

THE EDUCATIONAL NEEDS OF DEMOCRACY

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WITH A FOREWORD BY

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**THE EDUCATIONAL NEEDS
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FOREWORD

By SIR FREDERICK MANDER, M.A., B.Sc.,
F.E.I.S.

PERHAPS the most fitting tribute to Dr. Alexander's book would be to welcome it as a much needed sequel or complement to the "Hadow Report."

The spontaneous appeal of the beautifully phrased "Hadow" sermon on the infinite variety of the child mind tended for a time to leave unnoticed the anticlimax to which it led. The theory of the existence among children of many different kinds of ability, the time of their manifestation and their possible classification at the gate-way to a new post-primary sphere of education was developed, only to be followed by a tame and abortive proposal to sort out the children in practice by an examination in English and Arithmetic with the possible addition of a "written psychological test."

Dr. Alexander restates the "Hadow" philosophy of "variety in kind" in a much more orderly and scientific manner and leads

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on to a fitting climax in his practical suggestions for the classification of children in the school and classroom, for their selection for the different branches of "secondary" education and, not less important, for the treatment of backward children. His insistence on the "matching of capacity by attainment" as the overriding aim of the teacher is timely, and his theory of the factorial ingredients of the child mind is worked out so as to offer an orderly approach to its achievement. This orderly approach is shown to lie through the development of truer conception of what constitutes equality of opportunity as between child and child.

Every teacher will be the better for reading this book, whether he be encouraged, inspired, convinced or merely provoked. The chances are that, like myself, he will find that Dr. Alexander's hierarchic philosophy and its application explain his own experience in the classroom more fully than any other single theory.

And that, of course, is the ultimate test all educational theories must be called upon to pass.

PREFACE

I HAVE had occasion to deliver a series of lectures on behalf of the National Union of Teachers and the Board of Education to various educational bodies during the past two years, and requests have repeatedly been received that they should be put into print. This book is the result. It is offered, not as a textbook on education but purely in the form in which the lectures were given. No attempt has been made at special development or arrangement.

I desire to acknowledge my deep indebtedness to the very many teachers who have, as members of my audiences, and by their questions, contributed so largely to the development of my own educational thought. It is hoped that the book may stimulate its readers to a reconsideration of the problems of education; if it accomplishes that, its purpose will be served.

W. P. A.

SHEFFIELD.

February, 1940

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INTRODUCTION

THERE is a fundamental distinction which it will be well to set out clearly in the beginning : the distinction between education and instruction ; between the concept of the development of talents inborn in the individual and the conveying to an individual of a body of information or knowledge. This distinction is the more necessary because the word education is so often used when what is meant is instruction.

To begin at the beginning, the Education Act of 1870 might better have been called an Elementary Instruction Act. If you remember, it laid down a requirement on parents to cause their children to receive " efficient instruction in reading, writing and arithmetic." As a result, is it not true that schools were established primarily as places of instruction ? This definition of purpose has certain implications. There is the implication that it is equally easy to instruct different children in these fundamental subjects. This is perhaps not unnatural having regard to the

state of society, which appears to accept the same point of view in its political structure. The shibboleth that all men are equal presumably underlies the definition of instruction laid upon the schools, but it is clear that this is fundamentally untrue. All men are not equal, nor have they ever been so. They differ in every material respect : in height, in weight, in the colour of their eyes and their hair, in their abilities, their interests and their character. So, too, do children. A great body of evidence is now available which proves beyond all doubt that it is impossible to instruct children by the same methods and at the same pace, because children range in ability from one extreme to another.

This concept of instruction carries another implication. It is the suggestion that there is a standard which all children may reasonably be required to reach at a particular age ; a standard laid down by society. Is it not true that many children have suffered unduly because their teachers have attempted to instruct them to the required standard when nature has decreed for them a lower standard ;

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is it not true, also, that others have been held back once they have attained this average standard, when they could so easily have attained much more? The idea that the schools are created to perform this surgical operation of getting into children's heads certain information which society deems necessary, is no longer tenable. Education surely stands in direct contrast to such a point of view. It implies a development of the powers which are inborn in the child, at a rate and in a manner determined by the capacity of the child. It recognises the great differences that exist amongst children. There is no single standard of attainment in education which can be predetermined by society. Each child has his own standard determined by his capacity. The task of the school is to educate each of its pupils in such a way that attainment in every case is matched to capacity. If this is accomplished, then they are being educated in the full meaning of the word.

This fundamental distinction is, too, one of approach. If we are merely to instruct, then our approach will be that of Herbart or

Pestalozzi, an approach like that of the builder, who has his plans clearly before him and who knows at the beginning what the completed structure should look like, who is concerned merely to select his materials and to combine these in an appropriate manner in order that the plan may be fulfilled. But if we would educate, our approach will surely be more like that of Froebel or of Rousseau; it will be more that of the gardener who hopes his plants will reach the fullness of the beauty that is inherent in them but who cannot tell at the beginning what that will be, who tends the soil, provides, as far as lies in his power, an environment in which the plant may grow, and so arranges the layout of his garden that the plants will have sunshine according to their needs.

I believe this distinction between education and instruction is fundamental. These lectures are concerned with education, not with instruction. They are concerned, therefore, with the psychological nature of children, because the first thing necessary in an educational system will be a knowledge of the psychological nature of children—their abilities, and how

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these vary from one to another. The approach will be to find ways and means by which we can fit the school system to the needs of the children in it and for whom it was created, rather than to find ways and means of making children fit into the school system. Our first need is an appreciation of the psychological basis of education and this we must now discuss.

THE PSYCHOLOGICAL BASIS OF EDUCATION

IN the last two or three decades considerable attention has been devoted to the study of the nature of mind on what is, perhaps, a more scientific basis than at any preceding time. Attempts have been made to measure human intelligence or capacity. Arising out of this scientific advance have come conflicting theories of the nature of cognition, of the power to think and to learn. Broadly, these theories fall into three categories which may be described as essentially monarchic, oligarchic and anarchic. The first suggests that there is one general factor in the mind which plays an over-riding part in human thought, a general factor which is always present in greater or less degree. It is a belief, if we may put it so, that there is a single factor of general intelligence which varies in its amount from individual to individual, the amount a person has determining his skill in the ordinary thinking processes. The second suggests that there are two or three

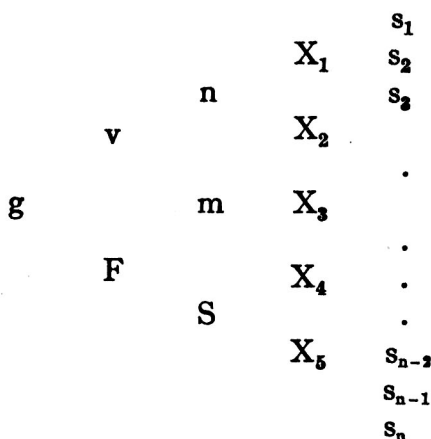
factors in mind which determine thinking power. Professor Thorndike, whom we may take to represent this school of thought, has suggested that there is first of all verbal intelligence which determines, presumably, a person's capacity to learn in the ordinary academic sense ; there is, second, practical intelligence which enables a person to think in concrete situations, a power presumably unitary and independent of verbal intelligence ; and there is, third, social intelligence, again presumably independent of the others, which determines a person's capacity to act intelligently in dealing with people. This oligarchic theory has no king. These three types of human intelligence are held to be of relatively equal importance, each in its own sphere. The third theory is the anarchic theory, of which Professor Thomson may perhaps be taken as the leading exponent, and which suggests that both the preceding views are wrong ; that the mind comprises a large number of special abilities and that general intelligence is at best merely a sampling of these specific abilities. The different types of intelligence suggested by

Thorndike would therefore be samplings taken in different areas of the mind, yielding different groupings of the specific abilities.

Professor Spearman meantime had enunciated his now famous two-factor theory, which accepted the existence of the general factor and suggested that, in combination with different specific abilities, it determined human thought. The two-factor theory is now sufficiently widely known not to require expansion here. My purpose is to suggest that each of these theories is partially true, but not wholly true. Recent research seems to indicate that the mind is essentially hierarchic; that there is a general factor and to that extent the fundamental point in the work of Professor Spearman is true; that there are certain broad group factors and that there are a large number of specific factors.¹ This may be presented diagrammatically as follows :

¹ The Spearman school would argue that the two-factor theory includes group factors. If an action is dependent on say, *g* and *v* and *n* and *s*, is it reasonable to say two-factor is still the appropriate name ?

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In this diagram "g" is placed on the left in isolation, as a general factor which we may call general mental energy, which plays some part in all the responses of the individual. Sometimes it may be very important, sometimes not so important, but it is always present. It is the "g" factor of Spearman, which has been so firmly established by his work and that of his students, and so completely corroborated by all subsequent research. "v" represents the verbal factor which plays its part whenever words occur. "F" represents a practical factor which plays

a part in all concrete situations, in all practical planning and doing. These two factors are placed after "g," indicating that they are of considerable breadth, occurring in many situations but not in all, and therefore not of the same breadth as "g." The factors which follow, "n," a number factor, "m," a mechanical factor, and "S," a factor of spatial ability, are still narrower, and play a part in an even more restricted field. The five "X" factors are submitted as five independent factors in character, not located in very detailed fashion so far; they will be discussed more fully later. The small "s" factors, "s₁" to "s_n" represent the large number of specific factors, each playing a part in a very restricted sphere.

I believe that any human ability can be described in terms of these factors, all of which are independent one of another. In general, academic ability is a combination of "g" and "v," and different types of academic work may demand more "g" and less "v" or more "v" and less "g." For example, in the study of English, "v" is found to be relatively more important than "g"; while