

PSYCHOLOGY APPLIED TO EDUCATION

A SERIES OF LECTURES
ON THE THEORY & PRACTICE OF EDUCATION

by
THE LATE

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PREFACE

A few weeks before he died, on one winter's afternoon after we had been having a walk together, Professor Ward put the manuscript of these Lectures into my hands, asking that I should look through it and tell him whether I thought it contained anything that was worthy of publication. Several times previously he had spoken to me about his lectures on Education, saying that years ago they had cost him a considerable amount of labour, and that he had sometimes had the idea of revising them for the press. But he was always exceedingly dubious about the value of his own work, and he rarely committed anything to print without first of all seeking the judgment of his friends upon it, and requesting their criticism.

The Lectures appear to have been given originally during the Easter Term of 1880 in the Literary Schools at Cambridge, as a course arranged by the Teachers' Training Syndicate, and to have been re-delivered two or three times in succeeding years, once, I believe, in Newnham College. Since then, a great deal has been written both on the theory of Education in general and upon educational psychology in particular; and, had Professor Ward himself been preparing this book for publication, he would assuredly have referred to the more recent literature on the subject. But no one will doubt the propriety of giving to the Lectures as they stand a permanent form. Apart from the fact that the authorities whose names are mentioned and whose works are cited do not (except in the case of the last Lecture) belong to the present generation, there will be found in the volume little that is not as pertinent now as it was at the time when Dr Ward was writing. It is, in truth, surprising how completely the principles here propounded are in accord with the best that has been thought and said upon the theory of Education in recent years. Professor Ward had, I think, rather the impression that William James's *Talks to Teachers* had rendered his own Lectures superfluous. Yet, admirable as in many respects these *Talks* are, Dr Ward's treatment

of the same problems is far more systematic, and should make the student of education realize the value of having a coherent and connected view of the growth and development of the mental life. Moreover, the Lectures are written in the author's happiest and brightest manner. They are enriched with a wealth of illustration which only a mind possessed as his was of an immense store of knowledge of nature and of human life could have summoned to the task; and they are replete with practical suggestions that can hardly fail to be helpful to teachers in whatsoever educational institutions they may be engaged. I believe, too, they will prove to be of value to the student of psychology. For they exhibit, in a striking way, how the leading ideas that are worked out in detail in the *Encyclopaedia* article on 'Psychology,' and which are more fully elaborated in the great treatise on *Psychological Principles*, give rise to and illuminate educational methods. I would refer especially, for example, to the extremely interesting discussion of Memory and of the relations of Language to Thought. Sometimes, indeed, it may not unfairly be claimed that the demands of a more popular presentation has led to a simpler and clearer statement of certain fundamental points, as, for instance, of the relation of pleasure to desire in Lecture IX.

Professor Ward's views on several psychological problems underwent modification with the lapse of years; and, in two or three instances, I have deemed it fitting to indicate by means of footnotes where such modification would have led him to alter the mode of treatment here followed. The most important case in point is in regard to the problems of Sense-Perception dealt with in Lecture IV, where I have ventured to add a Note at the end of the Lecture, explaining very briefly the analysis of the process which is to be found in detail in *Psychological Principles*.

Practically all the material comprised in the present volume was originally included in the series of lectures to which I have alluded. But Professor Ward made use of some portions of it for occasional Addresses which from time to time he was called upon to give, and where he did so I have availed myself of the later documents. This has entailed, now and again, some little amount of repetition; but it will not, I think, in any way interfere with the

general course of the argument. Lecture XII on 'The Moral Education of the Young' was read as a paper to the London Ethical Society, though at what date does not appear; Lecture XIII on 'Individuality' formed the substance of an inaugural Address for the Session 1903-4 at University College, Aberystwyth; while the final Lecture on 'Personality' constituted the Presidential Address to the Civic and Moral Education League on 23rd May, 1917. The last mentioned was subsequently published in *The Hibbert Journal*; and Lecture VIII, on 'Education Values,' appeared as an article in the *Journal of Education*, for Nov. 1st, 1890. I have to acknowledge the courtesy of the proprietors of these periodicals for permission to re-publish the two Lectures named.

My sincere thanks are due to Professor W. R. Sorley and to Professor T. Percy Nunn, who have read through the proofs of this book, and helped me in preparing it for the press by a number of valuable suggestions.

G. DAWES HICKS

9 August, 1926

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LECTURE I

THE POSSIBILITY AND VALUE OF A THEORY OF EDUCATION

THE science of education is still in that stage of mixed being and non-being in which successful apology for its existence is requisite before it can really begin to exist. The value of treatises on the history and practice of education by educational experts is hardly likely to be questioned. But whether a student of psychology can contribute anything which it is worth a teacher's while to consider is a matter about which we may well be sceptical. And yet it is not hard to shew in a general way that a science of education is theoretically possible, and that such a science must be based on psychology and the cognate sciences. To shew this we have, indeed, only to consider that the educator works, or rather ought to work, upon a growing mind, with a definite purpose of attaining an end in view. For unless we maintain that the growth of mind follows no law; or, to put it otherwise, unless it be maintained that systematic observation of the growth of (say) a hundred minds would disclose no uniformities; and unless, further, it can be maintained that for the attainment of a definite end there are no definite means, we must allow that if the teacher knows what he wants to do there must be a scientific way of doing it. Not only so. We must allow not merely the possibility of a scientific exposition of the means the educator should employ to attain his end, but we must allow also the possibility of a scientific exposition of the end at which he ought to aim, unless again it be contended that it is impossible by reasoning to make manifest that one form of life and character is preferable to another.

What the laws of mind are we learn from psychology; in what this acquired perfection of man consists is largely the subject-matter of ethics. Thus the existence of a science of education appears to depend upon and follow from the existence of the so-called 'moral sciences,' among which psychology is the most fundamental. We find, accordingly, that on the Continent, where the aversion to theorizing is less pronounced than in this country, *Paedagogik*, as the Germans call it, is usually one of the subjects pertaining to a philosophic chair. All the leading philosophers of Germany have propounded theories of education; and among

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ourselves the names of Locke, James Mill, Whewell, Bain and Spencer at once occur as further instances.

But there are many, mostly somewhat stupid persons, who, instead of being helped by theory, are only mystified and cheated by the absence of such concrete and particular directions as they expected to find. To them the enthusiast who seeks to base education upon psychology is like Swift's tailor who took his customers' measure by means of astronomical instruments. There is no use measuring the man in such a philosophical fashion when after all a tape must be used to measure the cloth! What is the good of a knowledge of humanity in the abstract when you have to handle a room-full of restless little urchins?

No doubt a widespread distrust of educational theories has been produced by the extravagant claims advanced by the theorists themselves. Not to mention the unbounded pretensions of Ratich and Jacotot, Bell and Lancaster, we have in Rousseau and Pestalozzi examples of the mischief of indiscreet enthusiasm. The leading ideas of both these pioneers were as psychologically sound as they were practically important; but, being presented in too exaggerated terms, or overlaid with too much rose-colour, they have met with little but suspicion and neglect from English school-teachers.

Yet the question is worth asking whether, after all, the too sanguine expectations of so many educational reformers ought not to incline us rather to believe in than to reject the idea of a science of education. For where there is smoke, there is fire; where there is exaggeration, there is usually some truth. A man does not expect everything from a discovery from which he has already realized nothing of importance. Bacon and Descartes were most absurdly over-sanguine of the results that would follow the use of their methods; and even supposed that the supremacy of genius in the realm of science would disappear, much as mere physical superiority may be said to have disappeared from the modern battle-field after the invention of fire-arms. But, notwithstanding their unwarranted and unverified predictions, we none the less admit the first-rate importance of the methods of research expounded by the fathers of modern philosophy. And so we may admit that a science of education can never do the half of what educational theorists have supposed, can never be comparable for exactness and distinctness to, say, the theory of navigation or the theory of structures; and yet have reason to believe that such a science will be as valu-

able to the practical teacher as the theories just mentioned are to the navigator and the engineer.

Dismissing as beneath contempt that 'platitudinizing formalism' which would affect to deduce from first principles the length of a school desk or a scholar's patience, quantities which experience only can enable us to estimate, we may none the less believe that the school-teacher's experience itself is only valuable to him, is only truly experience, when enlightened and interpreted by scientific theory. It would be well if those who eulogize experience as distinct from theory could be induced to give their minds to an examination of what they mean by this term 'experience.' The true antithesis is not, I venture to think, between theory or science on the one hand and experience or practice on the other, but between systematized and unsystematized experience, between experience that has been formulated and so made comprehensible and manageable and experience that remains blind and chaotic because it lacks both general ideas and unifying principles. The empirical knowledge of the so-called practical man is but raw material of the sort from which the man of theory elaborates the reasoned knowledge which we term science, the only knowledge which deserves to be called power, because the only knowledge which helps us to deal with new cases and to turn our concrete experiences to account. A knowledge, however intimate, of a narrow range of facts is worth very little, and the practical rules of thumb founded on such knowledge, though they may suffice for the attainment of a traditional standard, are worth very little too.

The history of the useful arts affords ample proof of this, so that even the City Companies are now looking to science to improve their wares. Yet, not only are the improvements in modern industry due to the substitution of scientific for empirical knowledge, but many of the advances in modern politics can be traced to the same cause. The world has still to learn how much it owes to political theorists like Adam Smith, Bentham or Montesquieu. The history of medicine furnishes, however, the aptest illustration for our purpose. It is some two thousand years ago now since medical men were divided, as perhaps educationalists are to-day, into the advocates and opponents of theory, or, as they were called, the rationalists and the empirics. The former asserted that, before attempting to treat any disease, we ought to make ourselves fully acquainted with the nature and functions of the body generally, with the operation of medical agents upon it, and with the changes

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which it undergoes when under the operation of any morbid cause; the empirics, on the contrary, contended that this knowledge is impossible of obtainment, and, if possible, is not necessary, that our sole guide must be experience, and that if we step beyond experience we are always liable to dangerous and often fatal errors. Of course, the rationalists knew nothing comparable with modern anatomy, physiology and pathology; but they believed in them afar off, and helped on their advent, while of their adversaries nothing remains but their name which is now synonymous with quack. Nobody supposes that a man is competent to practise medicine knowing nothing but anatomy, physiology and pathology; but nobody will maintain that he is competent, whatever may be his experience, if ignorant of these sciences. Similarly, no one, I imagine, supposes that a knowledge of psychology, logic and ethics, or rather of the science of education based on these, will suffice to make a man a school-teacher; but the day may come when, even in England, he who professes to be an educator without this knowledge will be esteemed little better than a charlatan and an empiric. And, if anyone should think this so much empty declamation, I would ask him to remember that the same would have been thought of a like prediction concerning medicine.

Nor will it appear too strong if we reflect for a moment longer on the superior practical worth of scientific or systematized knowledge. *Vere scire est per causas scire*, said Bacon, and Aristotle before him had said the same thing; for, without this knowledge, we are almost as likely to attribute an effect to an unessential antecedent as to that which was really the cause of it, as, for example, the school-teacher does who attributes the improved memory of his pupils in after-years to the arduous gerund-grinding they had to do in their childhood, or their increased self-control to the disgust they had to overcome in doing it. And, conversely, till we know things through their causes we cannot foretell the effect of a given procedure nor turn our so-called experience to account: we are, indeed, more likely to add to the stock of prejudices and superstitions than to extend the range of useful knowledge. The man who, as a preliminary to practice, furnishes himself with a knowledge of theory may be compared to an agriculturalist who comes to his work with a stock of capital in the shape of time-and-labour-saving machinery. He grows richer every year, while his neighbour who has no tools but his own hands, *though he gets to work sooner*, makes no advance and dies as he began, a manual

labourer. The man who turns aside to fashion a plough and harrow does not appear to be making such practical preparation for his food as the man who grubs up pig-nuts and takes his first meal on the spot; but the roundabout way secures the better dinner in the end. The man who studies psychology and the kindred sciences may appear to be taking anything but the directest way to proficiency as an educator, and yet, with the same stock of information, will far excel the 'hedge schoolmaster,' as Herbert Spencer called him, who has nothing but his mother-wit to aid him. Of course, the study of theory will not infallibly make any simpleton into a first-rate teacher, any more than gymnastics will convert a dwarf into a lifeguardsman. But out of a hundred teachers, fifty of whom have and fifty of whom have not made this preliminary study, we may, I think, safely affirm of the former three things: (i) that they will be on the whole the best teachers, (ii) that they will see most clearly wherein and why the current traditions of education are good or bad, (iii) that they will be most likely to improve existing theory and so to advance future practice.

Assuming, then, that a science of education is possible, and that if realized it would be of the greatest practical importance, not as superseding personal experience but as quickening and enlightening it, we may face the question: Are psychology and the related sciences at present sufficiently advanced to justify the attempt to deduce and formulate a system of educational principles? I should answer in the affirmative, and I hope in the course of these lectures to do something towards making my answer good. At the same time, I hasten at once to say that it is not my intention to attempt the construction of a theory of education. I do not at present feel competent to do this; and, even if I were, I should prefer to explain the elements of psychology on which such theory must largely rest. The teacher who has a fair knowledge of psychology can see the 'why' and 'wherefore' of any theory that is offered him, can even to a large extent make his own theory, or, at any rate, intelligently apply and, by and by, supplement out of his own experience the theory with which he starts. Still, although for my part I believe that, if teachers are to be trained at all, they should be trained thoroughly, I am compelled just now to a compromise; and, in consequence, shall treat only of those parts of psychology which bear most directly upon education. And I shall do this rather with the hope of giving you a sample which may induce you hereafter to make the bulk your own, than with any expectation that you