which has rarely been surpassed in the subsequent literature dealing with educational planning in what we choose to call developing countries or countries of the Third World. Indeed, I find it rather tragic that so little progress has been made since that time to solve the theoretical and practical problems associated with technical assistance programmes in education. From my point of view the study of educational planning and development persuaded me, if any persuasion was needed, that the 'problem(-solving) approach' was the most appropriate way of tackling comparative education research. I have not changed my mind.

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THEORIES OF SOCIAL CHANGE

Indeed, my confidence in problem-solving was strengthened and the ways I could use it were developed as a consequence of my studies in the evolution of American education and in particular in the role played by Dewey and faculty members at Teachers College, Columbia, in the progressive education movement. Dewey's *How We Think*²³ remains, for me, the single most useful rationale for activity and discovery methods of teaching and learning and indeed for many other slogans which inform child-centred, informal and other kinds of non-traditional proposals about schools in the USA and Britain. Slogans and misguided practices apart, distortions of Dewey's central epistemological position, described as 'reflective thinking', should not be used to discredit the educational practices which have been attacked from time to time by those who advocate as the school's role a return to the basic three Rs. Nor should criticism of instrumentalism or any cavalier dismissal of pragmatism as a viable and coherent philosophy persuade comparative educationists to dismiss as useless or misconceived the problem(-solving) approach which I have tried to develop with some success. Indeed, Dewey's work and that of other early pragmatists can be seen as an attempt to formulate a new and more appropriate rationale for American life in a period of rapid and radical change towards the end of the nineteenth century. Philip P. Wiener's *Evolution and the Founders of Pragmatism*,²⁴ to which reference will be made later, throws light on the relationship between the theories of Herbert Spencer and Charles Darwin and those of pragmatists such as Chauncey Wright, C. S. Peirce, William James, George Herbert Mead, Oliver Wendell Holmes, Jnr, Nicholas St John Green and of course Dewey himself. Each of these men in discussions with each other was trying to make sense, in his chosen sphere of professional or academic life, of the commercial, industrial and urban nation that was rapidly emerging from an agrarian, rural American society. In the face of a prevailing Hegelianism, best exemplified by educationist William Torrey Harris, the pragmatists adapted Darwinism to provide a new intellectual framework for Americans. As an educationist and philosopher Dewey's seminal analysis of conditions in a Chicago growing at an unprecedented rate and the role he ascribed to schools as vicarious communities in inner cities set the stage for a great deal of subsequent research into urban education and fathered the community school movement in the USA and Britain.

Basic to his analysis of societal problems was the concept of change. Fundamental to his proposals about how problems should be solved was his faith in the intelligence of individuals and their ability collectively to resolve their difficulties by thinking reflectively. It was central, therefore, to Dewey's educational philosophy that above all

schools should educate children to tackle and resolve confused situations according to his problem-solving techniques. A case could be made that these techniques are now widely used in the USA among businessmen, military leaders and research workers and that pragmatism is indeed the philosophy of Americans.

A key to the perjorative view taken of pragmatism is found in Bertrand Russell's assessment of Dewey as a defender of American commercialism and industrialism. My judgement, on the contrary, is that through the schools Dewey hoped to perpetuate those worthwhile values that were part of the frontier spirit of rural America. Be this as it may, more favourable assessments have been made of the early pragmatists among whom Peirce has been described by Popper as 'one of the greatest philosophers of all time'.²⁵ Mead is now revered by ethnomethodologists but the individual contributions made by members of this 'club' to the philosophy of mathematics, science, psychology, education and law have yet to be fully recognised outside the USA.

What is certain is that the progressive education movement in the USA (and in England, perhaps influenced by J. J. Findlay in the first instance) developed under the acknowledged leadership of Dewey, first at Chicago University along with Jane Addams and then at Teachers College, Columbia, where John Childs, Harold Rugg, George Counts, William H. Kilpatrick and others constituted a galaxy of stars during the 1930s. At Ohio State University Boyd H. Bode²⁶ provided leadership in another centre in which H. Gordon Hullfish²⁷ as a devotee of Bode contributed greatly to the progressive education movement. Innumerable professors of education throughout the USA were trained at Teachers College and Ohio State. Among this generation B. O. Smith, W. O. Stanley, Harry S. Broudy, Archie Anderson and Theodore Brameld²⁸ influenced me most. In particular as a visiting professor on several occasions at the University of Illinois at Urbana-Champaign I participated with Smith and Stanley in a compulsory seminar for doctoral candidates in which the theories of social change of Marx, Myrdal, Mannheim, Mosca, Ogburn, Pareto, Sorokin, Sumner and Toynbee were analysed and compared.

The relevance of these theories to research based on the 'problem approach' in comparative education was immediately apparent. Commentaries on the work of European writers by Talcott Parsons in *Structure of Social Action*²⁹ added substantially to the analysis made in the Smith-Stanley seminars. William F. Ogburn's theory of social or cultural lag certainly influenced progressive educationists such as Rugg, who ascribed to traditional schools responsibility for cultural lag in a technological society. Gunnar Myrdal's analysis was based on his distinction between 'higher' and 'lower' valuations and the internal tensions these create in individuals. Vilfredo Pareto's purpose was to

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describe the conditions under which a society can change from one state (of equilibrium) to another, different state without violent revolution. The analyses made by Karl Marx and Karl Mannheim took as their points of departure changes in technology and the organisation of industry. Generally speaking, however, most of these theorists assumed that change takes place first in one aspect of society and that problems are created because individuals or other aspects of society fail to respond immediately to such change.

For a time Ogburn's theory which asserts that change takes place first in the material culture, that the adaptive non-material culture responds slowly and that the non-adaptive, non-material culture changes extremely slowly in spite of change elsewhere influenced my analysis of change most. Subsequently I accepted that any one of these theories permits problems to be analysed in comparative perspective, and that a choice should be made in the light of the research worker's interest. Any one of them, on a continuum from consensus-evolutionary to conflict-revolutionary, makes it possible to operationalise problem analysis in a way that can be replicated.

My own theory of social change is consequently rather eclectic and has its origins in the societal taxonomy derived, as I shall discuss later, from critical conventionalism and the distinctions I draw for the purpose of classifying societal data between normative patterns, mental states, institutional patterns and man's natural environment.

In Dewey's scheme problem analysis is a process in the stages of reflective thinking (or problem-solving). Each of these stages is implicit in Popper's hypothetico-deductive method of scientific inquiry. He claimed, for example, that inquiry starts from pure or practical problems which arouse interest in data of a certain kind. Both Dewey and Popper regard hypotheses as tentative solutions to identified problems and consider that in order to test hypotheses the circumstances (specific initial conditions) should be identified and described. Testing involves comparing outcomes predicted from general hypothetical statements under specified conditions with observable events. If events confirm prediction for Dewey the problem has been solved and the hypothesis verified. Verification is consequently an important feature of problem-solving. Popper, on the other hand, has stressed the need for scientists to try to refute or falsify hypotheses.

The similarities and differences between the two positions are important among philosophers of sciences. They have implications for comparative educationists who wish to identify the social functions they can legitimately perform, but for my purposes Dewey's problem-solving approach and Popper's hypothetico-deductive method and critical dualism (conventionalism) can be reconciled and I brought them together into a working paradigm for comparative education research which I chose to call the 'problem approach' or 'problem

(-solving) approach'. It was first exemplified in the first section of *Problems in Education: A Comparative Approach*³⁰ which appeared in 1965.

PROBLEM-SOLVING AND POSITIVISM IN COMPARATIVE EDUCATION

The development of my position during the 1960s and early 1970s should be seen against a background of growing interest in the role of education to solve the world's economic and social problems. *The World Year Book of Education* continued to provide me with the chance to give substance to the theoretical models I had accepted. Throughout the 1960s topics were selected for comparative analysis and commissioned articles provided information on a worldwide basis. Some of the topics – such as teacher education (1963), the economics and planning of education (1967) and higher education (1971/2/3) – had been dealt with earlier and these volumes were consequently prepared on the basis of more substantial research. On other occasions, however, the editors broke new ground by selecting topics and issues on which there were few comparative research data. Church and state in education was regarded as a particularly controversial issue to be tackled in a volume to which authors from all over the world would contribute. It was presented in the 1966 *World Year Book*. Less controversial but equally relevant were questions relating to the education explosion, and in the 1965 *World Year Book* the editors assembled a great deal of carefully prepared data from a variety of sources on the topic. New issues considered in comparative perspective included the growing use of new media of communication in education (1964), examination systems (1969) and education within industry (1968) and education in cities (1970).

Some of these volumes took up original themes which had not previously been analysed in comparative perspective and most of them initiated further research. By the 1960s, however, the virtual monopoly enjoyed by *The World Year Book of Education* as the source of analytical comparative studies was a thing of the past. Up to then international agencies such as Unesco, the International Bureau of Education in Geneva and the Council of Europe had been content, for the most part, to build up information about school systems in the light of models derived from the United Nations Declaration of Universal Rights and European–North American prototypes. The IBE *International Year Books* brought together statements prepared by member governments about the aims of policy, the present state of their own school systems and trends in their development. Selected aspects of these systems were described in greater detail from time to time. Unesco meanwhile had built up statistical data and in a series of *World*

*Surveys of Education*³¹ had reviewed legislation and brought together in a systematic manner information about the school systems of member states. Introductory articles described in turn trends of development in primary, secondary and tertiary education and in administrative systems.

The creation in 1961 of the Organisation for Economic Co-operation and Development brought new resources and a new dimension to research in education.³² One of the main tasks of the OECD was to assist member countries to adapt their policies to changing circumstances in the modern world. Its Committee for Scientific and Technical Personnel took up aspects of educational policy. At first OECD comparative studies of education paid great attention to issues which had been raised in the 1956 *Year Book of Education*, namely, the extent to which education could be regarded as a form of economic investment (rather than as a 'human right') and how educational systems should figure in the planned allocation of economic resources. In this phase of the OECD's work economists and social scientists who favoured this approach dominated the comparative methodology. This was a period during which cost-benefit studies and analyses of education as the residual cause of economic growth occupied the attention of research workers. They concluded that investment in education would bring its own economic rewards not only to individual recipients but to the society in which they lived and worked.

The methods of comparative study adopted by the economists of education were similar to those used by sociologists who wanted to show that there was a close relationship between the social class position of young people and their chances of gaining access to prestige secondary schools and institutions of higher education. Hans and Lauwerys had initiated comparative research into this phenomenon. It was taken up by sociologists and other social scientists who came into comparative education who were in favour of reorganising secondary education along comprehensive lines. In other words the economists and sociologists sought to justify a normative or ideological commitment to educational expansion and its reorganisation by using evidence from comparative studies.

The assumptions on which the economists and sociologists based their inquiries were the same, namely, that relationships between education and the socioeconomic aspects of society could be established and measured. A further assumption was that by changing one of the variables – the provision of education – the other variable, that is, economic levels and social class divisions, would be changed. The resulting methodology, as I discuss in Chapter 3, was positivistic. It informed the research of comparative educationists who followed up an initiative taken by the Unesco Institute for Education in Hamburg in a series of studies of education achievement on an international

basis. The Ford Foundation generously financed the International Association for the Evaluation of Educational Achievement (IEA) during the 1960s. Its first study compared achievements in mathematics on the grounds that mathematics was not culture-specific, used a universal language and levels of achievement in it would measure the productivity of an educational system in a technological world. Subsequent research was undertaken in science, literature, reading comprehension, English and French as foreign languages and civic education. Over a period of seven years or so some twenty countries were covered and more than a quarter of a million students in nearly 10,000 schools were involved.

Members of the Association claim that these series of studies represent the most extensive empirical study ever carried out in comparative education and indeed that they broke new ground. The overall aim was to 'relate student competence as measured by international tests of achievement to instructional, economic and social factors which account for differences between students, schools, and national systems of education'.³³

Undoubtedly the techniques used in all these studies were brought to a high level of sophistication. Unfortunately they were derived from a traditional approach to social scientific research, the failures of which have their origins in the failure of many social scientists to seek new ways of understanding society. Until recently, when Alvin Gouldner's *The Coming Crisis of Western Sociology* received considerable attention in the USA and Britain, 'established' social scientists failed to grasp the challenge presented to natural scientists when an accumulation of inexplicable experimental results brought into question the conceptual framework of Newtonian physics. The crisis produced a paradigm shift among social scientists who came to question the value of positivism as a framework within which 'normal social science' could proceed.

My study of Dewey, Popper and Dingle had, as I have said, persuaded me that positivism was not a framework within which I wished to develop research methods in comparative education. The apparent success of those comparativists who developed techniques within this frame of reference did not persuade me to abandon my commitment to Dewey's method of reflective thinking and to Popper's critical dualism (conventionalism) which as far as I am concerned anticipated and adequately took into account the anti-positivist arguments raised by sociologists. Unfortunately Popper's critique of Marx in *The Open Society* made him the object of neo-Marxist criticism. The failure of members of the Frankfurt school of sociologists to make him a positivist is plainly shown in the volume *The Positivist Dispute in German Sociology* which includes papers by Theodor Adorno, Hans Albert, Ralf Dahrendorf, Jürgen Habermas, Harald Pilot and Popper him-

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self.³⁴ Nevertheless it is against this background of involvement in comparative education by social scientists committed to an approach which was accepted by the academic pioneers of comparative education – Kandel, Schneider and Hans – that my desire to provide an alternative paradigm should be judged.

In the event, universal macro-solutions drawn from positivist empirical research or supported by it have met with varied success in countries around the world. Results have hardly justified the confidence shown by governments in this kind of social science research. Indeed in human terms we have yet to count the full cost of ‘experimenting’ on a grand scale with the lives of children throughout the world.

Let me, however, be charitable by taking a leaf out of David Riesman’s book *Constraint and Variety in American Education*³⁵ where he writes that Americans have had a hundred years to learn that economics ‘hasn’t done anything worse than raise the national debt – dreadful as that is! ...’³⁶ by taking a reasonably optimistic view of recent developments in the traditional approach to comparative education. Over the past quarter of a century (because remember that the 1956 *Year Book of Education* virtually initiated the comparative study of the economics of education) economists of education who have flirted with comparative education have done nothing worse than raise wastage and stagnation rates in education throughout the world by convincing governments that there were sound economic reasons for doing what they had already decided to do on the grounds of expediency, political necessity, or ideology. Comparative psychometric studies of achievement have probably done no harm at all because in the absence of any real analysis of national attitudes towards education they have influenced national policies hardly at all. Comparative sociologists have identified to their own satisfaction the residual ‘causes’ of educational disadvantage and underachievement and its influence on life chances. Perhaps the only harm such studies have done is to raise aspirations throughout the world which either cannot be satisfied or at best can only be satisfied if the ‘causes’ of socioeconomic disadvantage are removed by political action.

A good deal of work remains to be done on the alternative paradigm derived from Dewey’s method of reflective thinking and Popper’s hypothetico-deductive method of scientific inquiry and his critical dualism (conventionalism). A unique opportunity presented itself when in 1973–4 I was awarded a personal research grant by the Social Science Research Council to develop models and techniques for the purpose of comparative education research. Those I presented in the final report were designed to operationalise the following processes:

- 1 the identification and analysis of problems to which at least some of the assumed solutions are educational;

- 2 the classification of educational data and information about its associated infrastructure;
- 3 the establishment of ideal-typical normative models designed to facilitate some understanding and comparison of overt aims and internalised attitudes which influence the way national school systems are run;
- 4 the analysis and comparison of the ways in which policies are formulated, adopted and implemented;
- 5 the prediction, under known circumstances, of the outcomes of adopted policy or of possible outcomes of proposed policies.

My intentions were, and are, twofold. In the first place I hope to provide a theoretical framework which takes account of debates in the philosophy of science and more recent in the philosophy of the social sciences. Secondly, within this paradigm I hope to show how comparative education research can contribute to the planned reform of education. In the collection of revised articles which follows I have therefore placed the debates among non-Marxist comparative educationists in the perspective of recent disputes among sociologists. In order to identify more precisely the social functions comparative educationists can perform I have drawn a distinction between comparative education as a 'pure' and as an 'applied' social science. In these chapters considerations of method are placed in the context of the traditions out of which comparative education has grown. Then follow chapters in which I discuss the principles on the basis of which I suggest problem identification and analysis should be made, the principles of classifying relevant data in comparative education, and the possibilities of anticipating the outcomes of policy using a systems analysis approach. Finally examples are given of ideal-typical models that inform major systems of education throughout the world and focus attention on on-going debates about the aims and organisation of school systems.

The articles on which this volume is based have been prepared and published over a period of some twenty-five years. They are not presented in historical sequence and for the most part they have been rewritten or heavily edited in order to avoid repetition and in order to give the volume greater coherence. I hope it will stimulate discussion and promote co-operation. Much still needs to be done to improve techniques and models of analysis if the social functions of comparative education are to be performed adequately.

NOTES AND REFERENCES: INTRODUCTION

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