

EDUCATION AT WORK

Studies in Contemporary Education

Edited by

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PREFATORY NOTE

THE following studies by writers connected with the University of Manchester aim primarily at illustrating the recent progress and present condition of English education by descriptions of the work done in a few definite fields. The first five essays attempt to picture education as it is actually carried on by men and women faced by problems of many different kinds but united by the same general purpose. Each writer treats his subject in his own way, and the diversity of the standpoints represented reflects the variety of the efforts by which educational progress has been achieved. The last essay suggests some lines along which further advances will perhaps be made.

H. B. S.

March, 1927.

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THE DEVELOPMENT OF MANCHESTER UNIVERSITY

BY
EDWARD FIDDES

MANCHESTER University is the oldest of a well-defined group of English Universities. Oxford and Cambridge differ in their traditions and their constitution not only from other English Universities, but from any other universities in the world. London and Dublin have each special characteristics of their own. But at the end of the nineteenth and the beginning of the twentieth century universities were founded in six of the English cities—in Manchester, Liverpool, Leeds, Sheffield, Birmingham, and Bristol. All these Universities have many features in common—all are situated in large cities, the only cities outside London which have more than 300,000 inhabitants. They have similar histories. All began as University Colleges before they became Universities. They have the same mixed form of government. Their attitude to certain fundamental questions of university policy is for the most part identical. The constitution of the newly-founded University of Reading closely follows the lines of these six foundations, but whether it should be added to this group or whether its different environment may lead to different developments it is too early yet to say.

It is difficult to give a common name to the group. *Provincial* is inaccurate and misleading. *Modern* would include London, Durham and Reading. Perhaps the term *Urban* will do for want of a better. They are the universities of the great industrial cities of England outside the Capital.

The higher education of this country has been profoundly affected by the growth of these colleges and universities. Manchester, the oldest of them all, may be taken as typical in the objects which it set out to achieve

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and the results which it accomplished. The history of any other university in the group if examined would be found of course to contain differences but there would be an underlying similarity. Manchester, however, was the first to make the experiment and had all the advantages and disadvantages which belong to the pioneer. Its history is therefore specially instructive both in its failures and its successes.

One of the most remarkable facts in the history of universities is the monopoly which Oxford and Cambridge maintained in England for six centuries. About 1220 there were two English Universities. Six centuries later there were still two and no more. Before 1826 the number of universities had increased in every important country in Europe. In Germany there were a score of universities. Even in little Holland there were three ; in little Scotland there were four. But in England the two ancient Universities steadily upheld their exclusive rights. Oxford crushed out the Stamford Secession ; Oxford and Cambridge opposed the foundation of Gresham's College in London which in any case dwindled almost to extinction. During the Puritan Revolution, a period fertile in new ideas and new projects, at least two attempts were made to establish universities, one at Manchester and one at Durham. Both failed, in part at least owing to the jealousy of Oxford and Cambridge. And there the matter rested till the latter part of the eighteenth century. By that time English life had been modified by two great movements, the Industrial Revolution and the Growth of Nonconformity. Lancashire in the seventeenth century had been one of the poorest and most backward parts of the country but now the incidence of wealth and population was shifting to the North of England, and Lancashire had a full share of the new prosperity. With wealth came a desire for culture at least in the second generation. But Oxford and Cambridge were far away

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and difficult of access, and the limits of their education may have been unattractive to the merchants and manufacturers of the North. And, even if there had been no other objections, many of them were Nonconformists and no Nonconformists could graduate at Cambridge or could even matriculate at Oxford.

The foundation of University College, London was the first effective break in the monopoly of Oxford and Cambridge. It is not necessary to discuss here the early history of that University. It began with the foundation of University College in 1826, Whig in politics and latitudinarian in religion. Three years later came King's College, representing the views of the Church and the Tories. In 1837 the University of London was created, with power to grant degrees to pupils of the two Colleges, but itself distinct from these Colleges and in essence an examining board. In 1850 a supplemental Charter gave the University power to recognise affiliated colleges.

Meanwhile, in Manchester, the first steps had been taken to found a college in the North. The matter had long been under consideration. Various projects of university education had been discussed for more than half a century and in some cases efforts had been made to carry them out,¹ but so far as university education in Manchester itself was concerned, nothing permanent was accomplished till the time when John Owens' Will became operative.

Very little is known about John Owens. He was a business man in partnership for a long period with his father. A shy recluse, he took little interest or pleasure in society or public affairs. His only friend was George Faulkner, afterwards the first chairman of the College Trustees. Owens' chief public interest appears to have been a strong aversion to religious tests. It is not certain what led him to found a college. The usual account is that he

¹ Manchester New College, now at Oxford, derives from one of these efforts.

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followed the advice of Faulkner to whom he had offered to leave his estate. This has been disputed and the point is of little importance. The idea of a University of Manchester had long been mooted and the successful foundation of University College twenty years before must have been an example and an encouragement.¹

John Owens died in 1846. He left about £90,000 for the foundation of a college. It was to be open to youths of the male sex of fourteen years old and upwards, with some local preference; the subjects of instruction were to be those at that time or thereafter taught in the English Universities, and there was a fundamental and immutable rule and condition that there was to be no religious test imposed on any one connected with the College. Nothing was to be introduced into the teaching of a theological or religious character which would be reasonably offensive to any student, his relatives, guardians, or friends.

To-day this rule would be obvious and commonplace. But in the middle of the nineteenth century the principle was by no means settled. When a share of religious liberty more substantial in reality than in form was conceded at the Revolution of 1688, no one dreamt of throwing open the universities to dissenters. It was still inconceivable that education could be separated from some definite and dogmatic religious creed. In this position the Nonconformists, who maintained schools of their own, would have concurred down to the beginning of the nineteenth century. In the middle of that century, in spite of a growing discontent, Oxford, Cambridge, and Durham were still Anglican, and Gladstone in his earlier phase could still speak of the Church of England and *her* universities.

¹ The suggestion has also been attributed to Samuel Fletcher, another of the Trustees (*Good Words*, July, 1864). The George Faulkner version raises this difficulty, that ultimately Owens left only half his estate for the College and the disposition of the other half included a substantial legacy to Faulkner and bequests to relatives whom he was not likely to have passed over in any case.

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When University College was founded in London with freedom from religious tests this "godless" institution, as its opponents called it, was countered by the foundation of King's College on Anglican principles. Durham, founded in 1832, was also Anglican. Queen's College, Birmingham, founded in 1843, required all its teachers, including those in the Department of Medicine, to conform to the Church of England. New students must attend chapel. In Scotland membership of the Church of Scotland was required from all professors, and in the year before John Owens died, a Parliamentary Bill to admit dissenters to non-theological chairs was thrown out, in spite of Macaulay's eloquence. The tests led to the absurdity that in England Gibbon and Shelley were expelled from Oxford for youthful vagaries, and that Priestley, Faraday, and Dalton would not have been admitted had they wished it. In Scotland, the local Presbytery could clamour for the removal from the principalship of St. Andrews of Sir David Brewster, a sound Presbyterian, but not a member of the Established Church. The fundamental and immutable rule laid down by John Owens definitely engaged his College on the side of freedom from these tests. Apart from its justice the wisdom of the choice is evident when we consider how heavily Durham University and King's College were handicapped by their religious restrictions.

It is hardly necessary to say that the movement had behind it no secularist or anti-religious bias. In University College, in spite of "the irreligious principles of the Gower Street Scheme," one of the earliest acts of the council was to give full approval to the establishment of a University Chapel where the students might attend service, and where a course of divinity lectures would be delivered. Thomas Arnold even made strenuous though unsuccessful efforts to make a knowledge of some part of the Greek Testament compulsory on all candidates in Arts. The

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views of John Owens and his Trustees were similar. Owens himself moved freely from one place of worship to another. At one time he was a Congregationalist ; then, after a squabble about his pew, he became a Unitarian ; and finally died a Churchman. His Trustees considered that it was incumbent on them to include religion as a subject in the curriculum, because religion was one of the subjects usually taught in the English Universities. They accordingly decided that instruction which should be optional should be given in Christian Evidences and the Foundations of Natural and Revealed Religion. Such subjects they thought could not be reasonably offensive. They raised, however, a storm of protest, and apart from a course on the Relation of Religion to the Life of the School, which was not repeated, the only results were the institution of classes in Hebrew and in the Greek Testament. This latitudinarian doctrine that education must contain a religious element, but that no particular dogma should be insisted on, was common in Lancashire. It was pointed out by Mr. James Bryce (afterwards Lord Bryce) in his report on Lancashire Schools in the 'sixties that in private schools for girls mistresses taught the doctrine of the particular denominations to which they belonged, without objection from anyone. In one school a Church of England girl gained a prize for repeating the whole of the Presbyterian Shorter Catechism correctly.¹

The persons appointed to administer John Owens' Trust were wisely chosen. They were men of affairs, often with some knowledge of public life at a great epoch in the history of Manchester. They had among them men who had taken part in the controversies over the

¹ It is said that not many years ago, in a school near Manchester, a protest was raised against a proposal in a scheme of the Board of Education to substitute for the teaching of the principles of the Church of England as prescribed in the Trust Deed, the teaching of the principles of the Christian Religion. It was found, however, that no attempts had been made of recent years to give dogmatic religious instruction of any kind.

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Peterloo Massacre, the Corn Laws, and the Reform Bill. They clung with courage and tenacity through times of difficulty and disappointment to the ideal of a University College, as was their duty under John Owens' Will.

But their task was far from easy. Primarily citizens of Manchester, few of them were widely known outside its bounds. Richard Cobden was an exception, but he was too busy to spend much time over the new College. Their names had none of the prestige which the names of the Duke of Sussex, Lord Brougham, and Dr. Arnold brought to University College, or the names of the Duke of Wellington, of two Archbishops and of thirty Bishops, brought to King's.

Moreover, they were hampered by their lack of experience. Only one of them appears to have studied at a university and when they wrote round to a number of universities and colleges they met with little sympathy or counsel. Left to themselves they determined to act strictly on the letter of the Trust. In one of their earliest minutes they resolved to keep complete authority in their own hands with power to dismiss professors at their full discretion. The constitution was painfully like that of an ordinary endowed school, but perhaps under the circumstances nothing else was possible.

In their initial arrangements the Trustees followed two excellent principles. One was to spend as little as possible on buildings, the other was to secure as eminent a set of teachers as might be. So they rented an old house belonging to Richard Cobden in an unfashionable part of the town and proceeded to collect a group of professors of high distinction. In the first twenty years of the College among teachers of the humanities were Bryce, Christie, Adolphus Ward, and Stanley Jevons ; among teachers of science were Frankland, Roscoe, Balfour Stewart, and Osborne Reynolds.

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Yet for all their efforts the College within a few years of its foundation was in grave danger of collapse. It had opened in 1851 with 62 day students ; at the beginning of the Session 1857-58 there were only 28. The reasons for this depressing state of things are obvious enough now. The Trustees were trying to carry on a University College without properly trained students.¹ The boys' schools of Manchester were very bad in the first half of last century. Even in the 'sixties they were private adventure schools with the exception of the Grammar School and nearly all these private schools confined themselves to a "commercial" education of a very narrow range. There was, therefore, no adequate supply of well-educated youths who could begin something like university work as soon as they came up, and they could come up far too early. The entrance age had been placed at 14. The staff was eminent enough to adorn any college but they could not make bricks without straw. They could not give a proper education to boys to whom they had to teach what should have been learnt at school. We find in the minutes frequent proposals to supply this want by a college school, like University College School in London.

The College was seriously hampered by its lack of money. The total income for teaching and administration was derived from John Owens' bequest and a handful of students' fees. It amounted in all to £3,000 or £4,000. No proper buildings could be provided. The library could hardly be said to exist. The professors were compelled to undertake far too wide a range of instruction. To one was assigned Classics and Ancient and Modern History, to another all the natural sciences. The principal, burdened with the task of administration, had also to teach Logic, Philosophy, and English.

¹ The MSS. Minutes of the Trustees are preserved among the University Archives. Joseph Thompson's *The Owens College : its foundation and growth* gives a detailed account of its history down to 1886.

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The administration itself was unsatisfactory and eminently unsuitable for a University College. The daily routine had to be carried through by the principal. His colleagues had merely an advisory voice. But both principal and professors were under the absolute control of the Trustees. The Trustees settled every detail. A whole meeting might be spent over the appointment of a college porter.

Another administrative difficulty must be mentioned. The first principal—Alexander John Scott—was a man of unusual gifts. His eminence as a philosopher and his high personal character had gained for him the friendship of some of the greatest thinkers among his contemporaries. He was a teacher who won the affection and admiration of his pupils. But his mind was far too fastidious and subtle for the rough and ready tasks and the dull routine to which an administrator must submit. His health, moreover, was not robust. He resigned the principalship in 1857 and with a loyal magnanimity continued to serve as professor under the new head for the few remaining years of his life.

So serious was the state of the College by this time that the local Press, which only a few years before welcomed the opening of the College as an augury of the long-expected University of Manchester, was now equally emphatic in declaring it a failure. The reasons given for this failure were curiously different. The *Manchester Guardian*¹ said that the teaching in the College was of no use for the youth of Manchester, and the *Manchester*

¹ *Manchester Guardian* (July 9th, 1858): "It is, of course, very delightful to learn that some boys in Owens College are able to read the Greek Testament, but we should gladly give up whatever benefit is to be gained by this if we could be sure that these same boys knew something of their own language and were versed in at least the elements of the great modern science of chemistry. The causes, then, of the failure of the Owens College to conciliate the support of the people are two: first, the College supplies a kind of education which is not wanted; and, secondly, it does not supply the education which is wanted."

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*Examiner*¹ thought that it was far too good for their money-grubbing minds. But even before these outbursts in the Press the tide had turned. Scott was succeeded in the principalship by Joseph Greenwood, at the time Professor of Classics and History—who was the right man for the post. He delighted in hard work. He had abundance of good sense, courtesy, and tact. He was an excellent scholar and teacher. Under his painstaking administration of more than thirty years the College prospered. The numbers of students grew steadily. New subjects were added to the curriculum. A larger staff made for more efficient teaching. The work had necessarily to be regulated by the requirements of the degree examinations of London University to which the College was formally affiliated, but the establishment of the grade of associateship of Owens College, which was conferred on all students who had completed three years of work of substantially university standard, besides attaching its *alumni* to it by a permanent tie, was the first step towards its future complete autonomy.

The increasing prosperity of the College was accompanied by increasing dissatisfaction with its existing restrictions. The old house in Quay Street was by this time far too small. The foul air, as the Professor of

¹ *Manchester Examiner* (July 20th, 1858): "We are compelled therefore to look for the causes of non-success elsewhere than in the collegiate machinery. If an objection can be raised against the College at all it is that such an institution is either in advance of our felt wants, or altogether unsuited to the economical conditions of Manchester life. Still this is the fault of the community not of the College. The worst that can be said of it is that it is too good for us. It is out of place just as a missionary may be said to be out of place on the coast of Africa. He offers the Gospel and the people want Sheffield blades. He essays to rouse within them a consciousness of spiritual wants, and they are bent upon elephants' tusks, palm oil, or a leash of slaves for the market. The Quay Street professors give us prelections on the highest things of earth and heaven; they tell us of the life of the scholar and strive to allure us into the beatitudes of scientific thought. Little does Quay Street wist of these business attractions. The crowd rolls along Deansgate heedless of the proximity of Plato and Aristotle."

These quotations are taken from Thompson, l.c. pp. 195 ff.

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Natural Philosophy roundly called it, was good neither for staff nor students, nor apparatus. The part of the town in which the College was situated was unhealthy, and in other respects unsuited for ingenuous youth. Money was needed for the purchase of new buildings and new land. Endowment was needed to extend the teaching, to create new chairs, and to increase the teaching staff for the departments already in existence. But the scanty revenues were already proving too small for the actual needs of the College. In 1869 the accounts showed a deficit, quite a small deficit it is true, but unfortunately foreshadowing many worse things thereafter.

Then there was the question of the constitution. The College had begun as a Private Trust absolutely controlled by the Trustees. Probably there was nothing else for it, but the Trustees were not educational experts and they were busy men. Meetings sometimes fell through for want of a quorum. Though their relation with the professors was one of cordial friendship the Trustees were masters of the situation. Unless he had made a special agreement any professor, however distinguished, could be dismissed without notice. But the position was no longer what it was twenty years before. The professors had established the reputation of the College as a seat of learning. There was the new and growing body of associates, graduates perforce of distant universities, but with the intimate knowledge of the working of the college machine which studentship gives.

There was a further question of another kind which in recent years had become more insistent. In the last twenty years the whole question of women's education had come under review. Were they to be admitted to the reconstituted College?

For the creation of new buildings and the endowment of new posts money was required and happily the money required was forthcoming. John Owens' endowment

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was supplemented by about twice the amount. Quay Street was abandoned for a site in a main thoroughfare. There buildings were created adequate for the time, and possessing such sombre dignity as the atmosphere of Manchester allows. Some sub-division was carried out in the top-heavy departments where one man had been expected to teach a wide range of subjects, though no human being could possess a scholarly knowledge of them all. Relief from the drudgery of routine teaching was given by the appointment of a few assistants. New departments were established—among them a department for Engineering, one of the earliest in the country, and eminently suitable for the greatest centre of the industry in the country.

There were long negotiations over the new constitution. There are many ways in which a university or university college may be administered. The ultimate authority may be the Crown, or a board of laymen, or a city, as was once the case in Edinburgh, or its own graduates as at Oxford and Cambridge, or the students as in mediæval Bologna, or a combination of any two or more of these. The constitution of Owens College under the new constitution was composite. The supreme body was the Court, about half of the members of which were laymen including the Trustees of John Owens. There were also representatives of the Crown, of the City of Manchester, of the professors and of the associates as old students. While the final authority was the Court, in practice most of its functions, finance in particular, were delegated to its executive committee, the Council. The professors were constituted a Senate with definite rights and duties. They were given security of tenure. They were represented on both Court and Council. The associates were represented on the Council as well as the Court.

The alteration of the constitution of the College presented no serious difficulty of a legal character, but the

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proposal to admit women students was in the teeth of the wording of John Owens' Will. The Will prescribed that the College was intended for the instruction of students of the male sex, and not even by legal ingenuity can women be included under that phrase. It may, however, be fairly urged that the idea of admitting women never entered John Owens' head at all. It was entirely out of the question in his day and circumstances had greatly changed.¹

Female education, it is said, reached its lowest point in the middle of the nineteenth century. It was much worse than it had been in the eighteenth. But about 1850 an improvement set in. The next twenty years saw the establishment of Queen's College in London, and of Cheltenham College, the admission of women to the local examinations, the beginning of Girton and Newnham. Manchester, however, showed few signs of progress. The Lancashire parent shared the common view "that it was an offensive not to say revolutionary paradox that women had minds as cultivable and as well worth cultivating as men's." It is true there was no want of schools. Girls' schools were often started by indigent and uneducated women for lack of other occupation, and often as a temporary source of income.

The teaching was faulty both in method and subject matter. Great stress was laid on accomplishments, especially music. It covered, indeed, a vast range of subjects, and such catechetical works as Mangnall's Questions were used to convey to the pupil's mind a mass of heterogeneous and disconnected facts. But no real body of knowledge was built up by such a process and the

¹ Further justifications for the proposal may be found in the action of the Schools Enquiry Commission who, by boldly extending the terms of their reference, secured the possibility of using school endowments for the benefit of girls, but in that case the long lapse of time might be pleaded. Perhaps in their terms of reference, as well as in John Owens' Will, girls had been simply forgotten.

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“accomplishments” did not result in any real artistic or musical culture. In addition to the private day schools there were the boarding schools where still greater importance was attached to the accomplishments. A formal “crocodile” walk was the only mode of exercise which was sufficiently lady-like. Naturally, frivolity and gossip were rampant. To this state of things there were a few honourable exceptions. There were two very good public girls’ schools in Liverpool, and two meritorious schools in Manchester, but the average education open to girls in Lancashire was very poor.¹

The proposal then to open Owens College to women could not have been based on any belief that a large number of women students were ready to enter. But a reform was obviously imminent and the stimulus given to girls’ education by the Endowed Schools Acts would be intensified by the opportunities now held out of education of a university type. Promoters of the Bill may have had in mind that, twenty years before, the foundation of Owens College had helped to reform the education of boys in secondary schools.

The legal objections to the Bills of 1870 and 1871 by which the Owens College under its new constitution was incorporated were sufficiently obvious. The manœuvres by which they were circumvented in Parliament form an interesting and entertaining story which cannot be told here. Finally a compromise was effected which made

¹ This account is taken mainly from Bryce’s Report for the Schools Enquiry Commission, Vol. 9. There is also an excellent chapter on the Reform of Female Education in Professor Archer’s *Secondary Education in the Nineteenth Century*. For the extent of the curriculum compare Miss Pinkerton’s testimonial to Miss Tuffin and Miss Hawkey :

“ Either of these young ladies is perfectly qualified to instruct in Greek, Latin, and the rudiments of Hebrew ; in Mathematics and History ; in Spanish, French, Italian, and Geography ; in Music, vocal and instrumental, in Dancing, without the aid of a master ; and in the elements of Natural Sciences. In the use of the globes both are proficient. In addition to these, Miss Tuffin . . . can instruct in the Syrian language and in the elements of Constitutional Law ”—
Thackeray, *Vanity Fair*, Chap. xi.

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little more than verbal concessions to the objectors. The obnoxious clause which spoke of "persons of the female sex" was replaced by one which spoke of "*young persons.*" There was to be a preference for males and provision for effectual separation of the sexes when attending for the purposes of instruction.

The admission of women was now possible, but there was no proposal to make it binding on the College authorities and these showed themselves in no hurry to avail themselves of the permission. No action at all was taken for some years and then women were admitted by special arrangement, as visitors not as students, to a carefully selected number of classes. As late as 1877 the College Court still refused to admit them on the ground that "the principle of mixed education was opposed to the true educational interests of students of either sex and out of harmony with the sentiments and usages of society." But the great improvement in girls' schools in the early 'seventies after the passing of the Endowed Schools Act and in particular the opening of the Manchester High School for Girls made such a position untenable unless, indeed, it was proposed to give the full amount of university instruction required by women in a separate college, standing in something of the same relation to Owens College as Radcliffe stands to Harvard. Some such scheme may have been contemplated in the establishment of the Manchester and Salford College for Women, which was opened in the same year as that in which the Court had repudiated mixed education. The classes in it were taught by the Owens College staff and ran parallel, *pro tanto*, with the instruction given to men students. But such an arrangement would have been expensive if fully carried out, and almost certainly would have tended to treat women's education as of secondary importance. So, when the Charter of the Victoria University which was granted in 1880 declared, following

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the example of London two years earlier, that its degrees were open to men and women alike, it was inevitable that women should be admitted as regular students. At first it was only in the senior courses that they were taught in the same class-rooms as men. For many years the juniors were taught in a gloomy house in a side street near the College. But this distinction was gradually abandoned. Department after department was thrown open. The most marked step was the admission of women to the Medical School in 1899. All courses are now open.

The College had scarcely been reconstructed and placed on a proper footing, when the scheme for a University of Manchester, which had been so often proposed and so often proved illusory, was revived. A pamphlet appeared in 1875 signed by Principal Greenwood and three of the professors, Roscoe, Ward, and Morgan. They asserted that the needs of Manchester in Higher Education were satisfied neither by the University Extension Scheme provided by Oxford nor by the affiliation of Owens College with London University as an examining centre. This affiliation, indeed, was a form of bondage which cramped and distorted the Manchester curriculum. Under modern conditions degrees were necessary for efficiency, and Manchester was a peculiarly suitable centre for the teaching of science and of engineering, and also for the departments of law and medicine which had been recently added. This pamphlet was circulated to many persons eminent in literature and science, among them Matthew Arnold, Bryce, John Caird, Freeman, Huxley, and Mark Pattison, and it was also sent to a number of periodicals many of which published articles on the proposal.¹ The judgment passed on the scheme was, on the whole, favourable, but objections were not wanting. These objections may be summed up as follows :

¹ In the library of Manchester University there is a volume containing the pamphlet and reprints of the various letters and articles.

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1. Manchester was, by its local conditions, an impossible place for a University.

2. There was no need for Manchester to have the right to confer degrees. Degrees were of no value except for professional purposes.

3. The creation of a University in Manchester would lower the value of the degree of British Universities. It could not be trusted to maintain a high enough standard. In short it was not fit to be a University.

We need not waste much time over the first and second of these objections. The only sponsor for the first was the *Saturday Review*, which held that in the physical environment of Manchester the students would certainly be dull and probably vicious.¹

The second argument was advanced by Huxley, who argued that degrees were not of the essence of a university, and that they were a mere branding by an institution of its own herring for professional purposes. Another correspondent spoke contemptuously of the herds of boobies who were indiscriminately granted capital letters. But it could hardly be denied that a university without power to confer degrees would be an anomaly and the real conflict was waged round that question. Were the professors of Manchester the right persons to examine Manchester candidates for Manchester degrees? The written examination, which had hardly existed before the nineteenth century, had now become to many almost an article of faith.² The system had done much to stimulate

¹ "All work and no play, especially if that work has to be done in a very large and very smoky town, will certainly make Jack a dull and probably make him a vicious boy. Yet what are the amusements to be had in a city like Manchester? Bicycling, perhaps, in the quieter streets; bathing in a swimming bath; boating by going over to Liverpool, cricket in a ground which can be easily reached by railway. . . . The first step to make the College the nucleus of a new University is to move it to new quarters," and so on and so forth.

(*Saturday Review*, August 12th, 1876.)

² The reply drafted by Grote and Warburton for the Senate of London University to the protest of graduates against the indiscriminate opening of

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serious study in the universities. It had been a powerful weapon in cleansing the Civil Service from jobbery and favouritism. In London, partly owing to the historical accidents of its early troubles, the university as distinct from the colleges had become a mere examining board, a plan, if one may adapt Professor Huxley's phrase, not so much to brand its own herring as to brand any herring of any kind or sort which was willing to submit to the operation. The success of London in its own peculiar way lent a certain speciousness to the theory that one set of men should teach and another should do the examining. Otherwise, to put it bluntly, the teachers would give unfair preference to their pupils, or, as it was phrased by Robert Lowe, who was member for London University and whose wit was often greater than his wisdom, "It was bad housekeeping to set the cat to watch the cream." The professors of Manchester had little difficulty in exposing the absurdity of this division of labour. They knew its evils by the experience of affiliation with London University. The competent teacher should be allowed to teach on the lines which best suited his own knowledge and the needs of his own pupils. He should not be compelled to distort his teaching to fit it into a scheme which was supposed to be equally suitable for anyone in any part of the British Empire.

The argument of favouritism would carry little weight to-day. Every university must know that the lowering of the standard of its degrees is a folly from the effects of which it would take long to recover. Its reputation would decline. If anyone thinks the lower the standard the more students, and the more students the greater the

degree examinations spoke of "the comprehensive principle that while testing by strict examination the amount of acquired knowledge and requiring reasonable evidence of antecedent continuous study, it would no more tie down the deserving student to a few privileged colleges than to a particular religion." (Quoted in Final Report of Royal Commission on University Education in London, 1913.)

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financial profit, let him examine the accounts of any university, and he will easily discover that the cost of the average student is considerably greater than the fees he pays.¹

There was an obvious compromise which was finally adopted in the Charter. There were to be external as well as internal examiners. In the examination other persons of expert knowledge should be associated with the teachers. External examiners have always been appointed in the University. But perhaps their greatest value nowadays lies in the opportunity of an interchange of views between one university and another and not in their being the watchdogs of a sufficiently high standard of examinations.

No doubt these objections of the older universities were foreseen, but a new difficulty arose in an unexpected quarter. When Owens College was incorporated it held a unique position outside London. With great perseverance and effort it had succeeded, in spite of many difficulties, in obtaining a measure of success which would reasonably entitle it to the rank of a university. But the 'seventies were a time of great activity in education. The development of the secondary schools after the Endowed Schools Act and of the elementary schools after the Education Act of 1870 was paralleled in the same decade by the growth of the university colleges. The success of Owens College was a stimulus and an example to one large city after another. By 1880 University Colleges had been founded in Newcastle, Birmingham, Leeds, Liverpool, Sheffield, Nottingham, and Bristol. It was felt in some of these new foundations that, if a university had once dug itself in in Manchester, there would be a poor chance for another to be founded else-

¹ Of course if a professor was paid by fees and was a very stupid man he might be tempted to increase the attraction of his own subject by making it a soft option, but he would soon be pulled up by his colleagues. In any case, payment on the basis of fees has disappeared for all practical purposes.

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where. They knew they had not made good their claim so far, but they did not wish the claim to be estopped in perpetuity. Manchester, which had no wish to have a new London University of the North,¹ still desired to incorporate Owens College as a University but was willing to leave an opening for the admission of other colleges. The opposition headed by the Yorkshire College, Leeds, was too powerful. Two concessions had to be made. The title was not to be the University of Manchester but the Victoria University. It was to be distinct from its constituent colleges of which the first was to be Owens College, and others with suitable qualifications were to be admitted later. A University Charter on these lines was granted in 1880. Manchester had agreed to the modification of its original scheme with great reluctance and consoled itself with the thought that in view of the slowness of its own growth no application for admission would be made for a long period, but it did not realise how much easier it is to do a thing the second time than the first. And it was not from Yorkshire, after all, that the first application came but from University College, Liverpool, which was admitted in 1884. Yorkshire College followed in 1887. There were no further admissions. The fear which had been expressed that the Victoria University under its federal constitution would become an heterogeneous conglomeration of institutions in the North of England was unfounded. The federal University, with all its defects, was a great improvement on what had gone before. The bondage of London was thrown off by degrees as the prestige of the new University increased. The curriculum was not imposed from a distant centre but was settled by the teachers of the three Colleges in consultation. The University examined the students of these Colleges and no others.

¹ Some idea of this sort seems to have been in Matthew Arnold's mind when he expressed the belief that Manchester would be a centre for a University in the north-west of England and Durham in the north-east.

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Owens College had now reached a further stage in its slow progress. In the early seventies it had ceased to be a private trust and had become an Incorporated University College. It was now the first and largest constituent College of a University. It had not yet reached its aim of becoming the University of Manchester but it had traversed two-thirds of the way. The federal constitution lasted twenty-three years. The College prospered under it. Greenwood continued in office as principal till 1889, completing thirty-two years of service. He was succeeded by Adolphus Ward, eminent alike as a scholar and a far-seeing administrator. If we add to Greenwood and Ward Sir Henry Roscoe, we have the names of those to whom more than any other of its teachers the early development of College and University was due.

But there were serious drawbacks in the new constitution. The solidarity of a university is impaired when its teaching—the essential part of its work—is carried on in three different cities, so that its teachers are debarred from that day-by-day contact which is more necessary than formal committees and regulations for its efficiency. Each of the Colleges desired to develop on special lines of their own. Each of them ran the risk of finding their proposals treated by the other two with indifference or hostility. Manchester had long desired, for example, to found a Faculty of Theology. This was impossible under the federal constitution, for Liverpool was prohibited by its constitution from teaching theology in any shape or form. Discontent came to a head when, through the advocacy of Joseph Chamberlain, perhaps the most powerful Englishman of the time, a University Charter was granted to Mason's College, in Birmingham. Now there was no doubt that Manchester and Liverpool had each of them a much better claim. A movement for the establishment of an independent University of Liverpool

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began. Manchester joined forces, and, though there was considerable opposition from the graduates of the federal University who feared that the value of their degrees might be lessened, and who honestly thought that education would suffer by the change, and from the Yorkshire College, in 1903 independent Universities were established in Manchester and Liverpool, and in 1904 in Leeds. In the latter year Owens College ended its half-century of history by incorporation with the reconstituted University.¹ The Charter granted to Sheffield in 1905, and to Bristol in 1909, completed the list of universities which have been established so far in the great cities. The newly-constituted University had two advantages. There was the negative advantage that it was no longer hampered by association with other bodies with aims which might be widely divergent. There was the positive advantage of the institution of the Faculty system. In every university, subjects of study tend to group themselves, were it only for professional purposes. Under its new constitution, Manchester organised these groups as Faculties, each with its own officer, the Dean. Each Faculty had a recognised place among the authorities of the University, but always under the control of the Senate. The Faculties deal immediately with all matters of teaching and examination. From the academic standpoint the University is ultimately a collection of Faculties. Such an organisation is not a mere formal matter. How the Faculties should be organised and what subjects should be assigned to each are matters radically affecting the life of the University, but this could only be adequately discussed in a treatise on university administration.

¹ It should be remembered that the Charter of 1903 did not create a new University of Manchester. Under it the Victoria University was reconstructed. It received a new name but was the same body corporate. Its seat was to be in Manchester and was free from liability to be in association with any other college than Owens College. The University of Manchester therefore dates from 1880 and ranks in seniority after Oxford, Cambridge, Durham and London.

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Manchester realised her aspirations for a University partially in 1880, and completely in 1903. The main principles which she hammered out in half a century of conflict have been adopted by all the universities of the great cities. These principles are five in number. There is complete freedom from theological tests. There is a mixed government representing laymen and public bodies, the teaching staff, and the graduates. Women are admitted essentially on the same conditions as men. Examination is not divorced from teaching. The teaching is organised by Faculties. How far this system will remain unchanged and what modifications it will undergo are questions for the future.

But the greatest principle established by the development of Manchester University was that a university independent of outside control could properly be established in a great industrial centre other than the Capital. It has been said that if the religious tests which excluded dissenters from Oxford and Cambridge had been abolished thirty or forty years earlier, say in 1830 or 1840, Owens College would either never have come into existence or would never have grown to maturity. Perhaps not, but in that case something very like it would have taken its place. For, if we assume that the present demand for university education—which is far from excessive—would have existed in any case, Oxford and Cambridge could not possibly have offered facilities for the numbers of students seeking admission without transforming and spoiling their best characteristics. Alternatively, the higher education of England, outside the two ancient Universities, might have centred round London University. This, in any event, could hardly have been a permanent arrangement. It became impossible when, in 1858, London threw open her examinations to anybody and everybody. There was a third possibility. The growing need for university education

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might have been met by a series of federal universities, say, one in the North, another in the Midlands, and a third perhaps in the South-West. But in the North where alone the plan was tried, and tried under favourable conditions, it was found that it would not work satisfactorily, and since its failure, though similar plans have been mooted elsewhere, they have never been carried out.¹

After all, in what one may call the area of European culture, a university has been usually associated with a particular city. In England the long monopoly of Oxford and Cambridge, which made it necessary for anyone in any part of the kingdom to go to one or the other, and the external examination system of London have obscured this fact. It is characteristic of this country—one may say a fortunate characteristic—that it should maintain universities of widely differing types. The urban university inevitably has its own advantages and disadvantages. It can make no claim to the ancient traditions and splendid setting of Oxford and Cambridge. In beauty of environment it is often sadly to seek. But it has also great opportunities. It is the outward and visible sign to its own city and district of the higher learning which would otherwise be represented by some confused idea of a distant examining board, or by the talk of some acquaintance who had been to Oxford or Cambridge. Most of its students live near by. In Manchester, some seventy-five per cent. have their homes in the city, or within a radius of thirty miles. Nor is it a bad thing for the members of a university to be in close touch with persons engaged in the many-sided activities of a great centre of population. The university is supported and helped by the local authorities not only of the city but of the surrounding districts. It has peculiar advantages for instruction in certain subjects. Only in a great city can there be a great medical school. In a great city there is a

¹ Of course I am not here discussing the special case of Wales.

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special appropriateness and there are special facilities for the study of such subjects as economics, engineering, chemistry, and many branches of technology.

It is the business of the urban university to bring together and strengthen all forms of education and training especially professional training, which go beyond the work of the secondary school. This work of consolidation is a difficult and critical matter for a young institution. It is comparatively easy to win a temporary success, and to lengthen the register of students by agreeing to some alliance which would compromise its university character, and convert it very speedily into a professional institute or a technical school. More than one case could be quoted from the history of the middle nineteenth century where this fatal blunder was made. In Manchester the Trustees avoided the pitfall. Till the College had found its feet they rejected various proposals of union with other bodies. An alliance with the Manchester Royal School of Medicine was declined in the Session 1856-57. They refused in 1859 the offer of the Government to establish a school for the training of teachers in connection with Owens College. But by the 'seventies the position of the College had so greatly improved that such accessions were a source of strength and not a danger. In 1872 the School of Medicine was taken over.¹ In 1890 a Men's Training College, and in 1892 a Women's Training College, were established. The higher work of the Manchester Technical School, now the Manchester Municipal College of Technology, was recognised in 1905 as the Faculty of Technology.

During the last half-century there has been a tendency for professional bodies to call in the universities to help in the education of their future members. This tendency

¹ Even then, though the students in Arts and Science had greatly increased, the medicals formed nearly half the total number of day students. A premature union at an earlier date would have probably turned the College into a Medical School and nothing else. The proportion is now about 25 per cent.

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has been as well marked in Manchester as elsewhere. The teaching of Law, a department of the College since 1871 and a Faculty of the University since 1880, is aided by the Manchester and London Law Societies, and recognised by the Council of Legal Education. Still more remarkable is the institution of a Faculty of Theology. As long as the federal constitution existed this was impossible, but as soon as the new Charter came into force a scheme was prepared and carried through. It was based on the co-operation of the University with the Church of England and with the Free Churches which maintain theological colleges in Manchester. The instruction is shared between the University and the Colleges, the regular staff of the University dealing with most of the historical and linguistic studies. No complaint, reasonable or unreasonable, has been made as to the character of the teaching on theological or religious grounds. It may be said that neither in spirit nor in letter has the fundamental rule of the founder been violated.

With the local secondary schools the University stands in the closest relationship. Directly it helps to mould their teaching by the system of inspection and examination. To many of their governing bodies it sends a representative. Many of the teachers of these schools are trained in the University and in their turn prepare its future students.

If the University is necessary to the schools the schools are equally necessary to the University. It was shown by the early history of Owens College that no degree of eminence in professors will compensate for ill-educated pupils. No university can hope to thrive unless it can draw its students, from healthy and vigorous secondary schools. The prosperity of the University was in large part due to two Acts of Parliament, the Endowed Schools Act which followed the Report of the Schools Enquiry Commission, and the Education Act of 1902, with its provision for the development of secondary

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schools. As the University of a city, itself the centre of a great industrial population, Manchester University can appeal with more confidence for local support than a federal university spread over half or the whole of England. The University, moreover, is generally a centre of encouragement for all the literary, scientific and artistic activities of Manchester, which are much more deep seated than is usually supposed. Its scheme for university extension was a step in preparing the way for university education among women specially of the well-to-do classes. At the present time the Tutorial Classes, conducted under the joint auspices of the University and the Workers' Organisations, have brought the possibility of more systematic knowledge within the reach of a new class of the community.

The founders of Owens College did not look beyond the provision of university education for Manchester and South Lancashire. The immediate problem to be faced was sufficiently difficult. Future and distant developments were not their business. But the success of the University would have been imperfect if it had failed in either of two ways, if it had only served a particular district in the North of England or if it had merely adapted itself to the special advantages which its local situation afforded. The real area served by a university is ultimately proportionate to the quality of its higher teaching and research. For the regular routine of work, especially of undergraduate work, the nearest respectable university will usually suffice the needs of a student unless he prefers and is able to go to Oxford or Cambridge. But when a university offers facilities for higher teaching or reasearch such as are not common elsewhere, the area of attraction expands. In Manchester it was the excellence of the work in chemistry which first brought students from all parts of the country. But Manchester would not rank as a University of the first class if it had limited its higher

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work to the professional and technical studies which lay, as it were, at its doors. It has always followed, and sometimes gone beyond, the prescription of its founder to instruct in the subjects taught in the English Universities. No one would have predicted *a priori* that flourishing schools of mediæval history, of comparative religion, and of radioactivity, if one may select examples, would have arisen in Manchester. Advanced study and research are now accepted as a part of the work of every Faculty. It is essentially through them that persons are attracted from the rest of Great Britain and from Overseas. In the Session 1925-26 some thirty countries were represented among the students. The University can claim to be national as well as local. It can also claim its share in the growing comity of learning which is uniting more and more closely the universities of the world.

But it is not the purpose of this paper to dwell on the more recent history of the University, still less to discuss the problems which it has to face. It is an attempt to show what were its earlier stages of developments and how, in some things encouraged and in other things repelled by the example of other universities, it helped as a pioneer to work out the distinctive principles on which a group of English Universities have so far acted.

THE SOCIAL ASPECT OF EDUCATION IN AN INDUSTRIAL AREA

BY
SPURLEY HEY

EDUCATION is the most persistent factor of life, since it embodies all experience ; but the word is used in a narrow sense in reference to the growth and training of physical, mental, and social activity in children and young persons, and to indicate the schemes and organisation designed to effect their educational advancement. Even in this narrower sense education is a comprehensive and intricate problem, and is especially complicated in an industrial area.

School Difficulties in an Urban Area.

In the earlier days of compulsory education many school children were so mentally or physically defective as to make nugatory or negligible the ordinary means of instruction ; yet the function of the State in respect of education was limited to teaching in Reading, Writing, and Arithmetic. Much progress has been made in the direction of widening the foundations of education since 1870, but even to-day, in the twentieth century, in many cases home neglect prevents children from receiving the benefits of instruction from which, under happier circumstances, they would be well qualified to profit. Children still attend school insufficiently or unsuitably fed, badly clothed, and with unclean bodies. Some children exhibit signs of overstrain, many show traces of lack of suitable exercise in the open air. There is evidence, too, that children, after school hours, do not in many cases receive the supervision necessary to safeguard the community against a tendency to lower the standard of social life. Neglect leads to physical discomfort, malnutrition and mental retardation in children, and to anti-social habits.

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Up to quite recent times comparatively little was done for the physical and social welfare of school children. It is obvious that the task of the teachers in urban schools has been made more difficult as a result of the influences surrounding many children in their out-of-school hours. Careless or vicious home surroundings and neglect of preventable physical defects counteract in no small measure the earnest and devoted work of the teachers in the schools. The following details of twenty actual cases, typical of many, serve to illustrate the difficulties with which the teachers must contend :

Girl of 12.—Feeble-minded. Charged with wandering. Parents of low mental calibre. Older sister—aged only 14—twice recently charged with indecency, and for accosting.

Boy of 11.—Convicted of stealing and wandering. Drunken father. Mother deserted her family. Children neglected. Father works at night.

Boy of 12.—No father. Mother works in cotton mill. Six children, the three youngest being illegitimate. Boy out of control.

Boy of 11.—Mother rented a room in a disorderly house. Room occupied by mother and boy in a filthy condition. Furniture consisting of iron bedstead and straw bed without bed clothes.

Boy of 9.—A truant. Convicted of stealing. House in filthy condition. Mother drunken and immoral. School Attendance Officer visiting home at 9-30 p.m. for information found mother drunk, father at his club, children (ages 11, 9, 5, 4) all out.

Boy of 10.—Found sleeping with his mother and sister (aged 7) in a rag warehouse. Children neglected by parents. Mother convicted frequently for drunkenness. Father convicted twice for same offence, and also for indecency. Father twice proceeded against for educational neglect.

Boy of 13.—Charged with improper guardianship. Found in dirty, ragged, and verminous condition. Father and mother between them have been 43 times convicted for being drunk and disorderly, fighting, assault, and educational neglect.

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Girl of 6.—Illegitimate. Mother convicted of drunkenness and assault. Child found to be dirty and verminous. Neither food nor fuel in the house.

Girl of 11.—Stole 2/- from a little boy in the street. Taken home by police at midnight. Mother then out, but subsequently came in drunk. Mother persistently drinking and neglecting her family.

Boy of 10.—Convicted of stealing guinea-pigs. Previously convicted and birched. Truant from school. Father and mother convicted on the same morning on a charge of being drunk and disorderly.

Boy of 10.—Charged with breaking-in and stealing. Absent from school for three months owing to skin eruption brought about by parental neglect. In a very dirty condition when arrested. Bad family record. Father proceeded against for educational neglect on six occasions. Father and mother sent to prison for cruelty to children.

Boy of 7.—Charged with wandering and improper guardianship. Father absent. Mother living with another man. Family of four occupy one furnished room. Man referred to sent to prison for indecency. This boy and his brother greatly neglected, malnourished, badly clad, and infested with vermin. Mother sent to prison for cruelty to children.

Girl of 11.—Family of eight live in lodgings. Constantly moving from house to house. Both parents have served three months' imprisonment for cruelty to children. Father has been in the hands of the police for drunkenness and disorderly behaviour on two occasions, and has been proceeded against three times for educational neglect.

Boy of 10.—Charged with wandering. In very neglected condition. Mother drunken and careless. Has been imprisoned for cruelty to children and for drunkenness. One child mentally deficient.

Boy of 11.—Illegitimate. Convicted of stealing money. Mother sent to prison for receiving. Mother 12 times convicted for drunkenness, assault, and wilful damage.

Girl of 12.—Convicted of stealing clothing from school. Mother charged with receiving stolen goods and imprisoned. Home in filthy condition. Father did not know the name of the school his child attended.

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Girl of 13.—Illegitimate. Mother (addicted to drink) took her on the streets for immoral purposes.

Girl of 9.—Illegitimate. Charged with wandering. Mother has 21 convictions recorded against her for theft, cruelty to children, illegal pawning, and drunkenness. Putative father convicted on three occasions for disorderly behaviour, street-betting, and drunkenness.

Girl of 11.—Charged with living in a disorderly house. Mother a thief and prostitute. Mother imprisoned on seven occasions for theft, drunkenness, child neglect, and accosting.

Boy of 8.—Begging from people in the street. In a very filthy condition. Stench from his person and clothing most offensive. Mother summoned three times for educational neglect. Imprisoned nine times for thefts, assaults, and drunkenness.

An urban area has other problems in dealing with its young life. The provision and upkeep of school buildings, the modernising of old school buildings, the replacement of hopelessly inadequate school buildings and the efficient lighting, heating and cleaning of school premises, together with the provision of suitable school equipment constitute collectively a task of great magnitude. Finance and the general business side of education are important factors : in Manchester, the estimated expenditure on education for one year is approximately one and three-quarter million pounds. But in this article it is not proposed to discuss these factors, inseparable from the general problem of education, but to direct attention to the more humanistic aspect.

The Education Acts, 1918 and 1921.

The Education Act, 1918, now embodied in the Education Act, 1921, was a great educational measure which formed a sound basis for social reform. Recognition was given to the principle that education cannot be carried on to the best advantage under social conditions inimical to progress. The consolidated Education Act of 1921

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appeals to the public generally : it lays responsibility for carrying into effect its various provisions upon parents and employers and upon persons, or bodies of persons, interested in education, as well as imposing upon Local Education Authorities statutory duties and powers involving the provision of facilities for the simultaneous skilled training of body, mind and character. Each Local Education Authority functions through its Education Committee, established in pursuance of Section 4 (I) of the Education Act, 1921, under a scheme of constitution approved by the Board of Education for the purpose of carrying into effect the provisions of the Education Acts.

An area such as Manchester has its own domestic handicaps to social progress : the inevitable tendency towards materialism inseparable from a striving, industrial community, overcrowding in particular districts, many cheap amusements, the restlessness and energy of modern life and the wide differences obtaining in the standard of life between different sections of the community make it an imperative duty of the Education Committee to combat the potential results of such conditions.

Broadly, the desire of the Committee is two-fold : to secure that no child shall be deprived of any form of education from which he is capable of profiting, and to fit each child, within the limits of his capacity, for the attainment of a high ideal of citizenship.

Physical Welfare.

Of prime importance in industrial areas is the attention which it is necessary to devote to cases of physical defect in school children. In crowded city areas there is a constant proportion of children suffering from minor ailments, and immediate medical inspection and treatment may, and does in many cases, prevent incipient weaknesses from becoming permanent. Special schools for physically defective, epileptic and crippled children and

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for mentally afflicted children are found to be essentially complementary to the completion of educational schemes in industrial areas. It has been found necessary also to establish open-air schools for pre-tuberculous and weakly children and to organise special classes for backward children and for children afflicted with stammering.

The magnitude of the problem of medical inspection and treatment and the necessity for an efficient school medical service is illustrated by the fact that last year in Manchester approximately 200,000 medical examinations of school children were made and that there were collectively more than 300,000 attendances at the Education Committee's clinics, whilst approximately 60,000 children were dentally examined. Attention to children's bodily development is one of the most lively problems to which Education Committees of industrial areas must give consideration. Difficulties in housing, lack of open spaces and playgrounds and other drawbacks of life obtaining in crowded areas emphasise the importance of attention paid to such matters as the personal cleanliness of children and to minor diseases of the skin, the eyes, the ears, and the nose. It should be stated that although the problem has not been fully met at the present time the growth of medical inspection and supervision has already achieved remarkable improvement in the physical condition of the children in the schools.

Closely allied to the work of the school medical service in an industrial area is the provision of mid-day meals for necessitous children. Manchester finds it necessary at the present time to maintain 29 centres at which mid-day meals are provided each school day. The children are provided with two-course dinners which are carefully prepared in regard to variety and food values.

It will be admitted that expenditure incurred in combating incipient physical defects in children, in feeding hungry children, and in providing for children's normal

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physical progress is a charge which an Education Committee in an industrial area must be prepared to meet in the interests of the community.

Nursery Classes.

One of the problems peculiar to industrial areas is the education and physical care of children between 3 and 5 years of age. In many poor homes the mother is called upon to assist in increasing the family income, and, although there is no statutory obligation imposed on Local Education Authorities to provide school accommodation for children under 5 years of age, it is felt in Manchester that children should not be excluded from school during their earliest and most impressionable years. Preventive work in regard to health, the training and practice in simple personal hygiene, and habits of healthy routine and training in individual dependence are the first aims of the nursery classes. The rooms in which nursery classes are held are light, airy and warm and afford facilities for food, organised play and sleep. The children's intellectual development is encouraged by means of a graded series of sense-training exercises whilst social training is afforded by the carrying out of small domestic duties, the tending of plants, the telling of stories, and the encouragement of kindness and help towards class mates. The school medical service collaborates closely with the teachers of nursery classes. There is no doubt that these classes perform, in difficult districts in Manchester, a high social service and have fully justified their continuance and further development.

Cultural Training.

It is especially important in an industrial area that educational schemes should have regard to the more cultural forms of education. The young wage-earner will, all too soon, be received into the whirl of material industrial-

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ism, and it is necessary that, even in the case of children destined for mechanical work, as broad an educational foundation as possible should be given in the schools. The difficulties of modern life, especially in industrial areas and great commercial centres, and the wide increase in the franchise with its resultant powerful collective influence of the workers upon the future of the nation, make it not only a desirable but an imperative duty of educationists to give special consideration to the provision of general cultural training for scholars within the limits of their capacity. Industry must gain from such a policy, since an increase in initiative and resource in the units of industry must inevitably bear relationship to the standard of efficiency attained.

It is with these considerations in view that the present-day curricula in the schools are built on wide bases and the correlation of subjects given more thought and attention. Methods of teaching are designed to encourage children to independent effort and to develop individual initiative and self-dependence. It is proposed to make some reference to the special means adopted to counteract influences inseparable from life in a large community, and to inculcate the principles of citizenship in the lives of the children in the schools.

In Manchester, by means of co-operation with various departments of the Corporation, the Education Committee bring a fair proportion of the children in their charge into contact with various civic institutions. The children visit the parks for organised games and nature lessons, they visit the museums and art galleries, and have the opportunity, through the courteous co-operation of the University and other non-municipal organisations, of visiting for organised courses of instruction other city museums. Co-operation is secured also with the Libraries Committee, the Baths Committee and the Tramways Committee, and this co-operation has the direct

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result of awakening in children's minds their first ideas of the aims and possibilities of citizenship.

The inquisitive instinct of the child is given full play in this new type of work, and is the psychological basis upon which the new schemes, involving out-door work and regular visits to city institutions, are built. Rambles in the country, lessons in the parks, outdoor geography, interesting and instructive visits to places of interest form part of the week's school work of thousands of Manchester children. These collateral activities of school children serve to awaken their civic sense, to increase their experience and to create in them an appreciation of the intricacies of the economic and communal life of which they form a part.

In general, the aim of the various courses is to arouse interest, to widen experience, to increase knowledge, to encourage thought, and to foster the spirit of enquiry under efficient supervision and direction. Children are taught to feel a part-ownership in the great institutions they visit; their sense of responsibility develops perceptibly, and the general significance of corporate life is awakened. The visits to museums are especially valuable. They bring children into contact with the work of people of other lands, and such contact encourages appreciation of the fact that men of all nations have, at different times in the world's history, made their contribution to the growth of learning and to the structure of civilisation.

It is difficult to overestimate the collective value of such training: it is certainly true that children look forward with real pleasure to attendance at the classes, and that there is abundant evidence that many things formerly regarded by children as incomprehensible or of no account have now, with increasing understanding, become objects of wonder and of deep interest.

Among the more recent movements towards educational expansion the stimulation and refining value of music

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have been found to encourage in school children the growth of self-expression and a readiness for co-operation, to foster the love of beauty. In Manchester a scheme has been developed during the last few years with the object of inculcating in school children a love for, and an understanding of, music. A Musical Adviser has been appointed with three special assistants, and yearly courses of lectures have been given to teachers. Every school has its own piano in good condition, periodically tuned and regulated. No such scheme could be complete which failed to arouse in children the desire to take pleasure in performance, and the gift and knowledge of music in the children of Manchester schools has been made the means of serving the community. The two means by which this has been effected are the establishment of Schools' Orchestras, and Schools' Choirs. Most encouraging beginnings have been made by both the Orchestras and the Choirs, the members of which are drawn from various schools.

The Effect of Overcrowding.

Three-quarters of the population of this country are dwellers in towns. Large towns collect and harbour many casual and inefficient workers; they have a considerable floating population; they allow to develop, or they have done in the past, crowded areas without sufficient open-air "lungs." Workers live close to their work which is frequently arduous and monotonous and creates a demand for cheap entertainment.

One of the educational difficulties experienced in Manchester is that half the population lives in the central area of the city. This central area is about a quarter of the area of the whole city and the difficulty facing the Education Committee is evident when it is stated that more than two-thirds of the offences investigated by the Juvenile Court of the city are committed by children living in this area which, it may be stated, has roughly

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only one-fourteenth of the total area of the city devoted to municipal parks and open spaces. Lack of open spaces and lax parental control, some of which is due to housing difficulties, have the natural result of causing children to spend much of their time in the streets, and it cannot be gainsaid that street life is inimical to the moral and social influences of school life.

The Manchester Education Committee, having regard to the growth of juvenile misdemeanour, decided to open, as opportunity offered, a number of Evening Play Centres with the object of attracting children from the streets into the Play Centres. Last year there were more than 700,000 attendances made by children at the Committee's Evening Play Centres, and it would seem that the relatively small cost of maintenance of the Centres is fully justified if the striking rate of decrease in the number of cases brought before the Juvenile Court is considered. It may be stated that the number of cases of children brought before the Juvenile Court at the time at which the Centres were first opened was nearly four times the number of cases brought before the Juvenile Court last year, and it is certain that the Evening Play Centres have made a very large contribution towards this reduction. The Evening Play Centres, which are open nightly in all the crowded areas of the city, include in their organisation a number of camps which are visited by parties of children during the summer months. The educational value of the camps may be appreciated when it is stated that some slum children see at the camps for the first time in their lives real meadowlands and the ordinary animal life of a farm.

The Employment of School Children.

One of the inevitable results of life in industrial areas is the demand for part-time juvenile labour. In the past thousands of school children have been employed

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in populous districts before, between and after school hours in various types of employment, under conditions adverse to both physical and educational development. Exploitation of children in this direction was terminated in Manchester in 1921 when, after searching enquiry into the conditions of the employment of school children, the Education Committee put forward to the City Council, for their confirmation, a code of bye-laws prohibiting certain forms of employment and limiting the hours of permissive employment. Without going deeply into the facts the necessity for the institution and carrying into effect of bye-laws regulating the employment of school children may be illustrated by the statement that in Manchester, before the period of control, an enquiry showed that 6,081 school children were employed, that the ages of such children ranged between 7 and 13 years, and that their hours of employment varied between 20 and 50 per week. Under bye-law control at the present time under 2,000 school children, none under 12 years of age, are employed and in no case for more than 17 hours per week. The close supervision carried on in respect of the employment of school children is essential in industrial areas and is a duty which in its faithful performance has its ultimate value.

Two other types of juvenile workers engage the attention of urban Education Committees—children performing in places of public entertainment and street trading young persons. Licences are required by juveniles in each type of employment, and great importance is attached to the proper fulfilment of conditions governing the issue of such licences.

The Juvenile Employment Bureau.

It is only recently that the school age has been raised to fourteen years. For fifty years the battle between education and industry for possession of the child persisted

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and at the time of the passing of the Education Act, 1918, boys and girls might leave school and enter the labour market at 11, 12, or 13 years of age. Children entering industry at such ages were frequently employed in casual or unskilled forms of labour which fostered a disinclination to take up a settled trade or industry. Such young wage earners rarely received any further school instruction. Many of them deteriorated rapidly, both in a physical and social sense, quickly adopting the habits, some of them undesirable, of the adult workers with whom they came into daily contact. Deterioration of mentality was naturally a consequence of a persistence of these conditions.

It is false economy to train a child physically, mentally and socially for some nine years in the Elementary School, and at the age of fourteen years to cut him adrift from educational influences, to ignore the pitfalls which lie in his path in industrial life and, it may be, to leave him to combat the consequences of the demoralising influences of unemployment or the evil results of casual employment. In industrial areas educationists have concerned themselves closely with the question of juvenile employment, and much has been done in Manchester during the past ten years to assist the juvenile at the outset of his industrial career.

Local Education Authorities are empowered to establish Juvenile Employment Bureaux for the purpose of giving information, advice and assistance to juveniles under 18 years of age seeking suitable employment. In an industrial area the Bureau is an instrument of high social and educational value. Its influence touches the schools, the homes and the workshops, factories and offices : and juveniles, parents, teachers and employers find the work of the Bureau far-reaching both in its appeal and its effect.

After Care.

During recent years an increase in the number of children passing forward to post-elementary courses has

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occurred, but the percentage of industrial wage-earners at fourteen years of age is still approximately 80 per cent. of the children of that age. Children are withdrawn from the care and protection of school life and thrust into the swift competition of the workshop, factory or office. It is at this stage that the juvenile wage-earner needs much assistance. New experiences meet him at every turn ; he meets new temptations ; his physical nature is changing : and with the greater freedom which naturally accrues to him as a wage-earner, the cheap attractions common in an industrial area are more readily accessible to him. It is at this stage that the Education Committee of an industrial area must endeavour to keep alive its influence in the life of the young wage-earner. In Manchester the city has been divided into 24 areas, in each of which an After-Care Committee has been, or will be, established.

The Care Committees already functioning are constituted of members of the Education Committee, teachers and social workers. In carrying the welfare scheme into effect juveniles, parents, teachers, employers and social workers combine in co-operative effort. The centre of the movement is the Juvenile Employment Bureau system. Very valuable work for the community is already being done by the Welfare Committees now in active operation. The After-Care Committees direct their attention more especially towards the welfare of children living in crowded areas, children who, from the observation of teachers, show a tendency to lead their schoolfellows, children who are sub-normal in intelligence, children employed before and after school hours, juveniles " placed " by the Juvenile Employment Bureau, and neglected children.

Post-Elementary Courses.

Schools are the training grounds for the larger life outside : they must therefore embrace in their outlook

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utilitarian as well as character-forming and cultural objectives. In every industrial area there are three groups of young persons who, at 14 years of age, come within the sphere of the influence of the Education Committee and in respect of whom facilities for continued education must be provided. The first group are children who have passed at 11 or 12 years of age into a Secondary or Central School course ; the second group are those who, at 14 years of age, enter a full-time day course at a Junior Technical, Trade, Art or Commercial School ; the third group pass on into industry and may attend either a part-time day course at a Day Continuation School or an Evening School course.

The problem confronting Education Committees in populous areas of providing facilities for the continued education of these respective groups is largely one of expenditure and accommodation. It is a statutory duty of Local Education Authorities to ensure that no child shall be deprived of any form of education from which he is capable of profiting. There is no finer human material than the British child, and provision for his intellectual development and technical training must march with the facilities provided for his physical and social welfare. Manchester, one of the foremost industrial areas of the world, must necessarily make provision for technical instruction in many and widely varied forms. The active and successful pursuit of industry and commerce demands specialised training, after the broad and general basis of education is laid, for the banker and accountant, the engineer and the chemist, the worker in wood, stone or metal, the distributor, the retailer, and for the many other workers in a busy manufacturing and distributing area.

With reference to the first group of children, so far as Manchester is concerned the Education Committee conduct each year an examination for the selection of

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children for admission to secondary schools and central schools. In connection with this examination all the children in the elementary schools of the city are brought under review with the object of awarding free admissions to children strictly on the results of the examination. The problem in Manchester is to provide secondary school accommodation to meet the demand, and as difficulties of obtaining suitable sites and of actual building, and financial considerations tend to retard adequate provision, the Committee decided to develop and extend the central school system in order to supply additional school places to meet the demand with the immediacy the situation required. As a result of carrying this policy into effect, at the present time more than 3,000 children are admitted each year to either a secondary or a central school, under agreement to remain for a four-year course. These children gain admission on merit alone and come from poor and better-class districts alike. The second group—a much smaller one—are those who, at the termination of the elementary school course, pass on to one of the Junior Technical Schools for a more specialised course directed towards preparing them for entry into some branch of industry or commerce. The third group for whom the Committee make special provision are those who begin employment at the age of 14 years. For these, the Education Committee have provided a system of day and evening continuation schools and also maintain Unemployment Centres at which unemployed boys and girls attend for instructional purposes during a period of unemployment. Of the still more advanced educational courses provided by the Education Committee it is necessary merely to refer to the College of Technology, the High School of Commerce, and the School of Art, and to their service to the community in providing well-equipped entrants to industry and commerce. It is inappropriate to make more than passing reference to

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these educational facilities in this article, but their mention serves to indicate the complexity of the problem confronting an Education Committee carrying out its duties in a busy city.

Maintenance Allowances.

Ability is the monopoly of no particular class, and facilities for a full education are the birthright of every child. So far as natural ability is concerned the Manchester Education Committee have constant evidence before them that the children of poor parents hold their own in school work with the children coming from more comfortable homes, and it is necessary that consideration be given to this issue in connection with the provision of facilities for higher educational courses. Many city children capable of profiting from post-elementary school courses would without financial assistance be prevented as a result of economic conditions in the home, from taking advantage of the further training open to them.

In Manchester this difficulty has been met by admitting on merit, by making all post-elementary school courses free up to 16 years of age to children of Manchester ratepayers and by the institution of a system of Maintenance Allowances, the operation of which enables poor parents to keep their children in attendance at school until the completion of a school course.

The Teachers.

The Committee devote their own time to the public service, the administrator labours long hours in carrying out the policy of the Committee, but it is the teachers who occupy the actual front line in the battle against ignorance, dirt and disease ; it is the individual teacher's influence and skill which shape and direct the progress of children and which help them, often under adverse conditions, to assimilate the principles of conduct which make for good

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citizenship. The Manchester Education Committee attach the greatest importance to maintaining a high quality in their teaching staff, and have sufficient confidence in their teachers to give them the freedom of action which springs from trust and which is a tribute due to the trained and qualified members of a great profession.

The extent of the work done by teachers is not generally known. In Manchester, quite apart from attendance in their own time at special courses with the object of keeping themselves up-to-date—it may be added that hundreds of teachers attend such courses annually—teachers identify themselves with the out-of-school activities of the children. The Athletics Association and the Cricket, Football, Captain Ball and Swimming Leagues are organised and supervised entirely by the Committee's teaching staff. It is by such sacrifice and effort that the teachers have made the schools the centre of life of the districts in which they lie, by which they have consolidated and strengthened the great influence they bring to bear in the schools, and by which they have built up school tradition. The teacher's work, well and truly done, is the highest of all social performances.

THE PROBLEM OF THE VILLAGE SCHOOL

BY

W. H. PERKINS

I.

SINCE 1870, when the nation undertook to provide schools for all its children, elementary education has gradually become compulsory and free, and its age-range has been extended to cover at least nine years of full-time attendance. More than nine-tenths of the whole population now receive some, or all, of their education in the public elementary schools, which are maintained by the local education authorities, with the result that there are about 20,000 such schools organised into about 30,000 departments and attended by about five-and-a-half million children. The distribution of pupils for the country as a whole is shown in Table I. (appendix) which is supplemented by information in Table II. for a typical area, showing the types of department in each category. The effect on the average reader of studying the two Tables will probably be to cause surprise at the relatively large number of small schools. There is always a tendency in generalising about elementary education to think first of the comparatively large schools in which the organisation of instruction is relatively simple, and to neglect the smaller ones where the difficulties are immeasurably greater.

The widespread existence of small schools, however, constitutes one of the most serious problems of modern educational administration, and it is the object of this paper to examine the problem in some detail, and to discuss the various proposals which have been advanced for solving it.

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II.

Probably the best way to obtain a reasonable view of our subject will be to consider a typical school of not too extreme a type. Guided by the figures we have just consulted, we will choose a whole school (mixed and infants) with three teachers and about 100 children on its roll, the average attendance being 88. This school, we shall suppose, serves a population of about 600 persons, who live in an industrial village and its surrounding agricultural area. Like most village schools it is a voluntary school, but in this case there is no complication in the form of a neighbouring school of another denomination. The buildings stand back from the main street of the village on a rectangular site of about one-third of an acre, which is surrounded on three sides by a brick wall, the front boundary being an iron railing with a gateway to the street. The playground has a cindered surface with a few patches of gravel. Most of the children wear clogs, so that in dry weather the cinders are ground into fine dust, and in wet weather into a very unpleasant kind of mud. Mud and dust in turn find their way into the school buildings in large quantities. It would cost at least £400 to provide an impermeable surface of asphalt, concrete, setts or stone flags, and, as the playground is not a "room in the schoolhouse," the money would have to be raised privately by the managers whose income from endowments is barely adequate to pay for ordinary repairs to the buildings.

The buildings themselves are of brick, about 70 years old, and they are beginning to be the worse for their age. Otherwise they have changed very little since they were erected, because even the smallest improvement involves a local effort to raise money, in which the teachers and pupils are called upon to take a prominent part. The school was originally planned for parochial as well as for

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educational purposes, and the buildings are consequently semi-ecclesiastical in type. The main room of about 40 feet by 25 feet accommodates the upper school in two classes, and there is a smaller room about 20 feet square for the infants. The recognised accommodation of these two rooms is 130. Heating is provided by coke stoves, of which there are two in the main room and one in the small one. The windows in both rooms are of peculiar shape, rather small and awkwardly placed. Their lower panes are of obscured glass and a few of them have upper portions which open by swinging into a sloping position.

The larger room is open to the ridge of the roof, the exposed beams being inaccessible for dusting except by means of a ladder. To provide cloakrooms, the original porch has been enlarged and divided into two parts, one for boys and the other for girls. Clothes hooks are fixed to the boarded walls, and each cloakroom has one small lavatory basin. The infants must all pass through the main room whenever they enter or leave their classroom. New floors have recently been provided for the second time in the life of the school. Ninety per cent. of the cost of this improvement was borne by the Local Education Authority on account of their responsibility for the wear and tear of the old floors. The walls of both rooms, which had previously been unplastered, were surfaced and renovated three years ago, the major portion of the cost being raised by means of a bazaar.

The sanitary conveniences are 50 yards away from the main buildings and are necessarily somewhat primitive, because the local sanitary authority has not yet established an up-to-date sewerage scheme.

Caretaking is in the hands of a widow who was appointed by the managers partly on compassionate grounds. Her duties include all scrubbing, sweeping and dusting both of the school and the out-offices, the lighting of fires and the carrying of fuel and ashes, and

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they are entirely performed outside school hours. The floors are scrubbed three times a year only, the outside of the windows being cleaned at the same time.

This school is definitely above the standard for inclusion in the Board of Education's "black list." Its accommodation is technically adequate, and its other defects are not so unusual as to merit condemnation. But we can readily conclude, from the above description, that its material conditions, as measured by modern standards, are distinctly imperfect. The caretaker's battle against dirt is waged on most unequal terms. She asserts that the whole of the playground is carried into the school once a year and that she has to sweep it out again. It is difficult to get the rooms warm before the pupils arrive at 9 a.m. If they are warm they rapidly become stuffy owing to the lack of proper means of ventilation. Hygiene, both in practice and as a subject of instruction, presents formidable problems, owing to the system of sanitation and the inadequacy of the cloakrooms and lavatories. Lighting is unsatisfactory, and the planning of the building makes it impossible for even three classes to have separate rooms or the accommodation suitable for effective teaching.

In order to appreciate the problem of organisation we shall suppose that the staff and pupils of the school are as set out in detail in Table III. (appendix).

Beginning in the infants' room we find 28 children in charge of an uncertificated woman teacher. This teacher is a married woman, nearly 50 years of age, who has spent all her educational life in the school, first as a pupil, then as a pupil teacher, and finally in her present capacity. In spite of total lack of training she achieves a certain amount of success in her work, perhaps because she is so well acquainted with her pupils' parents and their homes. By attending summer schools as frequently as her domestic cares and limited means have permitted, she has just been

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able to keep herself conscious of the changes which have taken place in the last 25 years. Her methods would appear distinctly old fashioned to a girl coming to-day fresh from a Training College, but she would be found in conversation to be fully aware of her limitations and of the defective conditions under which she is compelled to work. She would frankly regret her lack of knowledge and training for certain branches of her work, but she would point out very reasonably that, even if she were more accomplished, her small room would not provide the space for the varied activities which she would then wish to prescribe for her pupils.

Although the room is recognised for 40 pupils it is obviously too small for 28, when their ages vary from three to seven. Free movement for the pupils and space for the storage of their material are restricted, owing to the presence of the stove and of certain large cupboards containing parochial and Sunday school stores. The only school piano has to be kept in the large room, but in any case its frequent use for younger children's games would be very disturbing to the upper classes. The formal work of the "sevens" needs careful organisation, which is not easy unless the movements and occupations of the "babies" are unduly repressed. An impression always remains that elbow room is lacking, and that the consequent immobility reacts on the spontaneity of the children's work and on their characters. The atmosphere is too solemn for proper freedom, and the spirit of play can take control only during the intervals in the grimy playground.

It appears, perhaps, to be a good thing rather than a bad one that the Infant Teacher's opportunities have not been unbounded, and that she has spent her whole life in making the best of her surroundings. Otherwise her impatience and discontent might display themselves to the inconvenience of the rest of the school. At present it

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is a little pathetic to hear her recall that she once had 40 children in the same room where she now teaches the 28, and that she cannot imagine how she ever managed them.

A special feature of this class is that the girls who leave it at the age of seven to eight are always capable of doing simple needlework suitable for their age with remarkable neatness and speed. Boys of the same age can sew on buttons quite securely, and have been taught that this is a duty they should always perform for themselves.

It will be noted that the infants' group includes one boy of eight years of age. He cannot yet read, and his attainments are lower than those of the average six-year-old. Both the headmaster and the class teacher believe that his backwardness is entirely due to absence from school owing to illness, and that, with individual attention, he might be brought up to the normal standard for his age. The boy's parents are unfortunately entirely unconcerned, so that his home surroundings are not intellectually stimulating. But the amount of personal attention which he can receive in school is obviously only small, and there are grave fears that he may leave the school before he has completed its normal course, and possibly provide another example for a well-known type of criticism which is directed at the work of our elementary schools.

In the next class there are 34 children varying in age from seven to eleven. The teacher is a young girl of 22 who left the Training College less than a year ago. The headmaster believes she will become a very competent teacher, but both she and he agree that this type of class and its problems were not visualised when she was being trained. She is, therefore, gathering experience slowly and somewhat painfully, and all the time she is in danger of being tempted to exchange to a post in a still smaller school nearer her home. Three teachers have

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occupied her present place during the last five years, and the managers do not think they will obtain a permanent teacher until a local candidate presents herself.

The problems of this middle class are obvious. "Elevens" and "sevens" cannot easily be fitted into the same educational community. But in this case they must be kept in it while they receive their most important equipment for future intellectual pursuits. The routine processes of reading, writing, spelling, and arithmetic have to be mastered. In a smaller or more homogeneous class the tedium of mastering them could be reduced to a minimum by avoiding needless repetition, and by suitable recreative occupations. A simple straightforward scheme of work and time-table would enable the teacher to use all her vigour (which is at present her main asset) in actual teaching. In a mixed class of this size a great deal of energy is dissipated in making arrangements and dispositions to keep everyone occupied. Real individual work on the tutorial system or the Dalton plan is scarcely possible at this stage, or with such a class. Repetition is therefore unavoidable, and the grading of the instruction is so difficult that its efficiency is bound to suffer.

It may be added that the teacher of the middle class lives 12 miles away from the school and is therefore unable to take part in all its social activities. Because she cannot teach needlework or drawing, but is the best teacher of music in the school, the classes have to be completely rearranged during certain hours of the week. The two mistresses exchange classes, and the headmaster and the uncertificated mistress then re-group their pupils for needlework and drawing. The re-grouping involves a most complicated rearrangement of the seating accommodation in the whole of the main room.

We may now pass to the top class and to the head teacher, whose task in dealing with pupils from nine to thirteen years of age may appear to be almost a hopeless one.

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But there are compensations. It will be noted that he has temporarily an unusual proportion of older boys. For the first time for many years he can get together a fairly good football team. He will have great difficulty in finding a field to play in, but fortunately he is at the height of his powers, and is not likely to be daunted by minor obstacles. For one year at least, he hopes to organise boys' games on satisfactory lines.

Some facilities for practical work are also available. For one afternoon a week fifteen boys are engaged in the school garden, while eight elder girls are taught cookery by the headmaster's wife, in her own kitchen. During this afternoon the remaining sixteen pupils of the top class are necessarily engaged on a programme of private study, organised by the headmaster, and supervised by the certificated assistant mistress. For the rest of the week the headmaster's class is taught in two sections, but its large size and extensive age-range interfere with any satisfactory attempt to provide the kind of systematic advanced instruction which the pupils require. There is no space inside the school to carry out practical work in science or handicraft, or to store the equipment for such work. Organisation is further complicated because some of the younger pupils have to be prepared for the local authority's Junior Scholarship Examination and because the elder ones will leave during the coming year in four groups—one at the end of each term.

Apart from his duty to his top class, the headmaster has of course the additional task of supervising the whole of the organisation of the school, dealing with the complicated details of registration, school attendance, supplies, and the promotion of pupils from class to class. He must continue for some time to give very careful attention to the proper training of his young assistant, and he must be prepared to receive, often without notice, all kinds of official visitors to the school (including attendance officer, doctor, nurses,

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managers, inspectors and officials of the local authority). The visitors are always welcomed, but it is obvious that each of the two sections of his class must always be ready to work alone at short notice, which means that they must always have something to do and an inclination to do it.

One comparatively successful way of dealing with such a situation is for the head teacher to specialise with the older children in some branch of work for which he himself has great enthusiasm, to the possible neglect of others which might be regarded as equally important. In this school the older pupils are specially trained in the observation and drawing of natural objects (plants, trees, birds, etc.). The school possesses a simple microscope, and in its garden and its rural surroundings there is much to be learnt of plant and animal life, as well as a certain amount of local history from buildings and other features. By prescribing limited fields of observation and insisting upon carefully written reports, illustrated with effective coloured drawings, the headmaster has gone some way to develop a special character in his school. He undoubtedly gives his better pupils a definite intellectual equipment which may fit them for dealing intelligently with some of the problems of their later life. They are not ignorant children but there are many things they do not know with which some critics might expect them to be acquainted. The most evident weakness of the school is the absence of any advanced work in mathematics, geography, or science. As most of the pupils take up industrial careers such weakness does not pass unnoticed.

The equipment of both classrooms is affected adversely by the history and the original purpose of the school. The Education Authority is gradually replacing the older seating accommodation by more-up-to-date furniture. But in the infants' room the installation of tables and chairs is delayed by the comparative lack of space, and in the

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main room there is a certain reluctance on the part of the managers to sacrifice the long desks without back rests which can so easily be converted into seats for adults at public meetings. Modern school furniture is not adaptable in this way, and as long as the room has to be used for other than school purposes, the exchange is not readily welcomed. Similar considerations affect the supply of suitable cupboards, blackboards, and pictures. The difficulty of accumulating a school library is less than the difficulty of storing it. The equipment for games is kept in the toolshed which the Education Authority has provided in the garden. The piano, which has already been referred to, was originally bought second-hand ten years ago, and, in spite of the fact that the headmaster guards the key very jealously, it is much the worse for wear and difficult to keep in tune. There is no sewing machine except one which is occasionally carried into the school from the house of the infants' mistress.

A friendly critic, on reading the foregoing somewhat detailed catalogue of material and personal difficulties, has expressed the opinion that it presents a deterrent picture of the difficulties with which teachers in elementary schools are confronted. It certainly does not describe either comfort or efficiency. But it is not an unjust or prejudiced account of typical conditions. There are many teachers and administrators who can tell far more forbidding tales. The remainder of this paper will be devoted to a discussion of possible improvements. It is hoped that encouragement may be found in it for the hope that strenuous effort and genuine zeal for educational progress can transform our system of compulsory education into one which need not fear comparison with those of other countries—particularly of our own Dominions.

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III.

It may appear to some readers that the troubles of our typical school could be most easily removed by adding a classroom to it and appointing another teacher. But even if the managers could afford to extend their buildings this solution would be unduly expensive and relatively inefficient from the point of view of the local authority. It would be justified only as a last resort, and where the school was small owing to its isolation. More fundamental treatment of the problem from an administrative point of view is needed in dealing with the system as a whole in order that our schools may be so organised, housed and staffed, that the pupils may be classified according to an efficient scheme. The object of good classification is to form groups of convenient and varying size, in order that the pupils may receive instruction which is suitable for their aptitudes and abilities, as well as for their stage of mental growth. In considering possible reforms we must, therefore, consider first the various proposals which have been advanced for administrative reorganisation, and then deal with questions of staffing and premises. Some schools are, of course, too isolated to be affected to any great extent by schemes of reorganisation, and their needs will require separate consideration.

Every Local Education Authority in the country is at present faced with the problem of providing better elementary education without increasing expenditure from public funds, and for most of them the obvious solution is to reduce the number of small schools which attempt to provide instruction for the whole of the school life of their pupils. The main obstacle to reduction is found in the dual system of provided and non-provided (council and voluntary) schools, a feature of our national system which is at once the pride of its historians and the despair of its reformers. Fortunately we no longer have to regard the question of

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religious teaching as one which is certain to cause dissension wherever it is raised. Everyone who knows the story of our voluntary schools in the past realises that their early work laid the foundation on which the present system is built, and no one now regrets the Act of 1902 which brought them a large measure of maintenance from public funds. But even the relatively small burdens which remain to be borne by the owners of voluntary school premises, are beginning to prove intolerable. The buildings are growing old, and many of them require either replacement or reconstruction at a time when the cost is too great for most congregations to contemplate. The result is that efforts are being made, both locally and nationally, to arrive at new principles of management and organisation which will enable necessary improvements to be made by the Local Education Authority on conditions which will satisfy the trustees and managers of denominational schools. These efforts are favoured by the gradual recognition of the value and seriousness of the religious teaching which is given in council schools. Moreover, the corporate life and traditions of the council schools have been based on those of the best voluntary schools, and with the advantage of better material conditions, they are in no way inferior to those of the older institutions.

For our present purpose, however, the important consideration is that the success of any efforts to deal with the dual system may be expected to remove quietly and peacefully the surviving rivalry which at present often keeps two or more small schools in existence in the same community, where one would be more efficient. The most important reason for the existence of small schools and grouped classes would then be removed. Existing premises and equipment could be brought up to a satisfactory standard at the public expense, and then be used under a scheme of reorganisation in the most efficient manner. It does not follow that one of the schools would invariably

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be closed. In many cases the seniors could be grouped in one building and the juniors in the other, or one building could be equipped for special instructions in practical subjects for a group of neighbouring school. No one who knows the schools in the villages and the small towns of the North of England can doubt that an agreement on the question of religious teaching would be the greatest single contribution to the better organisation of secular instruction which could possibly be devised.

Apart from the amalgamation of schools in the same community, the most widely discussed proposal for dealing with our problem is one which can most conveniently be called inter-community reorganisation or centralisation. In its simplest form it consists in closing entirely the very smallest schools and requiring the children to attend the nearest remaining school. If the distance is too great for the children to walk, conveyance may be provided. Another form of centralisation consists in the decapitation of one or more outlying schools by attaching all the elder children (usually from eleven years of age) to a centrally-situated school, either in a separate department or as part of the whole school. In a third form, selected children only are transferred, the receiving school providing a special course or department in which suitable advanced instruction is given.

Those who support the principle of centralisation do so on grounds both of efficiency and of economy. Efficiency is achieved because, in the larger schools, better grading of pupils, better equipment, and better staffing can be provided. Economy results from the fact that, while staffing, equipment and school maintenance may be superior in quality after reorganisation, their more efficient use is accompanied by an actual reduction in quantity, as measured by expenditure. There is undoubted force in these arguments and in their own field they may be regarded as unanswerable. There does not appear to be any other

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way in which special instruction in a progressive curriculum can be secured for the older children who are now being retained in the schools. The vigorous rural settlers in North America have found that the consolidated school is the only satisfactory answer to their educational demands, and their experience is added to the other arguments quoted above by those who advocate centralisation.

But, in spite of all arguments on educational grounds, there have been very few cases where inter-community reorganisation has been adopted in England without resistance. The English parish or village is not inhabited by rural settlers but by natives, whose community feeling is very strong, and only country folk can realise in how small an area local patriotism can operate. Every local administrator knows that, in spite of the development of communication, the small township is always suspicious of its larger neighbour, and the larger the neighbour the greater is the suspicion. Even where combination has taken place for purposes of local government the rivalry is apt to persist in the new township for generations. If we add to this influence the feeling that a village which has no school has no caste, or that the village whose school is only recognised for junior children has received a serious insult, we shall recognise the importance of the obstacles. They obviously originate in one of the most valuable traits in the English character by which threatened rights are guarded with the utmost tenacity. The apathy with which the school may appear to be regarded before it is threatened is no criterion of the loyalty with which it will be supported later, even by those who have hitherto complained of its excessive cost to public funds.

The motive of local patriotism is reinforced by the general preference of working-class parents for a school as near to their homes as possible. This preference is easily understood, though it may often arise from other motives

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than the physical well-being of the children, and have no reference to the efficiency of the school. In the North of England children often carry their parents' dinners to their places of employment, and elder ones may have to perform domestic duties in the absence of their mothers.

Still further support for the existing state of affairs is provided by the many head teachers of small schools, who, in spite of their difficulties, are rarely enthusiastic for any change which narrows the scope of their work, though it may make that work less exacting. Their opposition is not, however, entirely selfish. Apart from all questions of the prestige or interest of their own work, they point out that the influence of the elder pupils (who are the first to be removed in all schemes of reorganisation) is one of the most valuable agencies by which they can exercise their own powers in the development of the characters of the younger ones. They also frequently support the argument that centralisation of schools is likely to encourage the depopulation of rural areas.

We can conclude, therefore, that while reorganisation is, on the whole, a sound educational method of dealing with present difficulties of elementary education it cannot be imposed hastily on unwilling societies. It will progress only as it justifies itself by success, which will depend upon a broadening of the educational views of managers and parents. If the system proves workable there will be no lack of new efforts and sacrifices on the part of teachers to eliminate from the system all discontinuities which might result from the necessary transfers. During the next few years it will be found that centralisation is on its trial and its results will have to be studied with caution as well as enthusiasm.

An even more drastic scheme of reorganisation is often advocated by those reformers whose policy is summarised in their motto of "secondary education for all." It is based on the growing disposition to regard the age of

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eleven or thereabouts as the starting point of a new stage in education which must naturally affect all types of pupils, whether they are found in compact urban systems or in more scattered suburban or rural areas. In present circumstances eleven is the most convenient age at which to embark upon certain new studies, if reasonable progress is to be made before schooling ceases. Secondary and similar schools, therefore, recruit at eleven those whom they propose to retain till the ages of sixteen, seventeen, or eighteen. There is, of course, a growing demand for more plentiful and more varied facilities in the existing types of secondary schools, and we have also to take account of the feeling that those who do not transfer to these secondary schools at the appropriate age should be introduced, at that time, to a wider curriculum extending over at least three years without any repetition. With such an idea in our minds, we may be able to provide for some, who miss their way at eleven, later opportunities to transfer to the longer courses of secondary schools. This is as far as most administrators and teachers are prepared to go, but the more drastic reformers consider that a complete and immediate reorganisation of our system is needed to avoid overlapping entirely, and to avoid any selection of pupils at an early age for prolonged education. Such a reorganisation would provide secondary education for all children and would draw the line between elementary and secondary education in a new way. Junior secondary education would begin for all at the age of eleven and senior secondary education for selected pupils at fifteen or sixteen. The junior secondary instruction would be given in existing elementary schools with as little centralisation as possible, *i.e.*, there would be a junior secondary department at the top of practically every elementary school in the country. When education authorities contrast this conception with the existing state of affairs they almost invariably regard it as too

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far-reaching to form the basis of present-day plans. Even the assurance that Scotland presents an example of its successful operation in a country of small schools is unconvincing. It is doubtful whether it ever was in operation in Scotland substantially, as it is proposed for England. Certainly it is not in operation to-day, in spite of the existence of the extensive university system, which is an essential condition for the training and inspiration of the necessary teachers. Elementary school staffs, premises and organisation must therefore be improved to deal with the problem of "smallness" as it now confronts us, before we can turn our attention to the wider question of "secondary education for all."

IV.

When problems of reorganisation are being discussed it is essential to remember that the most important factor in the reform of an education system is the teacher. The economy of reorganisation will be no economy at all if it does not aim at improving standards of staffing throughout the system. In some cases the removal of elder pupils has been made the occasion for appointing an uncertificated headmistress, either alone or with an assistant of still lower qualifications, to take charge of the younger ones who are left behind. In exceptional circumstances this policy may be justified by the unusual competence of the uncertificated teacher who is promoted but, as a general rule, it is bound to prove unsatisfactory. Younger children, as much as older ones, need the influence of teachers of character, refinement and experience, all qualities which are more common among well-educated and specially trained teachers than amongst those of lower official qualifications. Similar arguments apply to reorganisation in its wider aspects. The object must always be to bring more competent teachers into contact with more man-

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ageable classes, and reorganisation should never be made the excuse for a policy of employing cheaper teachers who are always, taken in the mass, less efficient teachers.

Our first conclusion, therefore, with regard to staffing is the commonly accepted one that the general standard of education and training of all teachers should be improved as rapidly as circumstances permit. Such a policy undoubtedly involves additional expenditure, and it can only be put into operation gradually. Existing teachers who may be too old for further training cannot be summarily dismissed, so that the improvement must obviously be made in the quality of those who replace them as they retire. The recent report of the Departmental Committee on the Training of Teachers provides evidence that opinion is not seriously divided on the need for proper education and training, whatever different views may be held about the best courses and methods of training.

There are two very important factors which have to be considered in connection with the staffing of schools in small communities, whether reorganisation takes place or not. Both arise from the operation of the systematic scales of salaries which are now enforced upon education authorities. In the first place, it appears certain that the proportion of men teachers will never return to that of the nineteenth century. In the second place, it is evident that all teachers, but men particularly, are attracted to the large towns where the salaries are high rather than to the rural areas where they are lower. The attraction of the towns is especially strong for the younger teachers who are led to believe that large schools offer more opportunities for promotion than small ones. It is, in fact, a disturbing feature of our present system that while an urban teacher may easily be promoted to a rural school, the reverse is very seldom the case. Whatever may be said for or against the present system by which teachers are employed and appointed by school managers and local education author-

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ities, there is no doubt that there would be great advantages in a system under which one or more transfers from rural to urban, and urban to rural, schools took place during the careers of the majority of teachers. One of the most attractive possibilities which might appear on the abolition of the dual system is that transfers might be arranged by local authorities with the special aim of providing more varied experience for their teachers, without endangering their prospects of promotion. But even if we can solve the problems of migration it is evident, on numerical grounds, that the limited number of men teachers will be almost entirely absorbed for teaching the older boys, and that the schools for younger children and other small schools must be mainly staffed by women. Except in large villages, or in those which are natural centres for centralised rural schools, the village schoolmaster is already tending to disappear, and when we come to consider the social problems of rural areas we shall have to do so from the point of view of a woman, rather than from that of a man.

V.

It is quite evident that an enormous programme of rebuilding and reconstruction will be imposed on local authorities and on school managers if modern demands for suitable school premises are to be met. Fortunately, there is no cause for complaint with regard to the general plan of such new buildings as are being erected. The only difficulty is that the high cost of building is delaying work which many authorities would like to undertake. In districts which are not too densely populated it is the usual policy to provide one storey buildings, situated on generous sites, with paved playgrounds and adequate playing fields. Heating, sanitation, lighting and ventilation all receive special attention. The class rooms provide for some freedom of move

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variably facilities for practical work. The teachers have their own room which also allows space for the privacy of medical inspection. The heating of mid-day meals and the drying of children's clothes are not overlooked. The caretaker is considered in the planning of the buildings and in the design of furniture and fittings. There is, of course, still a danger of losing some of these advantages where the school is to be used for other than educational purposes, although managers are becoming increasingly attentive to the needs of children, who are the principal tenants of their premises.

But the community which is to have a new school is fortunate, and the commonest problem is to make the best of existing buildings. The first steps in most cases are those which can be achieved by spread of enlightened views in the community. The standard of cleanliness and hygiene can often be revolutionised without serious expense. If windows are suitably reconstructed, lighting and cross ventilation can be enormously improved. Some propaganda will be necessary to secure adequate use of improved facilities for ventilation. Even teachers themselves, in certain parts of the country, need to be reminded of the relation between precept and practice in connection with the value of fresh air. Adequate ventilation requires adequate heating, and where the school is so small that it does not justify the installation of central heating constant attention to fires and windows should be required of the caretaker.

From the point of view of cleanliness the main problems presented (assuming an expert caretaker and satisfactory arrangements for his work) are those of cheap floors, unplastered walls, and muddy and dusty playgrounds. A maple floor is always worth a special effort in the North of England. Wall surfaces demand attention for æsthetic as well as hygienic reasons, and all money spent on their improvement may be regarded as well invested. Even

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in country areas the ordinary exercise ground needs a smooth surface of flags, asphalt or setts, at any rate in the North of England.

The remaining hygienic problem is that of sanitation, which is again mainly a question of enlightenment. The system adopted must depend largely on the local sanitary authority, but, in any case, it needs daily attention and should be one of the principal anxieties of managers, caretaker and teachers.

It is commonly assumed that the Board of Education's recent criticisms of school premises amount to root and branch condemnation of the majority of our non-provided schools, but experience in comparing the criticisms with the actual premises shows that this is far from being the case. In many instances the actual rooms are certainly inconvenient and unsuitable for the number of children who are accommodated. But, on the whole, it may be concluded that a determined effort to make the school surroundings approximate more closely to decent domestic conditions could be made to succeed without ruinous expenditure. If our small communities can be brought to realise this fact, there is no reason why healthy rivalry between village and village should not result in a certain pride in the appearance and the amenities of their schools, with enormous advantage to the health and well-being of the whole neighbourhood. In country districts one of the best forms which such a rivalry could take would be to determine that the schools were the children's buildings, and that their interests should never be injured. This would naturally suggest that adult social activities should be centred elsewhere—best of all in a Village Hall provided specially for that purpose. There is no reason, of course, when all local interests can be brought to converge, why a village hall or community centre should not be erected on the same site or in the same block as the village school. Proximity of buildings would un-

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doubtedly improve the conception of education and remove discontinuities between juvenile, adolescent, and adult activities. Proposals of this kind require an active rather than a passive community spirit, with generous compromise on those religious, political and, above all, social questions which are apt to divide communities into groups. An excellent example has been set with assistance from official and philanthropic sources at Sawston in Cambridgeshire, and it may be expected that further experiments may be reported if modern social opinion can be improved by the influence of sound education.

VI.

We must now turn to the special aspect of our subject which is presented by the remotely situated schools which cannot be touched by any scheme of reorganisation. These schools have all the difficulties which we have learnt to associate with smallness together with others which are caused by isolation. The communities in which they are situated are generally considered to be unprogressive, and Sir Michael Sadler¹ goes so far as to say that rural schools have declined in interest within living memory because the countryside has been in economic decay. His brief account of the personal friction and suspicions which are apt to prevail in country districts may be supplemented by numerous detailed examples given by Ashley and Byles.² Administrative action by the Local Education Authority or its officials is not likely to succeed entirely in dealing with this situation, which obviously demands a change in the social atmosphere. There is no doubt that we are still far from the time when the average English farmer or small employer will understand the new ambitions of teachers, and when the actual

¹ *Our Public Elementary Schools*, pages 33-34.

² *Rural Education*, Oxford University Press.

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emancipation of the teacher will be freely accepted by those who have thought themselves his masters. But the ambitions are growing and the emancipation (on its economic side at any rate) is complete, and we must now begin to look to the teachers themselves to assist in staying the economic decay. If we can give back the vigour to our country schools, they may prove to be the most effective agents in solving the problems which are baffling both statesmen and economists. It is, of course, possible that the modern developments of cheap electric power and of the motor industry will tend to industrialise many small communities and to remove the isolation of others, so that geographical considerations may play a less and less important part as time goes on. Although contact with urban ideas has hitherto been blamed for the economic decay of the countryside—probably with truth—it may now begin to play its part in a social and economic revival. It is not only the distractions of the towns which now attract country folk. The effect of contrast is slowly disappearing and more serious activities are beginning to spread their influence from the towns to the country. But the restoration of our rural life must, nevertheless, still be guided and influenced through the best channels—of which the school and its activities are the most convenient. As the village teacher becomes established as a dignitary in his own community he will seek, and others must help him, to make contacts between its isolation and the best influences of greater centres. His own methods will depend on his personality, his education and experience. As a rule, however, we shall have to change the pronoun and say “her” for “his,” both for the reasons which have already been given and because it is necessary to realise that women’s opportunities for social contact are still more restricted than those of men.

The first and simplest method for bringing outside assistance to help a school is to introduce visitors to the

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school itself when the children are there. In town schools there may be too many visitors and their effect may be distracting. In village schools, on the contrary, the teachers are always glad to see a stranger, especially if he brings any message of encouragement. It may seem strange to suggest that H.M. Inspectors and officials of the Local Authority should be the first type of visitor to be encouraged, but nowadays such officials usually come with help and advice and they are always ready to describe new schemes and projects which they have seen in successful operation elsewhere. The managers themselves can scarcely visit too often, if they do so with the motive of making their school the best managed and their children the best cared for and best trained in the district. Parents, too, may well be encouraged to come and see what work is in hand without having any special excuse connected with their own children. Teachers who have secured the interests of parents in this way invariably report the performance of special services, or the gift of small articles of equipment connected with the parents' occupations or recreations.

The isolation of the teacher, as distinct from that of the pupils, may be mitigated by the short "refresher" courses of instruction and week-end meetings which form part of the programme of the Board of Education and of most Local Education Authorities. It is interesting to note that teachers' own societies are also taking similar steps in many areas, and organising meetings which result in free exchange of ideas on educational rather than professional matters. Where the meetings are short it is probably best not to set out any serious programme of study, but to rely on inspiration and example as the media for spreading incentive. Really eminent members of other professions, discussing their own work or making stimulating criticisms of changes which are now taking place and of modern social tendencies, can often produce more effect

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on a teacher's outlook than distinguished teachers concentrating on questions of routine, which are apt to become dangerously narrowing.

But the intellectual drawbacks of the teachers' isolation can be removed only by a more systematic provision of opportunities for stimulating intercourse. The more teachers are isolated, the more will their outlook tend to assume a tinge of dogmatism and vehemence, caused by decreasing consciousness of the uncertain boundaries of the field of knowledge. Generalisations and theories of their younger days tend to become hardened into faiths. A fixed point of view is apt to develop and everything which conflicts with it is in danger of being received with suspicion and lack of sympathy. This is one of the usual effects of isolation on educated persons, and will not be entirely removed until the teacher's training is broadened and extended to cover the whole of his career. The only remedy appears to be some system of organised communication between the outposts of the teaching profession and the main centres of knowledge and culture where old ideas are being discarded or re-shaped, and where new ones are being evolved. These centres, are, or should be, represented by the universities, and it is not encouraging to reflect how little contact there is in England between the main departments of the universities and the little schools which are their tiny brothers. It may be argued that the modern university already provides too many duties to distract its scholars from their natural occupation of original work or thought. But there is as much need for intercourse with the village school as there is for relations with trade or commerce or other organised departments of modern life. We must hope, therefore, that in the near future the two extremes of our educational system may begin to make some contact through the aspirations of the teachers and the activities of possibly some of the junior members of university

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faculties. The ideal of providing a kind of university tutor for every elementary school may be at present unrealisable, but it is not an unworthy one.

In these and many other minor ways we must secure that the rural school is in future more and more affected from without so that, if material conditions can be adjusted fairly, the natural advantages of the country may ultimately exercise their full effect in securing for the small schools their fair share of the most talented and ambitious teachers whom our system of training can produce.

VII.

The questions we set out to discuss have revealed themselves to be mainly administrative and social in character. We have been trying to approach the ideal of bringing together "the right teachers and the right pupils in the right conditions." Our partial and tentative solutions depend on new conceptions and ideals in the mind of the lay public. To describe possible pedagogical consequences would be too large a task to undertake now. But before we conclude some reference must be made to questions of curriculum and method, and to the possible outlook of teachers and pupils in an improved system of schools.

We must imagine larger, cleaner, brighter classrooms, which are not unduly used for other than school purposes. The classes will be more homogeneous, and the teachers better educated and better trained than they are to-day. The quickened interest of parents and the efforts of the School Medical Service will produce pupils who are in a fitter condition for school work. In the infants' sections and departments the lack of material amenities will no longer impede the efforts of the teachers, who will be specially selected women, adequately trained to understand their task of guiding their young pupils towards

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the formation of healthy and graceful habits. Movement and occupation will be free and spontaneous enough to stimulate activity rather than passivity in perceiving the first glimmerings of beauty, of truth, and of knowledge. Reading, writing, and number will be games rather than tasks, while singing and play will be the media for developing the first elements of the social spirit.

On passing to the middle classes the children will experience a more definitely disciplinary régime. Here the classes will be teams with captains, or societies with leaders, working to acquire control of certain weapons which will enable them to combat ignorance in later life. The complaints that accuracy and precision in calculation and expression are not sufficiently respected nowadays have already been noted by teachers, and the cure will be sought in the middle classes of the schools. Definite tasks will be attempted as far as, but not beyond, the point where they become burdens. Seriousness will be encouraged at proper times, so long as it does not become unhappiness. Concentration on essentials will banish diffusion of effort, although recreation both in school and in the playground, will not be forgotten.

These two stages of elementary education, which are of course fundamental, will be mainly received in schools which are organised and distributed so that they are as near as is reasonable to the young children's homes. In some districts there will still be a certain amount of grouping of classes, the effects of which must be mitigated by providing the best possible surroundings and by careful selection of teachers. But in all communities the aim of the work will be the same, and there will not be any serious variation with locality or with the outlook of the parents. The process will have succeeded if the children have attained some ease and fluency in reading and writing, if they show skill and accuracy in simple arithmetic, if they can keep their eyes and ears open and

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remember and describe what they have seen and heard, if they are ready to sing and play games together, if their health fits them for physical enterprise and their conduct for simple social contacts. There will be many differences caused by personal qualities, but the general desire will be to proceed with some programme of enterprise and to do so on individual lines. This will be the work of the senior classes. Here the real battle against ignorance will begin and the value of good grading or grouping of pupils will be immeasurable. For the sake of good organisation parents will be encouraged to make sacrifices, and teachers to work strenuously in free conditions. Differentiation will begin to appear in the curriculum at this stage, because all pupils of twelve years of age are not fitted for the same enterprises. Specialisation at twelve years of age may sound ridiculous to those who oppose premature specialisation in secondary schools and demand a liberal education for all. But in the elementary schools we are dealing with substantially the whole of the nation's children. Boys for whom history and literary work are (for the time being, at any rate) so meaningless as to be useless, do not often find their way into secondary schools, but they are fairly numerous in the population as a whole. Most of these boys have some special inclination at the age of twelve or thirteen. They may be interested in the care of animals, in plants and their cultivation, or in tools and in making things. Girls, when taken in the mass, exhibit the same qualities. Instruction in the senior classes of elementary schools must provide for these types, and the teachers must therefore have the necessary variety of attainments as well as a faculty for discovering the real qualities of their pupils. There is no need to fear vocational instruction so long as it is not imposed from outside the school. A miner's son who disliked books and sums was once found to have a strong desire to look after poultry. He was encouraged in this by a wise

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schoolmaster, and soon surprised his fellow pupils by a striking knowledge of obscure facts in geography connected with Leghorn, Andalusia, Rhode Island, etc. He now writes a very creditable weekly article on poultry for the local newspaper and is an authority on the financial aspects of his business.

In small communities, even after the elder pupils have been centralised, the senior sections will not be large and staffs will consequently be small. Their special business, therefore, will be to adjust themselves and their activities to the social conditions of the neighbourhood. If the teachers have been trained to be enterprising, they will be able to devise courses and time-tables to suit their classes. Given larger classrooms where there is room to draw things, to make them, and to experiment with them, as well as to fill exercise books with written work, they will find no difficulty in keeping their pupils occupied in the acquisition of knowledge and skill. Ignorance and incompetence will be their enemies. But knowledge and skill will be measured positively and not negatively. What the pupils know and can do will count, not what they have never heard of or never tried to do. The much talked of "outfit for life" will consist of a few characteristic garments made to fit the particular individual, and not a large supply of standard suits made for a stock-size figure. With such an outfit our young workman may well hope to be a good citizen and to make profitable use of his life both in labour and in leisure.

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BIBLIOGRAPHY.

THE scope of this paper has been considerably modified during the period of writing by the appearance of the Board of Education's Pamphlet No. 46 on *Rural Education* (Stationery Office, 6d.), and of Sir Michael Sadler's little book on *Our Public Elementary Schools* (Thornton Butterworth, 1s. 6d.). These two works, will be found to deal with many topics which might have been included in our enquiry.

The evolution of our present system of schools can be most conveniently studied in *The History of Elementary Education in England and Wales from 1800 to the Present Day* (C. Birchenough, University Tutorial Press, 6s. 6d.), which has recently been brought up to date in a second edition. The peculiar difficulties of rural schools are dealt with in *Rural Education* (Ashby and Byles, Oxford University Press, 2s. 6d.). Comparison with other countries may be obtained by a study of *Comparative Education* (ed. Sandiford, Dent, 10s. od.), and from the *Educational Year Books for 1924 and 1925* of the International Institute of Teachers College, Columbia University (Macmillan, 12s. 6d.).

For those who desire more philosophical treatment of the problems which always confront teachers and administrators there are, of course, many excellent treatises. Two in particular are mentioned here in order to acknowledge freely that they are mainly responsible for anything of more than ephemeral interest which this paper contains. They are *Education: Its Data and First Principles* (Nunn, Arnold, 6s. od.), and *The Reform of Education* (Gentile, Benn Bros., 8s. 6d.).

The Report of the Consultation Committee of the Board of Education on "The Education of the Adolescent" (Stationery Office, 2s. od.), published while this book was in the press, deals authoritatively with school organisation and curriculum as they affect older pupils.

TABLE I.—PUBLIC ELEMENTARY SCHOOLS—ORGANISATION.
ENGLAND AND WALES, 1924-25.

Departments, by Size (Average Attendance) and by Number of Classes; and Council
and Voluntary, by Size (Average Attendance).

From the Board of Education's Statistics of Public Education.

Average Attendance	1 Class	2 Classes	3 Classes	4 Classes	5 Classes	6 Classes	7 Classes	8 Classes	9 Classes	10 Classes	11 Classes	12 Classes	13 Classes	14 Classes	15 Classes	16 Classes	17 Classes	18 Classes	19 Classes	20 Classes or more	TOTAL	No. of Depts. in		
																						Council Schools	Voluntary Schools	
Under 30..	1035	738	2																			1775	455	1320
30 and not over 40..	119	1681	58																			1858	513	1345
Over 40, but not over 100..	28	2398	5193	934	33																	8586	2904	5682
Over 100, but not over 150..	—	11	783	3067	1042	106	8															5017	2020	2997
Over 150, but not over 200..	—	—	10	519	1888	1039	167	12	1													3636	1852	1784
Over 200, but not over 250..	—	—	—	11	456	1842	993	189	17	4												3512	2320	1192
Over 250, but not over 300..	—	—	—	—	27	571	1343	658	129	29	6	2										2765	2158	607
Over 300, but not over 350..	—	—	—	—	—	24	404	744	425	128	33	13	4									1775	1497	278
Over 350, but not over 400..	—	—	—	—	—	—	21	314	428	297	95	26	11	2								1194	1046	148
Over 400, but not over 500..	—	—	—	—	—	—	1	9	132	229	180	93	42	19	4	1						710	624	86
Over 500..	—	—	—	—	—	—	—	—	—	5	15	48	60	38	32	11	7	4	2	3		225	203	22
	1182	4828	6046	4531	3446	3582	2937	1926	1132	692	329	182	117	59	36	12	7	4	2	3	31053	15592	15461	

• One of these Departments contained 20 classes, the other two contained 24 classes.

The 31,053 Departments constituted 20,736 schools.

TABLE II.—LANCASHIRE EDUCATION AUTHORITY.
ELEMENTARY SCHOOLS.

Types of Departments classified by Size.

Average Attendance	Mixed 7—14	Infants 5—7	Girls and Infants 5—14	Mixed and Infants 5—14	Boys 7—14	Girls 7—14	Junior and J. & I. 5—9	Senior Mixed 9—14	Central	Totals
Under 30	—	4	—	44	2	—	1	1	—	52
30 and not over 40 ...	2	15	—	44	1	1	1	—	—	64
Over 40 but not over 100	29	126	3	156	10	6	—	1	—	331
" 100 " " 150	38	65	1	84	8	6	2	1	1	206
" 150 " " 200	57	22	1	38	7	8	3	—	4	140
" 200 " " 250	32	8	—	14	7	10	—	—	2	73
" 250 " " 300	19	4	—	5	5	4	1	1	1	40
" 300 " " 350	16	—	—	—	2	1	1	1	—	21
" 350 " " 400	7	1	—	—	2	1	—	—	—	11
" 400 " " 500	6	—	—	1	1	—	—	—	2	10
" 500	—	—	—	—	—	—	—	—	—	—
	206	245	5	386	45	37	9	5	10	948

Total number on roll of 690 schools organised into the above 948 departments, 136,274.

TABLE III.—ORGANISATION OF A TYPICAL SCHOOL ON MARCH 31ST, 1926.

Age of Pupils	Headmaster		Certificated Woman Assistant		Uncertificated Woman Assistant		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
3—4					1	2	3
4—5					2	1	3
5—6					4	4	8
6—7					4	3	7
7—8			3	3	1	5	12
8—9			3	5	1	—	9
9—10	—	2	7	5	—	—	14
10—11	—	4	1	4	—	—	9
11—12	6	4	3	—	—	—	13
12—13	5	3	—	—	—	—	8
13—14	10	5	—	—	—	—	15
	21	18	17	17	13	15	101

Totals of Classes ... 39 34 28
 Total on roll 101
 Average attendance for 1925-26 88

ADULT EDUCATION IN ENGLAND— A SURVEY

BY

F. A. CAVENAGH

ADULT Education, by which is meant education “other than technical or vocational” for persons over the age of 18, now forms a recognised part of the national system. Like other departments of education, it has evolved from purely voluntary effort to a position of partial state-control. Its origins are diverse. The Mechanics’ Institutes of the early nineteenth century, though they have as heritage such institutions as Birkbeck College and the Manchester College of Technology, came to a dead-end so far as Adult Education (in the usual sense) is concerned. The People’s Colleges are likewise rather apart from the movement. The famous London Working Men’s College still maintains a vigorous life, whilst the Sheffield College has developed ultimately into the local University. The Co-operative Movement has always attended to the education of its members in the principles and history of co-operation; and the Adult School Movement (with which the Society of Friends is chiefly associated) has, for more than a century, conducted schools which are (in the words of Sir Michael Sadler) “the nearest English parallel to the People’s High Schools of Denmark.” All these bodies were, and such of them as remain are, entirely voluntary; the origins of modern state-aided Adult Education must be sought in University Extension and its offspring by the Co-operative Movement—the Workers’ Educational Association.

University Extension began almost accidentally in the late 'sixties. It was taken up first by Cambridge, then by London and Oxford. The system of local lectures, followed by classes, with written work and examinations,¹

¹ Examinations, however, form no part of the University Tutorial Class.

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This need was recognised by Albert Mansbridge, a Co-operator who had had experience of University Extension. He has himself admirably described in his book, *An Adventure in Working-class Education*, the steps which led to the formation in 1903 of the Workers' Educational Association, "a working alliance between Co-operation, Trade Unionism, and University Extension." Its most important development, the University Tutorial Class, followed in 1907, and was from the beginning aided by grants from the Board of Education. The Board has steadily increased its grants and (necessarily) its supervision, and has taken cognisance of other forms of Adult Education, so that now the administration of Adult Education occupies a considerable place in the Board's activities.

By the Education Acts of 1918 and 1921 it was enacted that "with a view to the establishment of a national system of public education available for all persons capable of profiting thereby, it shall be the duty of the council of every county and county borough, so far as their powers extend, to contribute thereto, by providing for the progressive development and comprehensive organisation of education in respect of their area"—in which words the development of Adult Education is implied. The policy of the Board is explained in its latest Regulations for Adult Education,¹ and in Circular 1355 to Local Education Authorities.² The Board recognise the following extra-mural activities of Universities :

- (i.) Classes preparatory to Three-Year Tutorial Classes ;
- (ii.) Three-Year Tutorial Classes ;
- (iii.) Advanced Tutorial Classes ;
- (iv.) Tutorial Class Vacation Courses ;
- (v.) University Extension Courses.

¹ Education Act, 1921. Grant Regulations, No. 33 (1924).

² March 20th, 1925.

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For such work the University "should in all cases retain the educational responsibility . . . even if an L.E.A. is prepared . . . to accept financial responsibilities to the extent of the tutor's salary." Under this condition the Board approves of an L.E.A. "adopting and accepting financial responsibility for an agreed programme of extra-mural courses in the area of the Authority as part of the educational system of the area." "The Board trust that Authorities generally will consider sympathetically the desirability of this and other modes of co-operation with Universities and Colleges."

In addition, the Board pays grants to approved voluntary associations "in respect of courses which, in general, will be of a lower standard than that appropriate to University extra-mural work"; such courses are (i.) Terminal Courses (12 meetings of not less than $1\frac{1}{2}$ hours each); (ii.) One-Year Courses (20 meetings of not less than $1\frac{1}{2}$ hours each—these approximating to the standard of University "preparatory" classes); and (iii.) Vacation Courses. The Board leaves it to the discretion of L.E.A.'s whether they shall themselves conduct such classes, or whether they shall assist voluntary organisations; but there is a parting word of advice: "The Board trust that Local Education Authorities in general will now address themselves to the needs of their areas in the matter of Adult Education of a standard below that proper to University extra-mural work, and in particular to the possibility of co-operation with voluntary bodies."

It is thus evident that the Board of Education is fully aware of the importance of Adult Education. Official interest was no doubt aroused by the Report¹ of the Committee on Adult Education appointed in 1917 under the Ministry of Reconstruction—an educational classic which is now most unfortunately out of print. The President of the Board himself appointed a Committee

¹ Final Report of Adult Education Committee, 1919.

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in 1921, which has been reconstituted by two later Presidents, "to promote the development of liberal education for adults and in particular to bring together national organisations concerned with the provision of Adult Education, so as to secure mutual help and prevent overlapping and waste of effort ; to further the establishment of local voluntary organisations for the purpose and of arrangements for co-operation with Local Education Authorities." In Adult Education at least the policy of the Board has been continuous and progressive. If L.E.A.'s will carry out the Board's recommendations there will be an immense increase in this most essential public service.

There is probably no need to describe the extra-mural work of Universities. In the words of the Royal Commission on Oxford and Cambridge,¹ extra-mural work must be "definitely accepted as an established and essential part of the normal work of the University." All Universities and University Colleges now provide extra-mural classes, which are controlled either by a Board or by a Joint Committee (of which half the members are usually appointed by the W.E.A.). Some Colleges have established an extra-mural department, with a Director or Professor at its head. In addition, certain Colleges find it advantageous to co-operate in the provision of Adult Education : thus there is a Joint Extension Board for Bristol, Southampton, and Exeter. Nottingham University College² has a particularly vigorous Department of Adult Education which serves a wide area and conducts a larger number of classes than any other University or University College. Its numbers may be given for comparison with those of Manchester and those of the youngest of the University Colleges—Swansea, which in

¹ Report, 1922, p. 123.

² See *Adult Education in the East Midlands, 1920-26*, a Report issued by the Department.

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five years has provided as many classes as could be sanctioned by the Board of Education.

	Nottingham	Manchester	Swansea
Advanced Tut. Classes	2	1	1
Three-Year do.	54	36	18 (5 shift classes)
Preparatory	45	5	5
Extension Courses ...	23	18	—

The subjects studied in extra-mural classes are very varied. Economics and Industrial History still predominate, but there are many classes in Political Philosophy, Psychology, Philosophy of Religion,¹ History, Literature, Music, and other subjects. Individual effort on the part of students is required, especially in the form of class discussion and written work—the latter a form of expression in which students are usually very diffident. In many classes, however, written work is obtained by encouraging students to read short papers to their fellow-students. Discussion is as a rule vigorous; it may not always be to the point, and it may be unevenly distributed; but it is of great value to get people talking about matters of serious moment. A visitor who had had no experience of Tutorial Classes would probably find the discussion the most impressive feature about them. It is interesting, for example, to see a class of some thirty miners following a course of Welsh lectures on Greek Philosophy; but it is far more remarkable to hear them discussing and criticising the doctrines of the various thinkers. Here and there one finds a student of outstanding ability, who justifies the Board in their regulation that when the subject of a Three-Year Tutorial Class “is such as to make the standard of University work in Honours a possible aim, the course must be planned to reach, within

¹ The Board does not recognise or grant “Courses of instruction in religious subjects, without prejudice, however, to the recognition of courses which aim at the scientific study of the documents, history, or philosophy of religion.”

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the limits of the subject, that standard"; and an occasional class may reach that level. But, speaking generally, one should be content if classes reach the standard of upper forms in a good secondary school—which would be a sufficiently gratifying result. The bulk of the students have had no formal education since they left school at the age of 14 (or less); they are mostly engaged in manual work throughout the day; and many live in small houses where such study as they can find time for has to be done amidst innumerable disturbances. Small wonder that a middle-aged man fights shy of writing an "essay" when he has lost the habit of putting pen to paper, and when he has to compose and write his thoughts by a flickering light in a room where the children are playing and the baby being bathed. Again, as is natural, the keenest students are often those who are "live wires" in other ways—active members of a Trade Union, or district councillors—and their work for the class demands great sacrifice of time. But the movement can find a use for all sorts; indeed there is often a gain from the heterogeneous composition of a class. Nearly all adult students are keen; if they were not they would not join, or would soon drop off. Their interest is further shown by the frequent week-end schools that they organise for more concentrated study, and by their attendance at Summer Schools.

The value of Summer Schools can hardly be over-estimated—by whatever organisation they may be conducted for, besides the opportunity for continuous work, they give students a few weeks of congenial society in beautiful and historic surroundings (such as Bangor or Oxford). To complete this brief account of University activities two points may be added. First, an experimental scheme recommended by the Royal Commission on Oxford and Cambridge¹ is now at work—that of providing

¹ Report, pp. 159-165.

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intra-mural education for a limited number of adult students who have, as a rule, attended Tutorial Classes with profit. Under this scheme the student resides for one year (or two) in College under the conditions usual for an undergraduate—an experiment of extraordinary interest. A less revolutionary scheme by which students attend the College for two days a week is in operation at University College, Nottingham. Secondly, the growing professional spirit of Tutors is most noteworthy. The Association of Tutorial Class Tutors has as objects, “to promote good teaching, to ensure the proper development of the Tutorial Class Movement, and to protect the interests of its members.” By its *Bulletin* and other publications¹ it is helping to establish the new technique which is required for this particular type of teaching.

The voluntary organisations recognised by the Board “as qualified to control and supervise One-Year and Terminal Classes” are so far: (1) The W.E.A. (consisting of a central office and 14 districts); (2) The National Industrial Alliance, a body founded in 1916, the principal object of which is “to negative the idea that there is an essential and necessary antagonism between the interests of employers and employed, and to promote the acceptance of the fact that the future prosperity of the whole nation can best be secured by a frank recognition that these two interests are correlative and inter-dependent”;² (3) The National Council of Y.M.C.A.’s, an institution which is increasingly concerned with education; and (4) The Educational Settlements Association, a federation of affiliated settlements, founded in 1914.

¹ e.g., *The Tutor's Manual*. The Association, in collaboration with the British Institute of Adult Education, is now collecting material for the illustration of historical and other subjects studied in Tutorial Classes.

² Quoted from *The Handbook and Directory of Adult Education, 1926-27*, compiled under the auspices of the British Institute of Adult Education (Deane and Sons). This book contains invaluable information about every side of Adult Education in England. The present writer desires to express his constant indebtedness to this work.

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A brief account of the Educational Settlement may be given at this point. The earlier type of settlement (of which Toynbee Hall is perhaps the best known), though they do a certain amount of educational work, are primarily social in their aims. There are now 56 such institutions belonging to the Federation of Residential Settlements. The Educational Settlement, on the other hand, forms a community centre for all bodies connected with Adult Education which care to co-operate. It forms an extremely valuable part of adult educational activities, in that it seeks to provide that corporate social spirit which is apt to be lacking in separate classes.¹ As Maurice said long ago, "a College means a fellowship"; and the Educational Settlement or Guildhouse (a name which is more human and less cumbrous) creates the atmosphere of a College. In addition to formal classes, Guildhouses usually include dramatic and musical groups, debating and other clubs, and give opportunity for handicrafts. The spirit of the movement is embodied in the title of the Association's terminal magazine, "The Common Room." The Guildhouse marks, in many ways, a return to the methods of the earlier People's College, though its interests and activities are wider. There is no doubt that in such institutions lies the most fruitful line of progress for the future.² There are now 15 Settlements affiliated to the E.S.A., together with four Residential Colleges—Avoncroft, near Evesham (for rural workers), Fircroft and Woodbrooke at Birmingham, and the College for Working Women at Beckenham. Thus "from the simplest group to the year's course at a Residential College there is a natural highway."³

¹ Many Universities invite all their extra-mural students to an annual gathering, but this, though valuable, is not enough.

² See *The Guildhouse*, a Report issued by the British Institute of Adult Education in 1924; and pamphlets by Horace Fleming, founder of Beechcroft (Birkenhead), the honoured pioneer of the movement.

³ Yeazlee: *Spiritual Values in Adult Education*, Vol. 2., p. 103.

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Two other types of voluntary organisation, although not recognised for grant by the Board, should be mentioned for the excellent work they are doing. These are the Rural Community Councils and the Women's Institutes.¹ The former, brought into being in 1921 by the National Council of Social Service, have already done much to rouse educational and recreational life in the villages. Whilst the initiative of each village is encouraged the Council realises "that no village organisation, however good, is likely to be sufficient for the end in view if it is self-contained. One of the drawbacks to village life is its isolation, and, if the villages are to take their rightful place in national life, this isolation must be broken down."² Rural Community Councils are already at work in 12 counties. One can hardly exaggerate the awakening of the countryside that is taking place.

Women's Institutes were first formed in 1915;³ their aim is "to enable women to take an effective part in rural life and development." The idea came from Canada. The movement has grown with extreme rapidity: there were (in August, 1925) over 3,500 Women's Institutes in 51 counties of England and Wales, with a total membership of 200,000. "Width of interest is encouraged, and Institutes take an active interest, despite their distance from the town, in Poor Law questions, housing, the guardianship of the mentally defective, the protection of wild birds, and humane methods of slaughtering. Questions of party politics and sectional religion are excluded by the rules. The activities of the Institutes are far from being merely theoretical. They include such practical schemes as co-operative egg distributions and marketing of produce,

¹ See Board of Education Adult Education Committee's Reports on *Adult Education in Rural Areas* and *Adult Education among Women* (1923).

² *Handbook and Directory of Adult Education*, p. 85.

³ National Federation of Women's Institutes, formed 1917.

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schemes for the circulation of books, and educational classes for groups of villages. One Institute has paid the fees of a member attending an Agricultural College and some County Federations have provided funds for Institute members to attend 'Guild of Learners' classes or local Colleges, to learn subjects which they afterwards teach. In Dorsetshire the Institute teachers have taken handicraft classes in Dorchester Prison."¹ Women's Institutes, with the aid of the British Drama League, the Arts League of Service, and the Village Drama Society, have done much to foster the production of plays in the countryside.² In particular, the Village Drama Society, although it has sought little publicity, has had a wonderful effect through the intimate knowledge of the rural mind possessed by its founders.

Space does not permit reference to other voluntary agencies, though there are many in the field. Particulars of all may be found in *The Handbook and Directory*, or in Dr. Yeaxlee's *Spiritual Values in Adult Education*³—the latter containing an account of the numerous bodies organised by the Churches. Thus at various levels there is an immense amount of adult educational work going on; but the Board has naturally selected with great care those organisations which it can justifiably recognise for grants. It may be expected that as their standard of work improves more bodies may become eligible for state-aid.

The supply of books is intimately connected with all forms of Education, but particularly with that of adults. The place of the Public Library is now under consideration by a Departmental Committee of the Board of

¹ Report of H.M. Inspectors on the Educational Work of Women's Rural Institutes; September 1st, 1925. (Board of Education, 1926.)

² See *The Drama in Adult Education: a Report by the Adult Education Committee of the Board of Education (1926)*.

³ Vol. 2, part iii.

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Education ;¹ the Committee's Report will doubtless point to many improvements. But already the Public Libraries have, many of them, embarked upon definitely educational work.² The system of County Libraries, inaugurated in 1915, and financed where necessary by the Carnegie United Kingdom Trustees, is now operating in almost every county. It is "an attempt to supply a Public Library service to small centres of population which are not financially strong enough to maintain independent local services. Its main feature is the periodic distribution to suitable village centres (schools, clubs, institutes) of loan collections from a central county store." "The system is economical, no county having as yet had to levy more than a halfpenny rate ; very rich counties very much less."³ In many large towns, moreover, the Public Library directly serves the needs of the adult student, especially by providing boxes of books for the use of classes. All types of Public Library are benefited by the foundation (by Albert Mansbridge in 1916) of the Central Library for Students, "to supply expensive books on loan for long periods, without charge other than that of carriage both ways, to adult students who would otherwise have been unable to obtain such books." "Issues are made through Public, County, and Institutional Libraries and are not made direct to individuals except those living outside any Library area or unless there is special reason."⁴ This Library also is largely financed by the Carnegie United Kingdom Trust. It is not too much to say that a duly authenticated student can

¹ "To enquire into the adequacy of the library provision already made under the Public Libraries Acts and the means of extending and completing such provision throughout England and Wales, regard being had to the relation of the libraries conducted under those Acts to other public libraries and to the general system of national education."

² See *The Public Libraries and Adult Education*, by a Joint Committee of the Library Association and the B.I.A.E.

³ *Handbook and Directory*, p. 132.

⁴ *Ib.*, p. 129.

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now obtain in his own house any book which he requires, and that thus one of the greatest obstacles to study—the expense of buying books—has been removed. The same remark applies to others who, for various reasons, are unable to study in their own homes. “The Seafarers’ Education Service¹ has gradually built up a library of 24,300 volumes, of which 15,650 volumes are actually at sea. Carefully selected libraries, varying from 300 to 50 volumes in size, have been authorised on 160 ships for the use of the crews. A librarian is appointed on each ship, and a careful record of borrowings is kept by means of card indexes. The experience of the Service during the five years it has been in existence has conclusively proved that good books of all kinds are thoroughly appreciated by seafarers. The libraries are freely used by all ratings, and the books are carefully handled and punctually returned. The Public Libraries of Glasgow and Cardiff are assisting in the scheme by housing stocks of books and exchanging the libraries on ships calling at those ports.

Tutor advisors have been appointed in the main port towns, and at Liverpool a representative local committee is experimenting in providing educational facilities for seafarers when ashore.”²

Again, in connection with the system of non-vocational education which the Prison Commissioners have wisely introduced of recent years, a Library for prisoners has been established. “A prisoner attending classes is allowed to have one book from this collection, in addition to those provided from the ordinary prison library. The books are the property of the Prisoners’ Education Committee, a small committee appointed by the Prison Commissioners to advise them upon the general working of the educational scheme, and to administer the grant made by the Carnegie Trustees.”³

¹ Set up by the World Association for Adult Education in 1919.

² *Handbook and Directory*, p. 105. See also pamphlets issued by the Seafarers Education Service.

³ *Ib.*, p. 137.

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Those who have had experience of Prison Education can testify to its beneficial effects. The education provided is of course, not very academic ; but, in conjunction with the system of Prison Visitors, it aims at making the delinquent a better man when he leaves the prison than when he entered. Further, the Discharged Prisoners' Aid Society, by helping men to make a fresh start in life, completes the policy of reform that the Commissioners have now adopted.

It was pointed out on an earlier page that the Board, while urging L.E.A.'s to complete their schemes by the inclusion of Adult Education, leaves the nature of their activities to the discretion of the Authorities. To illustrate the kind of work actually being done by progressive Authorities, I cannot do better than quote from the admirable summary given in *The Handbook and Directory of Adult Education*.¹ The editors of that volume obtained replies from a number of Authorities ; it will be sufficient to include here the activities of two counties at different ends of England—Kent and the West Riding.

“The Kent Education Committee make considerable provision for classes and lectures of a non-vocational character in subjects like Literature, Drama, Musical Appreciation, General History, Economics, Psychology, etc., as part of the ordinary provision for further Education. They are always ready to establish new classes where the demand exists. At the same time they believe that some of the most useful work in Adult Education is best carried on by self-supporting voluntary organisations or by well-organised bodies working in close collaboration and, in certain cases, aided by the Committee. The County Library contains a Students' Section, sets of plays and books on Drama, while it is hoped to start a Music Collection. The Committee

¹ pp. 124-127. Reproduced by the kind permission of the publishers, Messrs. H. F. W. Deane and Sons, The Year Book Press Limited.

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encourage the work of voluntary organisations and are prepared to assist them in forming and conducting classes. They have assumed financial responsibility for classes organised by the W.E.A., subject to annual reconsideration and the approval of an annual estimate, while they also give help towards lectures organised in conjunction with the Universities. They give material assistance to Women's Institutes by finding the teachers and paying salaries for organised courses of instruction. They assist bodies like the Folk-Dance Society, and a bursary is offered each year for Kent students wishing to go up to the Residential College for Working Women.

In 1923 the West Riding County Council Education Committee appointed an Adult Education Sub-Committee to co-ordinate the activities of the Council in encouraging non-vocational education for adults and to examine, in consultation with representatives of voluntary associations and societies, prospects of further development. The Authority provides non-vocational classes organised and administered by local Boards of Managers of Technical and Evening Schools. These classes contain approximately 2,200 students, 75 per cent. being over the age of 21. Subjects of study vary from Literature and History to recreational handicraft, but the most popular subjects are Vocal and Instrumental Music and Appreciation of Music, Ambulance, First Aid and Home Nursing. The classes meet weekly throughout the winter. In conjunction with local centres of the County Circulating Library the Authority is now arranging single lectures and short courses. In addition to the County Circulating Library, which now has more than 30,000 volumes, the Authority has established out of educational funds a special adult class library of 2,000 volumes, made up of sets of from 3 to 24 copies of standard works on literature, history, economics, philosophy, etc., suitable for general

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reading by members of adult classes. Boxes of books are issued for the session to classes on demand. The Authority aids University Tutorial Classes and University Extension Courses. It offers Exhibitions tenable at Ruskin College to students or ex-students of University Tutorial Classes, and these, since 1920, have been made tenable alternatively at a College of the University of Oxford. Grants amounting to £1 per week and travelling expenses are made by the Authority to approved students from their area attending summer schools, organised in connection with University Tutorial Classes in Yorkshire. The Authority has for some years accepted financial responsibility in respect of One-year Classes in their area organised by the Yorkshire District of the W.E.A., such classes being adopted by the local managers of Technical and Evening Schools as part of the work of the school in which or in connection with which they are held. From 1919 a scheme was in operation for the West Riding area in the neighbourhood of Huddersfield, under which classes were organised by the humanistic studies department of the Huddersfield Technical College through the medium of a Joint Advisory Committee representing the Governors of the College, the Workers' Educational Association, and the West Riding Education Committee. The Authority paid a block grant to the College covering the fees of tutors, cost of organisation, administration and all incidental expenses. Though educationally a success, the scheme has now been terminated owing to difficulties of administration, and responsibility for such classes is now undertaken by the Yorkshire District of the W.E.A. In 1924-25 there were 74 of these One-year Classes with 1,880 students. Among the conditions attaching to the Authority's grant to the Universities of Leeds and Sheffield (amounting to the product of a penny rate, about £40,000) are the provision of tutors as may be required for tutorial and one-year classes, and also for lectures or courses of

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lectures on various aspects of Local Government and Public Administration."

The summary concludes with the following passage :

" In view of recent controversies it is interesting to note that the Executive Committee of the Association of Education Committee decided on the 29th of January, 1926, to recommend that financial assistance should be given to adult classes organised by voluntary associations, subject to the following conditions :—

- (a) Courses of study assisted out of public funds must aim at freedom from party bias and from any flavour of political propaganda.
- (b) Such courses must be conducted by teachers who have a thorough knowledge of the subject and have the experience and training, as well as personality and understanding of the students' needs, necessary to impart that knowledge. It is by these tests that the qualifications of teachers should be judged.
- (c) Such courses must be open to all students who desire to take them and are able to profit by them.
- (d) In order to ensure the proper observance of the foregoing conditions, it is essential that each class aided by a Local Education Authority should be open to inspection by the Authority and that the syllabus and tutor should be approved by the Authority or by such other body as the Authority consider qualified to exercise those functions."

The " recent controversies " referred to in the last paragraph are those which arose out of an agreement reached between certain voluntary organisations last year. The Trades Union Congress, which has come to see the importance of education for trades-unionists, adopted the scheme recommended by its Education Advisory

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Council. "The object of the scheme shall be to provide working class education in order to enable workers to develop their capacities, and to equip them for their Trade Union, Labour and Co-operative activities generally, in the work of securing social and industrial emancipation." To give effect to this scheme, the T.U.C. agreed to work through organisations already in existence, *viz.* : The National Council of Labour Colleges, the Workers' Educational Association, Ruskin College, the Labour College,¹ and the Educational Committee of the Co-operative Movement.

But although these organisations are recognised by the T.U.C., they are in no way bound by its policy. Each remains free to preach its own particular gospel, and to carry on its work in the ways that seem to it right. On the other hand it is laid down "that there shall be mutual abstention from criticism of the good faith of any educational organisation recognised by the Trades Union Congress"—an injunction perhaps easier to formulate than to enforce.

This agreement has aroused considerable criticism, directed chiefly against the W.E.A. It is said that they have given up their independence; that they are now subordinate to the T.U.C.—in other words that they are directed by headquarters at Moscow. A careful reading of the agreement will dissipate such fears. The T.U.C. is merely the co-ordinating body which makes use of a variety of experienced associations in order to promote the education of Trades-Unionists. So far as the W.E.A. is concerned the agreement involves (in the words of Mr. G. D. H. Cole) "no change of principle or policy. It is a natural and inevitable adaptation to changing conditions. The W.E.A. had always been ready to welcome the fullest participation of the national working-class bodies in its management; it has only had to wait

¹ Ruskin College and the Labour College are taken over by the T.U.C.

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until they were ready to develop their educational activity in order to meet the expanding needs and desires of their members."¹ It is an excellent thing that the T.U.C. should distribute its energies through different channels, and should not regard one school of thought as the only one suited to its members. When the scheme is fully working, it should result in increased funds and more claims for the W.E.A.

It is, indeed a strange irony that the W.E.A. should be suspected by many worthy souls of "Bolshevism," since it has from its start been regarded with contempt and hostility by the "Reds." There have always been two views about working-class education. "One school," say Mr. and Mrs. Horrabin, "means the *extension* of the benefits of culture, in the general sense of the term, to the class which, by reason of its lack of means and leisure, has been debarred from a full share of those benefits hitherto. . . . This school regards culture as something altogether apart from, and unaffected by, the class division of society. The other school means by working-class education, a particular *kind* of education, aiming primarily at meeting the specific needs of the workers as a class, and undertaken by the workers themselves *independently* of, and even in opposition to, the ordinary existing educational channels. This second school takes the view that all human culture, past and present, has been coloured by the outlook and prejudice of successive ruling (*i.e.*, leisured) classes; and that the working class—the great mass of humanity—will add to that culture, not merely a new 'note' of its own, but will inevitably revalue all culture by the standards of its own ideals and purposes."² The writers characterise the first type of education as Philanthropy, the second as Independence. They regard all help from

¹ "The W.E.A. and the Future," in *The Highway*, Summer, 1925. This number also contains the draft scheme of the T.U.C. Education Advisory Committee.

² J. F. and W. Horrabin, *Working-Class Education* (1924), p. 9.

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the "capitalist," whether Board of Education, L.E.A., University, or charitable Trust, as *tabu*; "bourgeois" money and teaching are alike tainted. They insist on building up their own educational system, finding both funds and knowledge for themselves.

Now this view, to those who cannot share it, seems both cogent and, given certain premises, logical. But those premises are unsound. The first is that the working-class is something entirely separate, with different mentality and aspirations from the rest of humanity. The second is that knowledge can easily be acquired, or truth discovered, by those who refuse the help of the learned and deliberately set out to see only one aspect of the most fundamental problems. For good or for evil, the Universities are, and have been for centuries, the repositories of knowledge: one can no more ignore them in the study of history (in which the "independents" regard them as specially biased) than in that of medicine. A man with one eye is a better guide than a blind man, or one who insists on keeping both eyes shut. The true seeker after knowledge learns increasingly his own ignorance: he knows how unattainable is the truth and the whole truth. A University degree, if not "a drawback rather than an asset,"¹ is at least of no importance; what does matter is a training in accuracy and a humble spirit. No better question can be asked about an adult class than that put by James Hole in 1853, "Is it intended to hear both sides?"² The University-trained tutor may have a bias, but he does (if he carries out his obligation) honestly try to "hear both sides"; the "independent" tutor, with equal honesty, does not. Nor need the bias be always on one side. It is absurd to suppose that all members of modern Universities belong to one political party or to one social class. All this

¹ Horrabin, l.c., p. 82.

² *An Essay on the History and Management of Literary, Scientific, and Mechanics' Institutions.*

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must be perfectly well known to intelligent leaders of the Plebs League : their aggressive hostility to the Universities can only be explained as a " defence-mechanism " against what journalists delight to call an " inferiority-complex." They treat the Universities as if they had not changed during the last generation, whereas in fact they have been profoundly affected by their work for Adult Education, gaining in width of outlook and in teaching method. It is of course true that there still exist persons connected with Universities who are opposed to all extra-mural activities, either because they suppose (quite wrongly) that the internal work will suffer thereby, or because they are afraid that the education of the workers will increase industrial unrest. To the latter objection the answer is obvious : you cannot, even if you wish, prevent the dissemination of knowledge nowadays. And if a little knowledge is a dangerous thing, the remedy is like that which modern ventilation prescribes for a draught—to create a bigger draught. Much of the industrial trouble of 1926 has been due to sheer ignorance—on both sides. Education is no panacea, but it will at least help towards providing better leadership and more intelligent negotiation.

Of the two Residential Colleges now taken over by the T.U.C., Ruskin was founded in 1899 by two American disciples of John Ruskin, Mr. and Mrs. Walter Vrosman. After some ten years the " independent " element found the control and curriculum of the College too " extensionist " ; the Plebs League was accordingly formed (Oct. 1908) " to bring about a more satisfactory connection between Ruskin College and the Labour Movement." The result was a split—the principal and certain students going off and founding soon afterwards the Central Labour College. Ruskin College however survived : it has been maintained by grants from the Board of Education, Trusts, Co-operative Societies, Trades Unions, etc., whilst a dozen L.E.A.'s give scholarships which are

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tenable there. Students at Ruskin may attend certain University lectures ; but the College forms no part of the University, and it is doubtful whether it would not have been wiser to establish the College elsewhere. It is definitely laid down as a condition of its being taken over by the T.U.C. "that the present aims and educational methods of the College shall be retained."

The declared aim of the Central Labour College (now known as the Labour College, London) was that of "equipping the organised workers with the knowledge necessary for the accomplishment of their immediate and political tasks, with the view to the ultimate abolition of capitalism and the establishment of a new social order." Its teaching is based entirely on Marxism—the "mechanistic conception of history"—this basis being safeguarded under the recent T.U.C. agreement. As already stated, the College has no relations with Central or Local Education Authorities, or with any University.

The foregoing pages give a brief survey of the present position of Adult Education in England. It has been shown how large a part is still played by voluntary agencies. This feature is indeed essential : adults are not interested in classes unless they have some share in their management, nor will the workers accept education which is imposed "from above." The Board of Education and the Universities recognise these facts ; but certain L.E.A.'s have been slower in learning the lesson. It is, however, a promising sign that so many L.E.A.'s are working on most enlightened lines, and that the Board of Education should encourage them to co-operate with voluntary bodies.

Although Adult Education has been the specific subject of this article, it must not be supposed that it is something separable from other forms of education. Some critics indeed hold that it ought not to exist at all—that you cannot educate adults, and that if you want to improve the general level you must begin with children in the schools.

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The reply is that many thousands of adults *are* being educated, and that the more this process goes on, the stronger will become public insistence on better schools. In the past there has been a vicious circle : children received an unsatisfying education and left school with no affection or respect for it ; as they grew up they handed on this apathy or dislike to their children—and to their representatives in Parliament and Town Council. Contrast with this attitude that shown in the aim of the W.E.A. : “ to work for a national system of education which shall provide for all children, adolescents, and adults, full opportunities for complete individual and social development.” We must improve our educational system by working from both ends : by improving the Primary Schools and by increasing the provision of Adolescent Education (*i.e.*, Secondary, Central, and Continuation Schools) ; at the same time we must foster public opinion by propaganda and by the extension of educational facilities for adults.

Within the last few years much has been done to rouse general interest by the British Institute of Adult Education, founded in 1921 under the presidency of Lord Haldane. Its “ constitution enables the Institute, while preserving entire freedom of action, to draw upon a considerable body of experience in order from time to time to survey the situation in Adult Education, to carry out research into its problems, to suggest lines of advance and to promote new developments, to maintain its standards, to engage in the building up of an alert and informed public opinion as to its importance, and in general to undertake such activities as may meet the needs of the movement as a whole. The Institute does not itself undertake any teaching work.”

The Institute has already accomplished much by its conferences and publications ; it has started a half-yearly Journal of Adult Education, and a library containing not

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only books, but illustrations, diagrams, and other material useful for class work.¹ In particular, it has had considerable success in bringing home to members and officials of L.E.A.'s the vital importance of Adult Education.

For on the sympathetic co-operation of the Local Education Authority depends the future of the movement. There is a vast mass of work which lies beyond the reach of the Universities, and which the voluntary agencies cannot attempt without financial aid. Whatever economies may be necessary, it will be a national disaster if they are made at the expense of Adult Education.

¹ In forming this collection the Institute is collaborating with the 'Tutors' Association.

THE WORK OF THE JOINT MATRICULATION BOARD OF THE NORTHERN UNIVERSITIES

BY

J. M. CROFTS

I. *The Origin of the School Certificate Examinations.*

It may seem a far cry from the theses and disputations of the "Public Examinations" in mediæval Oxford and Cambridge to the highly centralised and extremely complex organisation of a modern School Certificate Examination by which tens of thousands of candidates are now annually tested at the conclusion of the first stage of their secondary education. But our present system of examinations is lineally descended from the arrangements for testing the "determiner," who in the Middle Ages qualified for his degree partly by proving his capacity to answer difficult questions. It was long, however, before the Universities, after developing a scheme of written examinations for their own students, undertook to test by the same method the acquirements of boys and girls in secondary schools.

External examinations in secondary schools date from the middle of last century, when the Local Examinations of the Universities of Oxford and Cambridge were instituted. These examinations held the field for a long time and in spite of the criticisms to which they (and all other examinations) have been subjected, they have exercised in their long career an important influence in setting a standard where before there was none.

Other examining bodies entered the field later: notably the University of London, whose Matriculation Examination, first in the upper forms of the ordinary grammar schools and later in those of the secondary schools of the Local Education Authorities, held a position

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of importance. This position was attained because the examination was the first step towards obtaining external degree, and in spite of the fact that it made no pretence to be a school examination. It became, however, ultimately an end in itself.

The present century, with its insistent demand for increased facilities for advanced education, has seen the founding of numerous "Modern Universities," each with its own Matriculation Examination which has made its influence felt in the schools. In addition, the non-University College of Preceptors and the various professional bodies, with their differing Preliminary Examinations, had already increased the complexity of the system of written tests thus brought into existence.

At the beginning of the present century the position was recognised as intolerable. A boy might have to take three or four different examinations almost simultaneoously in order to safeguard his career.

Various efforts were made to induce the Universities and the professional corporations to recognise examinations other than their own. These efforts were, however, only moderately successful, though an important step forward was the formation in 1903 of the Joint Matriculation Board of the Universities of Manchester, Liverpool and Leeds, to which were added later those of Sheffield and Birmingham. These Universities, instead of having each its own Matriculation Examination, co-operated to institute a common one.

The mere interchangeability of examination was, however, only one of two pressing needs. There was also a strong demand for a more uniform and efficient method of testing the work done in secondary schools. The whole question of secondary school examinations was therefore referred by the Board of Education to their Consultative Committee, and the Committee's report, issued in 1911, laid down the general line of progress which has since

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been followed. It advised that there should be two sets of equivalent examinations, one group of examinations for boys and girls of about 16 years of age, and another group for those about two years older. The examinations within each group should, under certain conditions, be regarded as giving equal value.

In 1918 the Board of Education took action in general accordance with the Report, and made it a regulation that all grant-earning schools should submit all candidates in forms of average age about 16 years to examination by an external body ; for this purpose the Board of Education sought and obtained the co-operation of the principal examining bodies, namely, the Universities, and thus was evolved the First Examination, usually called the School Certificate Examination.

This step in itself did not help the cause of the schools, but the Board of Education appointed a Secondary School Examination Council, charged with the duty of co-ordinating the different School Certificate Examinations and of negotiating with the various professional bodies for the acceptance of School Certificates in place of their own Preliminary Examination Certificates. The Council consists of 19 members including representatives of the eight recognised examining bodies, of the Teachers' Registration Council, of the Association of Local Education Authorities, &c. The present Chairman is Dr. Cyril Norwood, Headmaster of Harrow School.

The Council has been largely successful in inducing the Universities and other bodies to accept the School Certificates granted on the results of recognised examinations, even if the examinations were not conducted by themselves. In so doing it was only carrying further a movement which had previously begun ; the various examining bodies themselves had moved some way in this direction, and their Certificates were accepted, under certain conditions, by professional corporations. Each,

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however, was fighting for itself and the collective bargaining now possible to the Examinations Council is much more effective. The position, however, is not so simple as it might appear. Ideally, the various bodies should accept the Certificate without conditions, but it is difficult to resist the argument of a Faculty of Arts that a pass in Latin at a certain standard is essential, or the argument of the Institution of Civil Engineers that Mathematics must be obligatory. It may be argued that if a candidate enters a Faculty of Arts without an adequate knowledge of Latin, or hopes to become a Civil Engineer without a solid foundation in Mathematics, he will seriously handicap himself in his training and his punishment will follow.

For the Universities, as opposed to the Faculties, to erect barriers is less excusable ; if two Matriculation Examinations are as a whole recognised as of equal standard, the question of choice of subjects appears immaterial. Why should University A refuse to accept a Matriculation Certificate of University B if the latter has as one of the minimum number of subjects General Experimental Science, merely because the Syllabus in this subject differs from that approved by University A for its own examination ? Why should one University refuse to accept the Matriculation Certificate of another if it shows Art as one of the subjects ?

II. *Classes of Candidates.*

The School Certificate Examination serves two main purposes. It tests the knowledge of boys and girls who have attended a secondary school until they are about 16 years of age. From this point of view it is definitely a school examination. But, secondly, a School Certificate under certain conditions qualifies its holder to enter a University. The examination is therefore a Matriculation

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examination and meets the special needs of boys and girls who intend to enter on a University course.

It follows that the large majority of the candidates are pupils from secondary schools who require either evidence that they have profited by a course of secondary education, or evidence that they are fit to enter some University. These two classes obviously cannot be rigidly distinguished from each other, more particularly since matriculation admits to various callings and not solely to Universities. Nevertheless they tend on the whole to belong to rather different types and need rather different treatment. We may call them respectively Certificate and Matriculation candidates.

These two classes do not, however, include all the candidates for whom the examination should provide. Two other groups of students merit consideration. First, there are those people who, comparatively late in life, desire to enter on a University course and who appear likely to benefit themselves and the University by such a course ; they have left their school days long behind them and cannot be expected to prepare for an ordinary Matriculation Examination. The University of London and the Joint Matriculation Board have instituted special examinations for these students : in the case of the latter body the actual examination is quite informal. All candidates are expected to write an English Essay and to present themselves for examination in one or two other subjects at their discretion ; the actual examination rarely lasts more than one day. Every candidate is interviewed by a Committee who decide whether or not he is of the type to whom assistance should be given. This is an important part of the test ; the written papers are used to discover whether the candidate has sufficient knowledge on which to build a University course. In this examination—the *Examination for Persons of Mature Years*—candidates must be 23 years of age, to

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prevent a weak candidate, who was a failure at school, from using the examination as a back-door to the University.

This examination is, therefore, one of a special type. It does not seek to test a definite standard of attainment but only the candidate's capacity for profiting by a course in a stated Faculty of a stated University. It is not a Matriculation examination, success in which is a qualification for entrance to any University, and Matriculation Certificates are not awarded to candidates who pass it. In the same way it is not recognised by any University other than that conducting it, nor by any professional bodies as equivalent to their own examinations.

The second type of student for whom provision has to be made is the youth whose education was that of the elementary school up to about 15 years of age and who then entered business or was apprenticed to a trade. To meet this case the Joint Matriculation Board has provided an *Examination for Persons engaged in Industry or Commerce*. The age limit is 19—fixed so that there shall be no inducement for a candidate to leave a secondary school before completing the course of such a school—and candidates have to show that they have been engaged in Industry or Commerce for three years and have attended systematic courses of day or evening instruction for a similar length of time. Each application to take the examination is considered on its merits; would-be candidates who are engaged in ordinary office work with comparatively short hours are rejected. The examination itself is a formal one and covers four subjects, *viz.*, (1) English, (2) a foreign language, (3) a third subject of the ordinary Matriculation schedule, and (4) the special subject of the candidate in question, such as Engineering, Textiles, etc. Special papers are set in subjects (1), (2), and (4), and the standard expected in (4) is well above Matriculation level. The inclusion of a foreign language in the list of compulsory subjects has been criticised. Experience, however,

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seems to show that the requirement tests the earnestness of the candidate, and there is no evidence so far that any deserving candidate has been failed on account of his weakness in a foreign language.

III. *The Working of the Examination.*

The recognised examining bodies are the Oxford and Cambridge School Examinations Board, the Oxford Local Examinations Delegacy, the Cambridge Local Examinations and Lectures Syndicate, London University, the Northern Universities (comprising the Universities of Manchester, Liverpool, Leeds, Sheffield, and Birmingham), Durham University, and Bristol University : to which must be added the Central Welsh Board. Recognition is extended by the Board of Education on the recommendation of the Secondary School Examinations Council, who conduct periodic investigations into the whole working of the examinations.

In the course of the following pages it will become clear what is implied by the phrase "the whole working of the examinations." The precise methods adopted vary with the different examining bodies, but on the whole they follow the same broad outlines. The actual procedure described in these pages however, is that of the Northern Universities.

One of the main purposes of the School Certificate Examination is to test the candidates' general education and candidates are, therefore, required to show some acquaintance with each of the main branches of the school curriculum. The usual school subjects are therefore divided into groups, and a candidate must pass in one or more subjects taken from various groups. Thus Group I. includes English Composition and Literature, History, Geography and Scripture. Group II. is the Foreign Language group and includes Greek, Latin, French,

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German, and other languages. Group III. is the Mathematics and Science group, and Group IV. the Art and Handwork group with such subjects as Drawing, Painting, Music, Cookery, and Needlework. Book-keeping is also assigned to this group.

There are minor variations in the regulations of the different examining bodies but, ignoring these, a candidate to gain a Certificate must satisfy the Examiners in at least five subjects which must include one from each of Groups I., II., and III. Most examining bodies allow one of the five subjects to be chosen from Group IV. The conditions as to choice of subject are in fact laid down by the Board of Education as essential. In addition, it is usually required that the candidate shall satisfy the Examiners in the examination as a whole, which generally means reaching a certain aggregate by adding together all the marks obtained in the different subjects. This leads to a tendency to reward quantity rather than quality. One or two examining bodies require a candidate to reach Credit standard in any one subject instead of exacting an aggregate.

With unimportant exceptions, no subjects are obligatory, no definite choice is laid down, candidates have to satisfy the Examiners in each of Groups I., II., and III. ; taken as a whole it is true that this can be done, and generally is done, by taking an individual subject of a group to a sufficiently high standard, but it is possible for a candidate to pass in the group on his work in two or more subjects of the group judged as a whole, without reaching a satisfactory standard in the individual subjects judged separately. A candidate who just fulfils the conditions set out above, and no more, receives a Certificate stating that he has satisfied the Examiners in the Groups, but no individual subject is named.

Occasionally suggestions are made to modify the regulations in the direction of what is called freedom of

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choice, *e.g.*, it has been suggested that a candidate need pass in two only of the groups. There is apparently no great demand for this somewhat drastic alteration. Naturally, there are candidates who find difficulty with the subjects of one group or another; this difficulty is most pronounced in Group II., where usually French is the only subject offered from the group. The abolition of the group system would require stronger arguments than those hitherto brought forward: the educative value of surmounting a difficulty must not be overlooked: there is too great a tendency among a certain class of schools to clamour for the removal by external authorities of anything which presents an obstacle, instead of making an endeavour to surmount the obstacle by internal effort.

The standard for this ordinary School Certificate is not high and cannot be accepted by the Universities as sufficient for their purpose: they are willing, however, to accept a higher percentage of marks in a given subject as a pass at the Matriculation standard; this standard in the School Certificate Examination is called the Credit standard. Subjects in which a candidate passes at the Credit standard are mentioned on the Certificate. In order to qualify for entry to a University a School Certificate must show a pass at Credit standard in the required number of subjects, and these subjects must comply with the conditions laid down by the Matriculation regulations. The professional bodies in many cases lay down a certain choice of subjects as necessary for exemption from their Preliminary Examinations some or all of them to be passed at the Credit standard.

In the case of the Northern Universities a School Certificate which does not in itself carry exemption from the Matriculation Examination may be supplemented by success in the Higher School Certificate Examination, and exemption be thus earned.

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Besides the ordinary School Certificate standard and the Credit standard, several of the examining bodies have a third standard, that of Distinction. The number of marks necessary for Distinction is considerably higher than the 50 per cent. or 45 per cent. of the maximum which may be taken roughly as the Credit standard, and the candidates who obtain it are comparatively few.

It is hoped that the Certificate will be of use to the holder in obtaining a post in Industry and Commerce. Employers are undoubtedly beginning to recognise its value and to ask that applicants for a vacancy shall hold the Certificate ; in some cases stress is laid on the Credits and Distinctions which a candidate has obtained. Applicants are sifted out by means of them, and the employers are thereby assisted in finding the type of boy whom they are seeking.

In awarding Distinctions the examining bodies are using the examination for a purpose for which it is not primarily intended. For an examination may be designed to fulfil one or other of two functions. In the conduct of any examination it is important to decide whether we wish to place the candidates in order of merit, singling out those of special excellence, or to find out which of the candidates have reached a definite standard. In other words, is our examination to be a qualifying one or a competitive one ? Undoubtedly the aim of the School Certificate Examination is to find out what candidates have reached a certain stage in their education, it is a qualifying examination and its primary object is to find those who are fit to pass and those who are not. In a competitive examination it is immaterial what happens to the bad or to the indifferent candidate ; we want to choose the best and to make that choice as easy as possible. An entirely different style of test is desirable in this case from that required in a qualifying examination ; possibly too a different scheme of marking is also desirable. The

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School Certificate Examination being of the qualifying type can give us an adequate idea of those who are fit to pass and those who are fit to pass with credit, but it is not suitable for distinguishing between candidates at the top end of the scale ; it is not suited to the task of separating those just worthy of a high-class and those just not worthy.

In dealing with the internal working of an examination the first matter to occupy attention is the Syllabus in each subject ; speaking generally, it is essential that the teacher, the Examiner and the examinee should know the limits within which the test is to be made. It is even more important that the Syllabus should meet the needs of the schools and that it should keep in mind the newest and best methods of attacking a subject—mostly it should follow, sometimes it should lead. To this end the examining body appoints a committee of experts—scholastic and academic—to draw up a new Syllabus or to revise an old one. In the former case or in the case of extended revision the Syllabus is sent to various interested bodies for criticisms and suggestions.

Examiners are, of course, the most important part of the machinery—on them depends the success of the examination itself. They are divided into two classes—*Chief Examiners*, whose duty is to set question papers, to draw up schemes of marking for their Assistants and to revise the marks of the Assistant as may be necessary for the sake of uniformity in the standard of marking, and *Assistant Examiners*, whose chief duty is to mark the answers.

It is desirable that Examiners should be familiar with the standard and character of the work in the schools, and most examining bodies seek the services of men and women who have had teaching experience in secondary schools. Such people, however, do not always make good Examiners; they are naturally more or less expert in their own subject and, as teachers, have brought their pupils to a good standard of efficiency. They compare the examinees

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unconsciously with their own pupils and naturally the former suffer. For this very reason they as Examiners expect too much and consequently are "hard Examiners." The University teacher on the other hand has little or no acquaintance with secondary school work, which is a great drawback. On the whole the University teacher, if caught fairly young, is the most promising material out of which an efficient Examiner can be made, but most examining bodies prefer that he should gain his experience in examinations other than their own.

In all the more important subjects there should be two or more Chief Examiners, who are responsible for setting the question papers. Each Chief Examiner sets a separate paper or a separate portion of a paper and submits his draft to his colleagues for criticism. When agreement is reached the questions are printed and then submitted to an independent critic called the Reviser, Moderator or Referee, who has to answer definite questions as to standard, style, suitability, equivalence of alternatives, whether the Syllabus is adequately covered and so on, as well as to write a report on the paper as a whole and to work out all the problems. This Referee should preferably be an active teacher in a secondary school; his report is considered by the examiners at a special meeting to which he is also summoned. Usually, the final form of the paper is settled at this meeting. If not, and further correspondence with the Referee does not result in agreement, the examining body itself must decide between the Examiners and the Referee. However this may be, a considerable number of experienced people will have approved of the paper in its final form.

The next step of importance is the marking of the answers. With the large numbers now being dealt with, there are, even in the less important subjects, many Examiners whose standard of marking must be brought into line. It may be taken as axiomatic that no two Examiners,

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even Examiners of much experience, will give a set of answers quite the same marks, nor will any Examiner get precisely the same result on the same answers if he marks them himself at intervals of a few months. These are not impressions ; the matter has been tested on many occasions. These remarks do not, of course, apply to a set of answers in, say, Arithmetic, all of which are correctly worked and to which full marks can be given. At the other end of the scale are subjects such as English, History, Composition in foreign languages, and so on. Here full marks are rarely if ever given—the full-marks answer is not so readily apparent as in Arithmetic, and it is with the incomplete or partially correct answer that the difference of opinion as to value arises.

The first step, therefore, is to divide as far as it is practicable, the total marks allotted to a question into parts corresponding to steps in the answer which is to be expected. This is easy in the case of mathematical subjects, of great importance in all subjects especially translation and composition, but presents some difficulty in the case of answers of the essay type which are usual in English Literature, History, &c. The division must be done with care or it will be found that easy parts have high marks allotted to them and the hard parts have received scant recognition. In essays it has been found useful to divide the scripts into classes such as α , β , γ , &c., such classes corresponding to, say, 75-100 per cent., 50-75 per cent. and so on : the actual essay being given high and low marks in its class, according to merit.

These matters are arranged before the papers are answered and corresponding instructions are sent with copies of the questions to all Examiners, shortly before they receive their batch of answers so that they may become acquainted with them. As soon as possible after the answers have been received, all the Examiners meet together to discuss the types of incomplete and incorrect

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answers they have received and to alter if desirable the detailed instructions for marking. With at least one examining body all the Assistants there and then value on the new scale ten to a dozen scripts chosen by the Chief Examiners, all valuing the same set of answers. Variations—and there always are variations—can then be traced down to their source and that source eliminated.

The panel then disperse and begin their marking. Towards the end of the period allowed for marking, the Chief Examiners in each subject attend at headquarters and re-mark a certain number of scripts already marked by each Assistant Examiner. They report on these to the examining body and suggest what alterations, if any, are necessary in order to bring the marks of any particular Examiner into accordance with the general standard. They can at the same time make valuable remarks on the way in which the Assistant Examiner has done his work.

The answers all having been marked and the marks standardised as described above, they are copied on to "broad-sheets" so as to show each candidate's complete performance in the examination. Then come the Awards. Those candidates who have clearly fulfilled the conditions, or have failed to do so lamentably, present no difficulty; the remainder who have failed only slightly and are referred to generally as "doubtful cases" are subject to further consideration. This consideration is justified on the grounds that Examiners' marks are not, and do not pretend to be, accurate within very narrow limits, and that a candidate may have failed to do himself justice in the examination because of ill-health or other inevitable external factors. Of course, there are candidates who, owing to the variations inseparable from an Examiner's marking, or owing to what might be termed "the luck of the paper," have received more marks than they might have been expected to receive. Logically the cases of these candidates should be subject to consideration,

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actually they are not, and they are allowed to stand as having passed. At any rate they have risen to the occasion and on this account may be said to have deserved their success.

The "doubtful" cases are looked at from two points of view. (1) Can the slight failure in one subject be overlooked on account of good work in other subjects? In the language of the examination, can the candidate be given a pass by compensation? In dealing with such cases it must be borne in mind that the subjects of the examination are divided into groups of more or less allied subjects, and a pass in each group is demanded as well as a pass in five subjects: now supposing that a candidate has fulfilled the former condition, and has passed in four subjects but has failed by a few marks to reach the standard demanded in a fifth subject, it is reasonable to allow for this slight failure if the other subject of the group is of good standard, or if the other marks are good.

If, however, a candidate has failed in a group, even if only by a few marks, this is a more serious matter; the candidate shows weakness in one side of his education; compensation in such cases is only rarely applied, the argument being that weakness in French, for example, is not helped by strength in Geography. A special case of this kind which is in a somewhat different category sometimes occurs—a candidate presents two subjects in a group and fails slightly in both. Compensation is readily applied on the grounds that a slight failure in, say, Latin, combined with a slight failure in French may be regarded as sufficient to pass the candidate in the group.

There appears to be considerable confusion in the minds of some persons about the question of compensation; it cannot be too strongly emphasised that only failures by a few marks are condoned in this way. It happens comparatively frequently that a school asks why a candidate with, say, 55 marks in Latin and perhaps 50 marks in

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French, is not regarded as having passed in Group II., 100 marks being the pass standard in a subject, while the marks gained in the group amount to 105. Every examining body would regard this performance as hopeless and as indicating an entire lack of grasp of the elements of either subject. In all subjects there is a limit below which the examining body will not go when considering the question of compensating for weakness.

(2) The second way in which the decision in "doubtful cases" may be revised is by taking into account the estimate formed by the school authorities of the candidates' probable performances. All schools are invited to send in an estimate, based on the school record, of what each candidate is expected to do in the examination; formerly in the case of most examining bodies the submission of these estimates was obligatory on all schools entering candidates; the regulation, however, is quite unpopular with many schools, who state that they are content that their pupils shall stand or fall by the examination results alone. Now that the submission of the estimates is optional probably less than 75 per cent. send in such estimates. One reason given by schools for not submitting estimates is that the estimate may of itself fail a candidate. This is an entirely mistaken idea; every candidate whose estimate is referred to has already failed; if there is an estimate this may be sufficiently in his favour to justify the award of a pass, if it is not, he is no worse off than he was before. No candidate already passed by the examination is failed later on because his estimate shows that he was not expected to do as well as he did.

The utility of these estimates varies enormously with the schools sending them in. A comparatively small minority submit estimates approximating closely to the examination marks; the fact that such a close forecast can be made, even if only by a few schools, is an indication that the examination is not such a lottery as may be supposed.

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On the other hand, many of the estimates are of little value. It is a fact that school after school will submit estimates in which it would appear that no candidate in any subject was expected to attain less than a pass, and in the case of some schools, a Credit standard : the custom is so widespread that it is clear that all the candidates affected cannot really have been expected to reach this standard. Doubtless this somewhat immoral proceeding is due to the excellent but mistaken idea that thus a candidate's chances will not be prejudiced. In all cases the main point to which the attention of the examining body is directed is the position of a particular candidate in his form : if, for example, candidate No. 13 is shown to be placed between candidates 12 and 14 by his school, but actually his marks put him level with candidate 20 or 21, he has evidently done himself less than justice, and allowance can be made. This is a simple case, and can be settled whether the school regards its candidates as all swans or all geese. The case is not always so simple ; these border-line candidates crop up most frequently in schools in which there is a considerable lack of correlation between the estimate and the examination result.

This state of affairs is much to be deplored. At first sight the blame will be laid at the door of the examining body, but it is claimed that if some schools can send in estimates which agree with the results within reasonable limits (and for this see page 000), such positive evidence is of great value as showing that all schools should find the matter within the limits of possibility.

It is somewhat difficult to say why it is that some estimates differ greatly from the examination results, but it may be suggested that (1) in some cases the forecast is based solely or mainly on the result of a school test, which may cover only part of the Syllabus and which may not be so independent a test as an external examination ; (2) in other cases no endeavour has been made to correlate the

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standard required in school work with that required by the examination ; (3) in a few cases it would appear that one person's judgment only has been consulted in making the estimate, and that person's judgment is not altogether reliable.

From first-hand experience of the subject it is suggested that better results would be obtained if the estimates were based mainly on the general impression of all those who have had the candidates under their care for some years, who know their characters and idiosyncrasies, their strength and their weakness, and how they behave when called upon to face the test of an examination.

The order of merit of the candidates as estimated by the teacher and the order as shown by the examination results can be compared by a process known as correlation. The co-efficient of correlation is an index number which gives a measurement of the amount of agreement between the two orders of merit ; complete agreement is shown by the index number 1, complete disagreement gives a co-efficient of -1, halfway between these two values the co-efficient 0 indicates no sort of agreement whatever, that is to say, the examiner does not place last the candidate whom the teacher put first, but assuming that one of the two orders is correct, the other is just random.

The co-efficient of correlation has been calculated in the School Certificate Examination from the latest figures available for a large number of schools in most of the subjects of the examination.

French is rather unexpectedly a competitor with Mathematics for the first position ; the extremes are not so wide as those encountered in the case of Mathematics and the average is appreciably higher, reaching .77 ; it is an interesting fact that the French question papers for the year under discussion were the subject of much criticism.

Considering that in the examination in question Mathematics consists of three papers, each marked by

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different Examiners, the agreement is good ; there are a few cases where the value drops below .5, the average is about .74 and in some cases figures over .9 are obtained. In this connection it may be stated that a co-efficient of .66 is regarded as indicating a very satisfactory amount of correlation.

As a rule, the agreement is good in Foreign Languages and in Mathematics and Science subjects ; in History and in English Literature the average is about .6 and the limits are not wide. The poorest results are given by English Composition in which subject it is rare to obtain a good figure and a very small percentage gives a negative value. This is only what would be expected from the nature of the test : " taste " enters into the Examiners' calculations—it is a question of opinion as opposed to facts. If an essay test is to form part of an examination of any character, it must be used with the greatest care. It is quite clear that a high percentage of marks cannot be required for a pass and we must be quite sure what sort of thing we require as a minimum performance. It is very important that the whole panel of Examiners also must be quite clear on the point. If an English Essay is a compulsory part of an elementary examination it follows that we can insist only on elementary points. Roughly, an Examiner may mark for matter and manner, and if the test is one of writing respectable English, matter may be regarded as of secondary importance, and manner, that is, neatness, spelling, grammar and clear simple English, form the minimum for which he seeks.

The co-efficients obtained from Science subjects form a group midway between those calculated for Mathematics and French on the one hand, and English and History on the other. We get, in fact, some sort of rough correspondence between the groups into which the index figures fall and those into which the distribution curves for the various subjects can be divided. There would

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appear to be room for improvement in the results for Elementary Science subjects.

One rather noteworthy feature is the value of the correlation co-efficient for Art. Here one would be inclined to expect that correlation would be lower and variations wide ; at any rate, one does not associate the artistic temperament with constancy. But in this examination the teachers and Examiners agree closely in their estimates and the candidates themselves fulfil expectations.

In the case of those subjects in which correlation is not good, there is little doubt that question papers of the new type mentioned on page 000, would effect an improvement. But in the subject in which improvement is most needed, namely English, including Essay and Literature, such a paper would not be easy to set ; though the attempt should be well worth while.

To sum up, the agreement between Examiners' results and the teachers' estimates is on the whole distinctly good as regards the placing of the candidates ; neither side would claim to be infallible, and there are the usual accidents of health and temperament which prevent the fulfilment of estimates : complete agreement is not then to be expected ; but it is to be hoped that neither side will be content with the correlation at present shown, good as it is.

It has been urged that much easier papers should be set than is customary in the various School Certificate Examinations and that the percentage required for Credit should be raised to 60 or more ; the percentage required for an ordinary pass might also have to be raised. The main argument in favour of this change is that the average boy and even the weak boy would have a much better chance of showing his capabilities and that even with the good candidate it is better to award marks for correct answers than to distribute what are known to Examiners as "charity marks." Against it is the fact that the really

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good candidates will all be bunched together, and that it would be difficult to award Distinction, and on this ground most of the schools would be against the change.

It may, however, be suggested that a combination of an easy question paper and of one conforming to the ordinary type would lead to satisfactory results. The complaint of all Examiners and of the general public is that when candidates are tested there is an appalling lack of accuracy in all branches of the school curriculum ; teachers employed in the schools themselves deplore it, though they feel themselves powerless, in view of outside influences, to do anything adequate to check it. The examining body could do a great deal to counteract this lack of definiteness if the examination paper were divided into two parts, Part A and Part B. The former to test accuracy and speed, the latter to test intelligence.

In Part A it is suggested that a large number of questions of simple type, dealing with facts as such and requiring answers of two or three lines only might be set ; the answers to these questions would be right or wrong, would be awarded full marks or nothing— no “ charity marks ” or marks for method would be given. If a candidate cannot do satisfactorily on this part he does not know the elements of the subjects and no complaint can be made if he is ploughed. Part B would contain questions similar in type to those at present set. Full marks on Part A would just bring a candidate to the ordinary pass standard but no candidate could reach the Credit standard unless he acquitted himself moderately well in Part B : of course it will be gathered that a candidate could obtain Credit by doing sufficiently well in Part B alone.

This scheme is being applied to some extent in Mathematics by one examining body and the results will be watched with interest : there is no insuperable difficulty in the way of applying the scheme to other subjects at the School Certificate stage.

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It has been suggested that certain schools might under approved conditions give their own certificates without submitting their pupils to an external examination. Such a system, it is claimed, would give the schools greater freedom and also produce more reliable results. For the schools know their own pupils and can assess their merits better than any outside Examiner can do. The proposal is clearly one of extreme importance and if adopted would revolutionise the method by which School Certificates are awarded. Whether the results would be more dependable than those obtained by the existing system is, however, doubtful. For the schools which are most successful in the present examination send in estimates of their pupils' work which correspond closely to the marks which the Examiners award them. It is the less efficient schools whose estimates differ widely from the examination marks. The examination is far from being a complete or infallible test of knowledge, but these facts show that as now conducted it assesses knowledge perhaps inaccurately but within limits rightly.

There is no evidence at present that it would be advisable for schools to grant their own certificates, and it would be an impossible proceeding to divide the schools into those who were and those who were not allowed to do so.

IV. *Standardisation by Curves.*

The method of standardisation described above is directed towards maintaining a constant standard of marking among the examiners engaged in any one subject. It does not balance one subject as against another, and it does not balance the results of one year against those of the previous year. Of course, the Chief Examiners are men of experience but the more experience a man has the less will he regard himself as capable of setting a paper

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which will give the same results as a paper set in a previous year. Now in any examination of importance it is in the highest degree desirable that a definite standard should be maintained from year to year—that it should not be easy to pass last year but very difficult this year ; or that such-and-such a subject should not be regarded as an easy one in which to pass, in other words as a “ soft option.” Those who have most experience of examinations state frankly that where the numbers of candidates are large and drawn from a large area, the standard of such candidates in the mass is less liable to variation than are the standards of the Examiners.

This leads one boldly to the statement that in dealing with large numbers of candidates the percentage passing in any particular subject should be more or less constant from year to year. Then follow the two questions “ What should this percentage be ? ” and “ How can it be maintained ? ” It should be remembered that we are not dealing with a single subject examination but with a minimum of five subjects, and an average, probably, of 7.5 subjects. Some of these subjects may concern only small numbers of candidates and variation in the pass percentage is frequent and understandable. It is difficult, therefore, to fix from statistical considerations either what the percentage pass in any subject should be or what it should be for the whole examination. We are not attempting a mathematical treatment of the subject, but only a general review. Let us, therefore, look at the matter from a general point of view.

When the School Certificate Examinations were first established, most of the people concerned were really in the dark as to the percentage of candidates expected to pass ; in a Fifth Form of well-prepared pupils with a four-year course behind them it was thought that something approaching 90 per cent. should gain certificates. But other factors intervene ; for instance,

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from grant-earning schools candidates are not to be picked for the examination, but the whole Form must be submitted and in all big schools there are some Fifth Forms wholly comprised of pupils whose bent is not academic ; in all Forms there is a " tail " ; country schools with small numbers and restricted staff cannot be expected to be as efficient as the large town schools ; ill-health and other causes interfere. In fact over all the recognised examinations the figure is in the neighbourhood of 66.6 per cent. and no great variation from this figure is shown by the individual examining bodies who have arrived at the figure by empirical methods.

An analysis of the causes of failure throws considerable light on this somewhat disappointing figure. Over roughly 14,000 candidates 33.6 per cent. failed, but 16.9 per cent., *i.e.*, almost exactly one half of the failures were candidates who were marked to fail on three or more counts—these may be regarded as hopeless candidates who ought never to have been sent in for the examination. Eliminating these we have a pass of 80 per cent. (*i.e.*, 66.4 out of 66.4 + 16.7). Figures of other years are in remarkable agreement with this. 80 per cent. is not an unreasonable figure and it should show a slow but steady rise.

Taking the figure 66.6 per cent. actually obtained in the examination as a whole, what average percentage of pass in the different subjects is required to give this figure ? Now in all the School Certificate Examinations there are other conditions to be fulfilled besides passing in the five subjects. Some require English, others Arithmetic or Mathematics to be included ; some require a pass in the examination as a whole, which means usually that a total must be obtained in the five subjects greater than the aggregate of the minima in those subjects ; others require at least one pass with Credit to be included. The matter is therefore complicated. Again, therefore, we may

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have recourse to facts, and we find in the main subjects the figures approximate to 50 per cent. passing at the Credit standard. In fact, taking the examining bodies whose numbers are large, and taking their average over four years, we find that in the eight chief subjects the percentage pass at Credit standard is 49.9.

It may be asked why we should trouble about the Credit standard when this is not the standard required for a School Certificate. To begin with, the Credit standard is of importance owing to the fact that it is recognised by Universities as the Matriculation standard and by professional bodies as the standard of exemption from their preliminary examinations; further, what is of more importance, the percentage at the Credit standard being known, that at any other standard can be deduced from the curve of distribution.

The curve of distribution is a graph showing how many candidates obtain 5, 10, 15, or 20, &c., per cent. of the maximum marks. Let us suppose that there are 100 candidates in a subject for which the maximum mark is 100. We may find on examination of the mark list that :

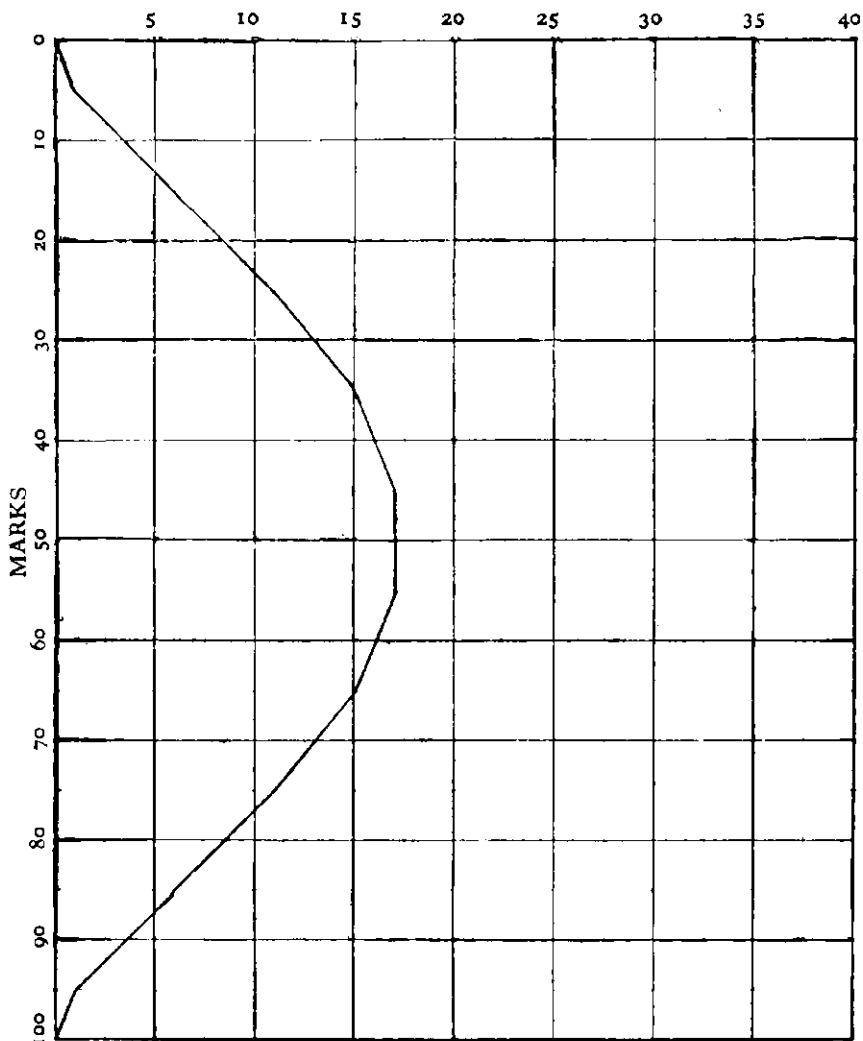
1	candidate	gets a mark	which is	between	0	and	9
6	candidates	get marks	which are	between	10	and	19
11	candidates	get marks	which are	between	20	and	29
15	candidates	get marks	which are	between	30	and	39
17	candidates	get marks	which are	between	40	and	49
17	candidates	get marks	which are	between	50	and	59
15	candidates	get marks	which are	between	60	and	69
11	candidates	get marks	which are	between	70	and	79
6	candidates	get marks	which are	between	80	and	89
1	candidate	gets a mark	which is	between	90	and	99

These marks show a regular rise and fall and are shown graphically in Figure No. 1.

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FIG. 1.

NUMBER OF CANDIDATES IN 100



Now 100 candidates is much too small a number to give regular results, but if a large number of candidates is dealt with a curve of the above type is obtained in the case of Mathematics, Science, and, for elementary examinations, Foreign Languages. This is called the

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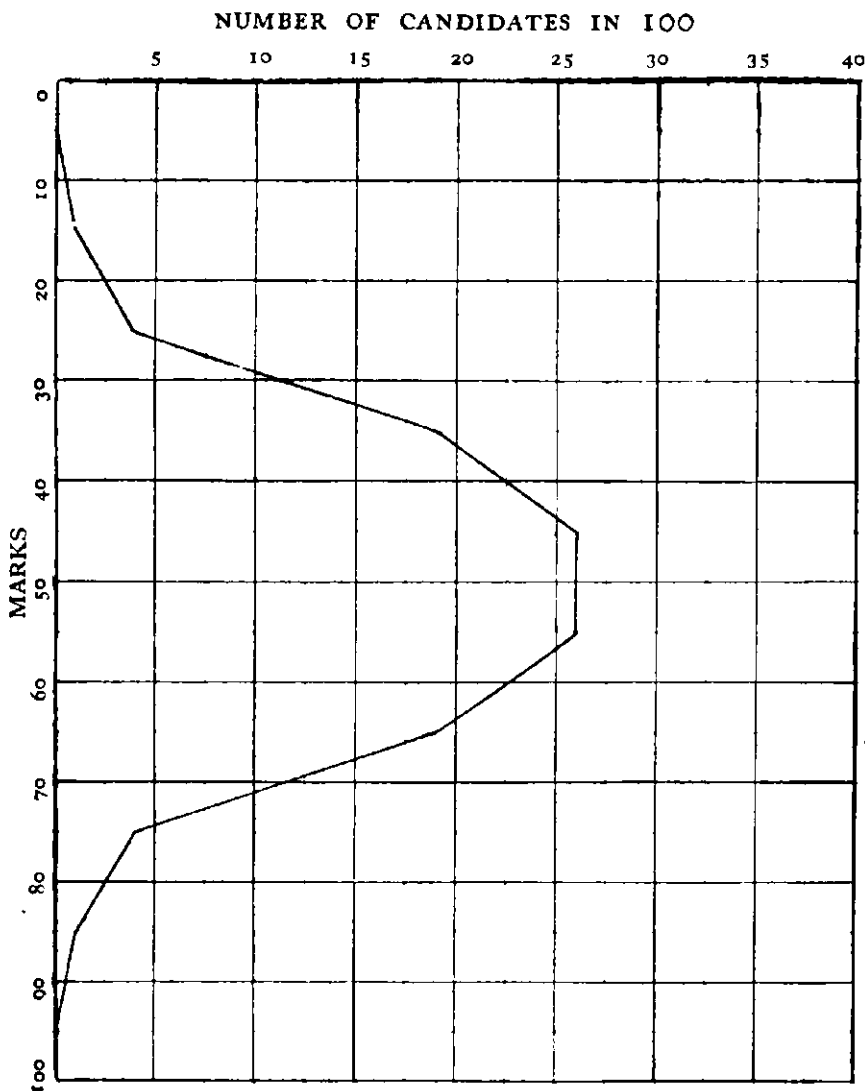
Pearson Curve after Karl Pearson, the famous statistician who has dealt with cases of this nature both mathematically and practically. Here no attempt will be made to deal mathematically with the subject ; we will accept the statement that the above is the normal type of curve for the subjects stated. If anyone takes the trouble to draw the curve for any examination for which he can obtain marks, bearing in mind the fact that several hundred candidates at least must be dealt with, he will probably not obtain a perfectly symmetrical curve. If the highest point of the curve is displaced to the left, the paper was too difficult for the mass of the candidates, if to the right, too easy. The most usual malformation is to find the majority of the candidates bunched in the middle—this is mainly the fault of the Examiners in marking the answers : there is always a tendency to be niggardly in awarding really high marks for good work ; too much is expected. How often will anyone, teacher or Examiner, give full marks for an essay, or a piece of prose composition ? On the other hand, Examiners are soft hearted, and many marks are given out of charity and have not been earned. Another variation from the normal is occasionally met with, namely, a curve with two summits. This indicates that the paper has not suited the mass of the candidates—the fault can be put down to the Examiner who has not covered the Syllabus properly or has not set questions of the right standard.

The curve described above applies to Mathematics and Science chiefly : in subjects such as English or History one gets a curve of a different shape. (Figure No. 2.)

The curve shows a bunching together compared with that on page 130, but this the nature of the subjects leads one to expect. In Mathematics, at the stage at which we are dealing, it is possible for a candidate to obtain full marks ; no candidate is likely to obtain full marks in English or in History.

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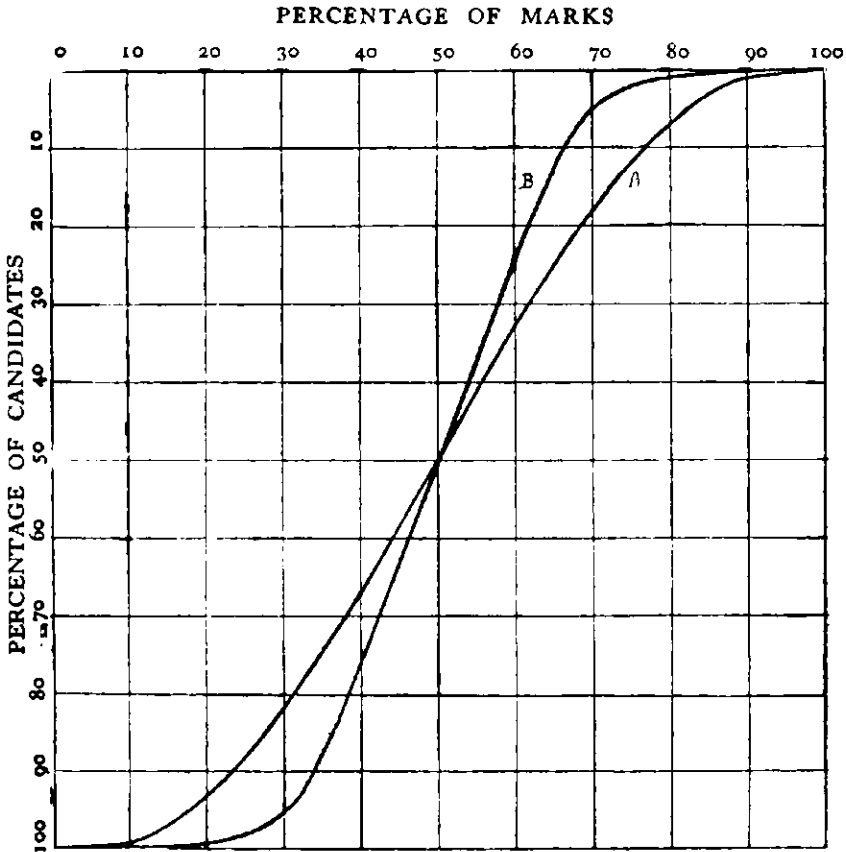
FIG. 2.



It is not to be supposed that the distribution of marks in different subjects conforms to one or other of these two types ; variations occur in the different subjects, and in the same subject from year to year. Again, what may be true of an examination of School Certificate standard may

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FIG. 3.



not be true of the same subject at a different standard. As an example, take the case of French : one would on *a priori* grounds have expected the French curve to conform to the English type, but actually it follows fairly closely the Mathematical type and a moment's reflection will show us why this is so. In answers to an elementary French paper, the parts of the answers sent in by a candidate can be easily classified as right or wrong, whether we are considering grammar, elementary composition, or easy translation. Examiners are not concerned at this stage with any niceties of taste as they would be in a more

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advanced examination. The moment that the question of " style " is introduced, then we get variation in standard as between different Examiners, with its accompaniment of a bunching of the marks. To put the matter another way, where there is only one answer possible to a question, full marks can be given where that answer is correct ; if, however, many correct answers are possible or, as in questions of style, an Examiner's personal taste enters, full marks are rarely given—the candidate might in History have mentioned so-and-so, in Latin he might have given a better rendering—and always comparatively few candidates get high marks or low marks, they are grouped more closely round the medial.

Both the varieties of curve give 50 per cent. of the candidates obtaining 50 per cent. of the marks ; this is interesting in view of the statement on page 131. Actually most curves show a slight displacement to the left and it is significant that the standard demanded for Credit with most examining bodies is in the neighbourhood of 45 per cent.

The figures given on page 129 can be expressed in another way.

- 1 candidate obtains marks which are between 90 and 99.
- 7 (*i.e.*, 1 + 6) obtain marks which are between 80 and 99.
- 18 candidates obtain marks which are between 70 and 99.
- 33 candidates obtain marks which are between 60 and 99.
- 50 candidates obtain marks which are between 50 and 99.
- 67 candidates obtain marks which are between 40 and 99.
- 82 candidates obtain marks which are between 30 and 99.
- 93 candidates obtain marks which are between 20 and 99.
- 99 candidates obtain marks which are between 10 and 99.
- 100 candidates obtain marks which are between 0 and 99.

From this we can obtain a different type of curve, Curve A in Figure No. 3.

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Curve B is obtained similarly from the figures for English and History subjects. These curves are called Bryan Curves after another distinguished mathematician, Professor Bryan.

The Bryan Curves enable us easily to find how many candidates obtain 30 marks out of 100 or 35 marks or whatever may be the figure demanded for a pass at the School Certificate stage. At the other end 5 per cent. of the candidates in A subjects obtain 82 per cent. of full marks, but 5 per cent. of candidates in B subjects succeed in getting only 70 per cent. of the marks. Obviously, therefore, if Distinction is awarded to candidates who get high marks, it is not fair to require the same percentage of marks to be gained in English as in Mathematics.

Most curves in actual practice differ from the examples given above, which may be regarded as the normal, but in a well-conducted examination they will be found to be more or less parallel to the normal, although the extremities may show greater variation. For the mass of the candidates the curve is almost a straight line and the effect on the number passing of raising or lowering the percentage required for a pass can easily be seen. For example in Curve B if 50 per cent. of the maximum marks is the Credit standard, 50 per cent. of the candidates pass at this standard, if 45 per cent. is the Credit mark, 63 per cent. are successful. From the normal curves the probable effect which the slight raising or lowering of all the marks would have on both the pass at Credit standard and the pass at School Certificate standard can be calculated. A way is thus indicated by means of which the percentage pass in any one subject can be made constant within small limits from year to year.

V. Differences in the Performances of Boys and Girls.

Dealing still with the School Certificate Examination of the Joint Matriculation Board, some interesting results

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have been obtained by comparing the examination returns of boys and girls. To begin with, there is a distinct difference in age between the two sexes ; the average age of boy candidates is about 16 years 4 months, and of girl candidates 16 years 11 months. Apart from this difference in age, there is a popular idea that the examination presents more difficulties to girls than to boys. The results do not bear this out.

A table has been made showing the difference in the percentages of boys and girls who pass at the Credit standard in the various subjects of the examination: the figures taken over four years show, in several subjects, a constancy which is really remarkable. Take first the case of English Literature ; here the popular view that girls excel is confirmed. The figures for four years are given below : they give the difference between the percentage of girls who reach Credit standard and the percentage of boys who reach the same standard.

	1922	1923	1924	1925
English Literature ...	17.0	19.3	16.9	17.0

The advantage gained by girls in English is counter-balanced by the advantage which the boys have in Mathematics.

	1922	1923	1924	1925
Mathematics	19.6	17.3	18.5	18.7

These two subjects are the most important in Group I. and Group III. respectively. The other compulsory Group is Group II., where French is the outstanding subject : here again the girls have an advantage, though this time it is small ; the figures for the last four years are :

	1922	1923	1924	1925
French	-0.8	2.4	2.9	1.7

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In Latin the balance is also slightly in favour of the girls ; in German, where the numbers of candidates are smaller, the figures are somewhat irregular, but show a much bigger balance for the girls.

One or two other subjects may be mentioned History, which, as has been pointed out elsewhere, is a difficult subject to mark, gives for the four years the following percentages in favour of girls :

	1922	1923	1924	1925
History	5.7	5.3	4.3	6.5

Other subjects for which the number of candidates is large are shown in the following Table which shows the difference between the percentage of boys reaching the Credit standard and the corresponding percentage of girls :

	1922	1923	1924	1925
Geography	1.4	0.9	3.4	5.5
Scripture	24.7	28.0	25.2	23.8
Latin	-9.2	2.3	5.1	2.7
Physics	25.1	19.2	21.2	18.0
Chemistry	19.6	14.3	6.9	9.0
Art	4.7	4.2	3.6	2.5

In the above subjects the boys come first in Geography, Physics, Chemistry and, somewhat unexpectedly, in Art. Where a minus sign appears in front of a figure it indicates that the advantage that year was with the opposite sex. The only subject of importance not included in the list is Botany, in which in 1925 there were 3,789 candidates, only 71 of whom were boys and hence the percentages for this subject would be of no value. The variation in the figures for Physics and Chemistry may indicate that these subjects are not very suitable for girls.

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Taking into consideration that the examination was a rapidly growing one, and that the regulations were rarely constant in any one of the subjects, the steadiness of the figures given above is very noteworthy. Evidently there is a constant ratio between the sexes for each subject, and the examination, even if its actual aims may be criticised, is a test of constant value. The figures strongly support the suggestion previously made, that with a large number of candidates the standard in the mass may be regarded as approximately constant from year to year.

It is seen, therefore, that girls have a decided advantage in Group I. and a moderate advantage in Group II., while boys do much better in Group III., which judging by the figures is a better group for them than Group I. is for girls. On the whole, however, it would appear that their chances of a pass are nearly equal and this conclusion is borne out by the following figures :

Percentage of candidates gaining a Certificate.

	1923	1924	1925
Boys	69.8	63.9	66.2
Girls	71.3	65.6	66.4

It might be instructive to give the total numbers of boys and girls taking the examination, as percentages.

	1923	1924	1925
Boys	47.8	47.5	47.7
Girls	52.2	52.5	52.3

Girls, therefore, have a slight but diminishing advantage in the examination taken as a whole.

If, however, the percentages of those gaining a Matriculation Certificate (*i.e.*, roughly speaking, attaining

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Credit standard in five or more subjects chosen according to a certain schedule) are compared, a different state of affairs is shown.

Percentages of candidates gaining a Matriculation Certificate.

	1923	1924	1925
Boys	32.7	29.5	33.1
Girls	24.0	20.3	24.9
Differences	8.7	9.2	8.2

These figures show a marked superiority for the boys which does not vary very much for the three years for which figures are available. This more meritorious performance might be due to several causes.

1.—The difference in the number of subjects presented by the boy or girl candidates. Figures do not support the suggestion that the difference is due to this cause.

Average number of subjects taken by candidates.

	1923	1924	1925
Boys	7.47	7.51	7.33
Girls	7.22	7.13	7.08

2.—The better average performance by boys. There is some evidence to support this view.

Average number of Credits.

	1923	1924	1925
Boys	4.50	4.43	4.66
Girls	4.13	4.21	4.34

3.—The small number of girls who obtain Credits in several groups so that only a few girls gain many Credits. This suggestion is supported by statistics.

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Percentage of candidates gaining five or more Credits.

	1923	1924	1925
Boys	50.6	53.1	54.1
Girls	43.1	44.9	46.6
Differences	7.5	8.2	7.5

These figures show a constant appreciable difference in favour of the boys ; and as they include Group IV. subjects which appeal more to girls than to boys, the differences in percentages when calculated only on subjects of Groups I., II. and III., would be more marked. Further, it is to be remembered that at present only one subject from Group IV. can count towards the five subjects forming the minimum requirement for a Certificate.

It appears then to be true that the girls show a tendency to specialisation compared with the boys : one might say, for example, that the girls who obtain Credit in English Literature are not the same as those who obtain Credit in Mathematics—with boys this is not true to the same extent : their examinational attainments are of an all-round character.

VI. *The Higher School Certificate Examination.*

What has been said about the First Examination applies to the Second, or Higher School Certificate Examination to a very large extent. This latter examination, however, presents some special problems of its own, the most important of which arises from the fact that it is not only a pass examination but also a competitive examination, inasmuch as it is used by the State and many Local Education Authorities for the award of Scholarships.

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Further, the examination tests a more or less specialised course of study and there are no subjects which are taken by practically all candidates, as is the case in the First Examination.

We have, therefore, candidates taking entirely unrelated combinations of subjects, for example, one candidate presents Greek, Latin and Ancient History, another presents Mathematics, Physics and Chemistry, and it is essential that both for pass purposes and for Scholarship awards the chances of the two classes of candidates shall be equalised. This is a very difficult problem. It has already been stated that it is difficult to get any two Examiners to mark to the same standard on the same question paper and much more difficult to maintain the same standard from year to year.

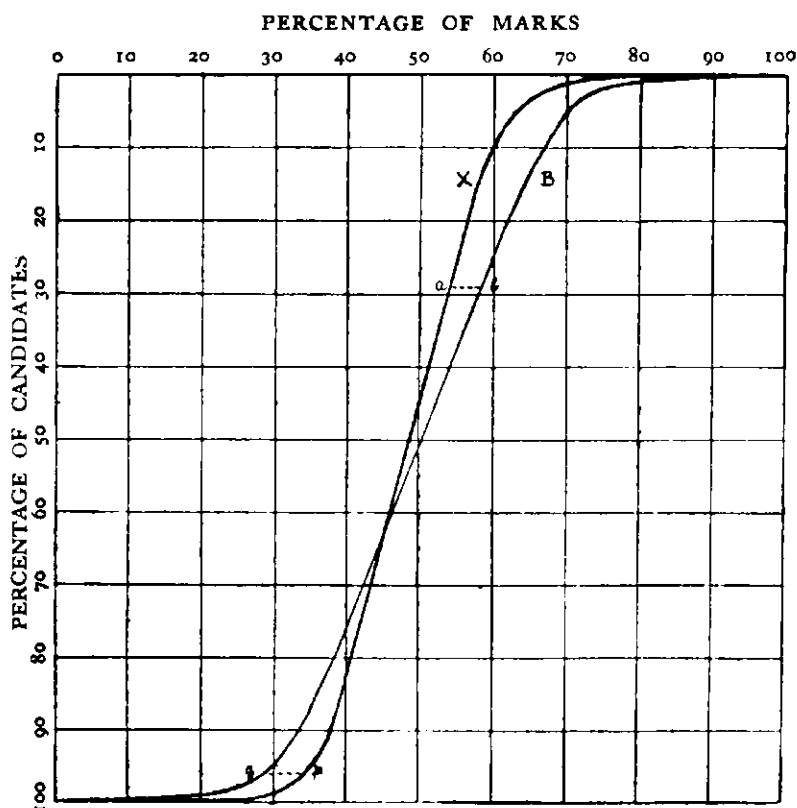
The first difficulty can be overcome when as in the Second Examination the numbers are comparatively small, because one Examiner can mark the whole of the answers to one particular paper, or, if this is not possible, the paper can be divided into Parts A and B, the answers to A going to one Examiner, and those to B to another. The Examiners employed are always those who are regarded as the most reliable by the examining body, and they probably do not vary much in the course of their marking. We may, therefore, say that the marks in Greek represent fairly well the relative merits of the candidates taking that subject, and the same can be said of Mathematics, or any other subject. But the question is: Are x per cent. of the maximum marks easier or harder to gain in Greek than in Mathematics, or does this percentage represent the same effort in each case? There is no doubt that if the actual Distribution Curves (see page 130) are drawn for the different subjects it will be found that there is very little correlation, even where the number of candidates concerned is considerable. It may be that the top candidate in Mathematics will get

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95 per cent. of the maximum while the top candidate in English obtains only 80 per cent., and yet there is no reason to think that the first boy is intrinsically better than the second boy. Again, we may find that in French only 40 per cent. of the candidates get half marks and over, while in Botany 60 per cent. achieve this result. Are we to conclude that the standard of French is poor and that of Botany good, and that therefore the Scholarships should go to the Botanists?

We are bound to assume, where the numbers are large, that the candidates taking a particular subject are similar

FIG. 4.



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in abilities to those taking any other subject. That being so we must endeavour to equate their marks. A method of doing this is furnished by the Bryan Curve. Suppose X (Figure No. 4) represents the distribution of marks as sent in by the Examiners in a certain subject, and let B be the normal curve for that subject.

Compared with the normal it appears that the good candidates have not received such high marks as might be expected, while at the other end the poor candidates have received too many "charity marks." The curve also shows that only 43 per cent. of the candidates obtain half marks and over, whereas 50 per cent. should do so, that 10 per cent. obtain 60 marks out of 100, whereas about 25 per cent. should do so. At the lower end 90 per cent. of the candidates receive 38 marks out of 100, whereas only about 80 per cent. should do so.

These considerations suggest to us a means whereby we could correct curve X to the normal. For example, every candidate who obtains 40 marks ought to obtain 37 marks; every candidate who obtains 65 marks ought to obtain about 72. If, therefore, we find the place of each candidate on curve X we must add to, or subtract from him, the marks represented by the horizontal distance between his position on curve X and the normal, *e.g.*, a candidate with 54 marks should have added to his total the marks represented by the length of the line a—b, *i.e.*, 4 marks, making his total 58. Again, 34 marks must be *diminished* by marks represented by the line p—q, *i.e.*, by 5 marks, making the new total 29.

Making these alterations in all subjects we should in the end have made the Distribution Curves in all subjects identical and we then have the same percentage of candidates getting high marks in each subject, *e.g.*, 5 per cent. of all candidates in each subject receive 70 or more of the maximum marks.

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Other methods can be adopted for standardisation ; the above has been described as it represents the course followed in various competitive examinations.

The standard curve B in the diagram is the Bryan Curve for English subjects, but any arbitrary curve might be taken so long as the distribution of marks in all subjects is made to conform to it.

One of the difficulties met with in applying this method is that presented by subjects with a small entry : the number of candidates is too small to give a good curve of any kind though it may easily be seen that the marks are running higher or lower than the arbitrary curve, as the case may be. Other considerations must be taken into account before deciding whether this tendency is justified or not. It is easily understood that, where the entry is small, the marks usually run high because the few candidates concerned are picked candidates, otherwise they would probably not be venturing on the subject. Ought we, for these perhaps exceptional candidates, to allow a distribution which gives higher marks than our standard, and, if so, how much higher? Exceptional action may be justified by the circumstances of the case.

These various adjustments having been made we can look at a candidate's results as a whole without having an uneasy feeling that any particular subject is having more weight in the final result than any other subject : we have, as far as we are able, standardised the marks in the different subjects, and what is more we have standardised the marks from year to year : our percentage pass in the examination as a whole should be fairly constant provided that no changes occur in the regulations governing the examination.

VII. *Some General Considerations.*

The opinion has been expressed that the examination system is for the present the most satisfactory method by

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means of which to award School Certificates ; such a statement does not imply and is not meant to imply that the examination system approaches perfection or that one can rest satisfied with its present rough measurements. The condition of affairs is continually changing, new Syllabuses, new methods of teaching, new methods of examining, all make alterations and adjustments necessary in the machinery of examination.

An examination affects a school in various ways. It prescribes a choice of subjects which in the examinations under discussion is laid down by the Board of Education, though it is not thereby free from criticism ; it prescribes a Syllabus of work in each subject, and may therefore seriously affect the work in the school : rigid, out-of-date Syllabuses must be avoided. The type of questions set in the examination may not be in accordance with modern methods of teaching. Undue emphasis may be laid on points which from the school point of view may not be important : the standard exacted may be too low to encourage effort, or too high to stimulate endeavour, and so on. It is frequently alleged that examinations encourage cramming, and on occasions lead to overwork. Cramming is a much abused word—if by cramming one means a thorough grounding in elementary fundamental facts until they become almost part of the child's nature, then some of us must plead guilty to possessing a sneaking regard for it. A candidate should not be in doubt of the fact that twice two makes four—is the absorption of that fact cramming ? The Taj Mahal has doubtless a very solid prosaic foundation. Further, while human nature remains as it is, most of us require a stimulus, a spirit of emulation, to produce our best results—the stimulus may be the reward of a good class Certificate or it may be merely wages calculated on a piece-work basis. An examination supplies such a stimulus to many.

It is, therefore, in the highest degree essential that examining bodies should be in close touch with the work

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in the schools. In some cases this contact is maintained by making representatives of the schools actual members of the examining body, in others by making them members of a special advisory committee. In addition they all hold annual conferences with the schools, at which suggestions and criticisms are produced and an endeavour made by both sides to understand each other's point of view.

There are other ways in which attempts are made to meet the needs of the schools.

Most examining bodies are willing to consider special Syllabuses in any subject as alternative to the official standard Syllabus, and if they approve of them they will set examination papers on them to be taken in place of the ordinary papers. Usually a charge is made towards meeting the cost of setting, moderating and printing the paper, but the charge rarely covers the expense incurred. The number of schools availing themselves of the offer for special Syllabuses is extremely small. Some years ago one examining body in order to encourage schools to submit their own Syllabuses, made no charge at all for special papers set on them; even then, however, the percentage was scarcely higher than when payment was demanded, and in both instances a large percentage of the special Syllabuses consisted of alternative set books, offered for a special and perhaps local reason rather than as part of an educational experiment.

Such evidence seems to show that the official Syllabuses, though criticised, do on the whole meet with approval, but this approval can only be maintained if the Syllabuses are overhauled periodically by a committee on which both the schools and the examining body are represented.

Again the style of an examination paper, even though set on a modern Syllabus, may not fit in at all with the method of teaching adopted in the schools and here the advantage of having active teachers associated with the setting and moderating of papers is obvious.

JOINT MATRICULATION BOARD

These two important matters, namely, Syllabuses and style of examination question, can be dealt with fairly easily. The main difficulty in testing the work of candidates is the Examiner himself. Emphasis has been laid previously on the variations which occur in valuing an answer, particularly an answer which is not of the "Yes—No" type. All our efforts will be in vain if the standard of various Examiners dealing with the same paper is not brought into line. The paragraph dealing with correlation shows that comparatively little difficulty is experienced in most subjects in placing candidates from different schools in order of merit—an Examiner may be relied upon to place his four or five hundred candidates fairly correctly in their relative positions. But this is not the end of the matter. All the candidates might be marked to fail and still be in the correct order of merit, though actually they all deserved to pass. This is where the importance of the work of the Chief Examiners, or Assessors, or whatever they may be called, comes in. It is their duty, by independently valuing an adequate sample of each Examiner's marking, to make such adjustments as may be necessary in the case of each individual Examiner, so as to bring the whole panel into line. This is difficult and important work ; its difficulty would undoubtedly be diminished in the case of a School Certificate Examination, by the adoption of a new style paper as described in section III. For examinations at a higher standard or for scholarship examinations, such a type of paper would not form a suitable test. Assuming that the panel of Examiners has been brought into line, we are not even then at the end of our difficulties. The panel may be standardised among themselves, but is that standard the correct one ? Here again the opinion of the Chief Examiners is valuable. Another consideration, however, may be urged. Knowing the difficulty of maintaining the same standard between different Examiners in any one year, he would be a rash person who

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would assume that it is easy to maintain the same standard from year to year. Now most of the examining bodies are dealing in nearly all subjects with some thousands of candidates and one is tempted to assume that with large numbers the candidates as a whole vary little from year to year. Indirect evidence in favour of this assumption is at least as reliable as the indirect evidence in favour of the assumption that Examiners do not vary from year to year ; a slight change in the difficulty of a paper may make an enormous difference in the run of marks sent in and so lead the Examiners to the conclusion, which really may be wholly unwarranted, that the candidates have greatly improved or greatly deteriorated as the case may be.

Valuable evidence of a direct nature tends to show that there is an approximate constancy in the standard from year to year ; this evidence is furnished by the figures quoted on the differences in performance between boys and girls. Here we found that differences in the percentage of boys reaching Credit standard and the corresponding percentage for girls, showed a very decided tendency to be constant. The fact that the differences between the performances of the boys and the girls remain practically constant is a strong reason for holding that these performances do not vary much. If they were erratic the differences between them would hardly remain the same.

One further argument may be stated. If the theory of the impeccability of Examiners be held, and consequently the variation of standard from year to year be regarded as a true variation, we should expect that the figures for different examining bodies would vary in the same direction for any one year. There is no evidence in favour of this.

The evidence therefore appears to show that variations in the standard of a mass of candidates from one year to another are small and likely to be less than the variations in the standard of the examinations.

THE SCHOOLS OF THE FUTURE

BY

H. BOMPAS SMITH

THE writers of the earlier chapters of this book have dealt with definite branches of education. They have sketched the progress which has so far been made, and outlined the actual position and prospects of education in their particular fields. In this last chapter I wish briefly to consider the aims by which these advances in education have been inspired, and to suggest some ways in which these aims may be more completely realised in the future. For, while our first concern is with the immediate problems which confront us, it is sometimes useful to ask in what general direction we are moving, even if we are thereby led into the misty world of prophecy and conjecture.

One of the chief purposes of education has been brought vividly before us in the preceding pages. We have watched teachers and learners and educational reformers actually at work, and their work was clearly guided by a keen interest in the education of actual human beings, as individuals or as members of some definite group. It was this interest, for example, that led John Owens and his co-workers to found Manchester University and Albert Mansbridge to originate Joint Tutorial Classes. The same interest is the primary motive of all true teachers, whether they try to brighten the lives of unfortunate boys and girls as Mr. Hey describes, or work in Mr. Perkins' typical village school, or perform the dreary task of marking examination papers. They feel that, however valuable education may be from other points of view, its first and foremost purpose is to make John Jones a wiser and better boy and Mary Brown a more intelligent and useful girl. This I shall call the individual aim of education, and I shall assume that, in the future as in the

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past, progress in education means, among other things, the fuller achievement of this aim. We shall educate more people and we shall educate them better.

The preceding pages also illustrate some of the conditions which must be fulfilled if education is to accomplish its individual aim. In the first place, we must, as we all know, have the right people as teachers. Mr. Hey shows us that the success of the schools' social work in towns, depends upon the energy and skill and sympathy of the men and women who devote themselves to this new adventure in education. In the same way the essential problem of the village school is, in Mr. Perkin's words, that of bringing together "the right teachers and the right pupils in the right conditions." Manchester University survived the difficulties and perils of its early days because John Owens' Trustees were determined to secure as eminent a band of teachers as they could possibly attract. It was men like James Bryce, Henry Roscoe, Balfour Stewart, and others mentioned by Professor Fiddes, who made the University.

Again, the right teacher, when he is found, must be free, within wide limits, to teach in his own way. He must be able to give of his best to his pupils in that unforced intercourse of mind with mind which is the true medium of education. So, too, again within limits, his pupils must be free to learn what they feel to be most worth while. The early history of Manchester University shows how step by step the University, and more particularly its teachers, achieved the freedom essential for their success. The University from the first, refused to be controlled by any religious body, but only by slow degrees did it gain the right of granting its own degrees. The dissolution of the federal university was a further and final step towards the freedom of its constituent colleges. But while the University was thus vindicating its independence, the changes in its constitution delivered

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its professors from the detailed control of the founder's Trustees. It gave them, as a body, an independent and responsible position as the Senate, while each man was left as free as possible to organise his teaching as he thought best. Of the need of freedom for the learners we find an excellent illustration in Mr. Perkins' picture of what a village school may be. The methods of teaching he suggests for both the lower and the higher classes aim at evoking the boys' interest and initiative and evoking a spirit of willing co-operation. He thus illustrates one of the main directions in which our desire to achieve the individual aim of education has led us to change our methods. The history of school teaching, it has been said, falls into three main periods. In the first, the chief incentive to learning was the fear of punishment, in the second the spirit of rivalry, and in the third, the boys' interest in what they learned. We are coming more and more to see that this last motive is the right one, and that, though the others must be occasionally aroused, the need to do so almost disappears when our teaching is efficient. Our practical acceptance of this principle is gradually revolutionising our methods of instruction.

Further, the individual aim of education demands varied methods and elastic organisation. So long as we think of boys mainly as vessels into which our instruction can be poured, our methods will be uniform and simple. But as soon as we think first of the boy himself as a person with manifold needs and interests, we find ourselves faced by a very complex task for which simple and uniform methods are quite inadequate. The boy has a body as well as a mind, and his life is lived only to a small extent within the classroom walls. If our teaching is to help him to live a fuller and wider life, we must take account of all the aspects of his being. The more we realise this fact, the more comprehensive do our methods necessarily become. Whole fields of educational work are added to

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those of the classroom and the playground. This is brought home to us by Mr. Hey's account of what is now being done and what still remains to do for the social welfare of our less fortunate boys and girls. Moreover, the more widely our educational net is cast, the more varied are the persons for whom provision must be made. Thus the growth of adult education has opened up fields of educational effort of which our fathers never dreamed, and has led us to try new methods of teaching and organisation. For instance, we are just beginning to ask : "How ought we to educate our prisoners?" Further, the accounts both of the social side of education and of the education of adults show that the work must be carried on by many agents. Voluntary bodies like the W.E.A. and the Y.M.C.A. can render invaluable help, co-operating with the activities of more official bodies. The same is true of the army of non-professional workers, and even of those who, as parents or simply as members of the public, can directly or indirectly help to make or mar the education given in their district. Local interest in the schools and other educational institutions of a town or village is a force which will, we may hope, become more potent in the future. It was local patriotism which made possible the rise of urban universities, and one of the chief hopes for rural education is, as Mr. Perkins says, that villages will take a real pride in their schools.

We have been considering the individual aim of education and some of the advances in education which it has inspired. But the influence of education is not confined to those for whose immediate benefit it is provided. Through them it is of advantage to the nation as a whole. Since the first half of the nineteenth century, or earlier, civilised countries have been busy in establishing and maintaining national school systems because they have realised to how great an extent their prosperity depends upon the education of their people. In early times parents

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and medicine-men could initiate boys and girls into the customs of their tribe, but as civilisation became more complex special institutions were required in which the young might learn the wisdom of their elders. In our own day the schools and universities are the chief instruments for handing on and so preserving the skill and knowledge, the traditions and the culture which are our national heritage from the past and without which our present civilisation would disappear. It is difficult to imagine the state of semi-barbarism to which we should be condemned if all our schools were suddenly abolished. Moreover, education not only enables us to reap where our fathers sowed, but also is a potent means of realising our hopes and ambitions for the future. We desire to keep and even improve our industrial position in the face of competing nations, and therefore, among other measures, we try to improve our methods of technical education. We believe that our efforts to replace war by negotiation and arbitration will be successful only if the schools teach their boys and girls to "think internationally." We send more boys and girls to secondary schools and to universities partly in order to provide the nation with more intelligent and efficient leaders in all departments of its life.

Education has, therefore, a national as well as an individual aim, and during the last century we have come more and more to regard it as a national concern. The state has come to the assistance of the schools both by supplying them with money and standardising their work. We may deprecate some of the results which have followed from the consequent centralisation of our school system, but there can be no doubt that the rapid progress made during the last fifty years would have been impossible without a large measure of state-aid and state-control. For example, our interest in the national aim of education has led the state to make provision, as far as possible, for all classes of boys and girls and of older persons who stand

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in obvious need of systematic education. The social work described by Mr. Hey and the Joint Tutorial Classes for adults are two of the many developments assisted by the state.

Again, our desire to make our schools of service to the nation as a whole has encouraged us to organise them as a coherent body. The state was obliged to organise the schools in order to give them the help they needed. It also became clearer that the schools could not fulfil either their individual or their national aim unless they formed part of a national system of educational institutions. Thus we find the W.E.A. stating their educational policy as that of working "for a national system of education which shall provide for all children, adolescents and adults full opportunities for complete individual and social development." Recent years have witnessed a gradual advance towards such a system in which the various types of institutions co-operate with each other. Thus the schools send better prepared students to the universities, and the universities help the schools to maintain or raise the standard of their work.

The inter-dependence of schools and universities is brought home to us by the history of Manchester University. The growth of the university was checked in its earliest stages by the inefficiency of the schools both for boys and girls from which it drew its students. It was the advance of secondary education which began after the Endowed Schools Act of 1869, that enabled the university to do its proper work. On the other hand, the schools are helped or hindered by the universities. The universities train many of their teachers and send representatives to their governing bodies, and they also influence the teaching given in the schools by the part they take in conducting the public examinations for which nearly all secondary schools prepare their boys and girls. We have come to realise more fully the importance

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of system and organisation. Hence, among other things, we have instituted a great scheme of First and Second School Examinations conducted by examining boards of which the Joint Matriculation Board of the Northern Universities is among the most important. The majority of the members of these boards are university representatives, and through them the universities control, to some extent, the curricula of the schools and the lines on which they teach. Dr. Croft's account of the work done by the Joint Matriculation Board shows how far-reaching is the influence which the universities thus exert.

As our system of public examination shows, there is a danger lest our desire to organise our schools should deprive them of their freedom. A one-sided insistence on the national aim of education inevitably tends in that direction. But it is equally clear that schools cannot flourish in isolation. One of the chief difficulties with which rural schools have to contend is often their remoteness from other centres of education. Mr. Perkins helps us to realise how serious this difficulty is and how essential it is to bring such schools into closer contact with schools of other types and with the universities.

One result of the closer relations established between the schools and the community at large is that our schools and universities have tended to become not only places for training individual boys and girls, but also centres of the intellectual and social life of the community they serve. We are beginning to see how much a university or school can do for the town or village to which it belongs. Manchester University, in Professor Fiddes' words, is a centre of encouragement for all the literary, scientific and artistic activities of the city, and Mr. Perkins looks forward to the time when the Village Hall or Community Centre will combine with the village school to provide a home for the district's educational and social life.

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So far we have been speaking of the individual and national aims which have inspired and guided much of the educational progress made in recent years. These two aims, however, do not exhaust the whole meaning and purpose of education. All great educational movements have been inspired by the conviction that education can help us to appreciate and realise such ultimate realities as truth and righteousness and beauty both in our personal and our common life. To do this is the ideal aim of education, and the progress described in earlier chapters was chiefly the work of men and women who had faith in the supreme importance of this aim. Thus the growth of Manchester University owes much to the administrators and teachers who have regarded the dissemination and advance of knowledge as its primary business. They saved it from becoming an institution for narrowly professional or technical instruction, and made it a centre of advanced research. The pioneers of the schools' social activities in our towns, of village education and of the education of adults, have been men and women who desired above all things that some ideal of life should be more fully realised. On the other hand, where education has forgotten its ideal aim and lost touch with the things that matter most, it has degenerated into a means for securing personal advancement or an instrument for attaining political or social ends.

It would be possible to show that an interest in the individual, national, and ideal aims of education has been the source of the progress made in fields of educational work other than those dealt with in this book. For example, our desire to make education helpful to individual boys and girls has, as we have seen, changed the whole spirit of our teaching. We try to adapt our teaching to the boy, not to compel the boy to adapt himself to our teaching. In the barbarous language of some books on education, our teaching has become paidocentric. Mr.

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Hey's description of the cultural training now given in the schools illustrates the far-reaching influence of this new orientation. Again, as we have come to recognise the national aim of education, we have tended to make a corresponding change in the things we want our boys to learn. Speaking very roughly, we may say that till the end of the Middle Ages no one doubted that a boy should learn things which would be directly useful to him in his calling or as a member of society, or as a spiritual being. After the Revival of Learning, however, a different view began by slow degrees to influence the schools. From the seventeenth century onwards boys were made to learn, not for the sake of knowledge so much as for the sake of the greater mental power which, it was imagined, was gained by learning difficult and unexciting subjects. "A boy who has learned Latin," says one enthusiast, "will be *ceteris paribus* an abler boy than one without such a training. He will make a better colonist or farmer, as well as a better lawyer or physician." In the same way by learning Euclid a boy was supposed to develop his power of reasoning which could then be exercised on any subject. This theory undoubtedly contains a modicum of truth, but its general acceptance created a division between the school and the world outside. If, however, we think of the school as fitting a boy for his later life by helping him to share the best interests of his time, we revert to the earlier view. We think of the boy as going to school primarily in order to learn how to live. The school is a little world which reflects the wider world outside it, not, indeed, as it is, but as far as possible as we would have it be. The teaching given by the school should help the boy to appreciate in some measure, the great lines of effort and achievement which have produced our civilisation and our culture. He must, to some extent, make his own the skill and knowledge, the traditions and aspirations which are the basis and inspiration of our common life. He will

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learn Latin, for instance, less as an intellectual training than as a means of understanding what manner of people the Romans were, and how their successes and their failures helped to lay the foundations of our life to-day.

Other advances, similarly inspired, can be only mentioned here. We have, for instance, established new types of schools to meet the needs of special classes of boys and girls. Thus we have municipal secondary schools, vocational schools of many kinds, nursery schools and continuation schools and classes. We can also trace a corresponding change in the spirit and methods of educational administration. In all branches of educational work we find a stirring of the waters which is valuable for its direct results and full of promise for the future. Indeed, it is probably true to say that the progress of English education during the last century has been more rapid and more far-reaching in its results than at any previous period in our history. Nevertheless, we are only just beginning to establish a system of education which will play its proper part in the nation's common life. We must hope for still greater progress in the days to come, and we may be sure that this progress will be inspired by the same three motives which have led to the advance of education in the past. I shall not try to forecast in detail what the schools of the future will be like, but I shall suggest some changes for the better which, as it seems to me, our children may hope to see.

We may expect, for one thing, that they will see a wide extension of our efforts to provide appropriate educational opportunities, not only for all the nation's boys and girls, but also for such of its older members as may need them. Professor Cavenagh has sketched the beginnings and present position of the systematic education of adults, but social workers tell us of large numbers of working men and women who have practically no chance of obtaining educational help and guidance. Valuable

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work in this field is now being done by the churches, by trades unions, co-operative societies and other agencies, but only the fringe of the problem has been touched. If we really desired to help our neighbours who left school at or before 14, and if we really believed in the value of education for them, we should not only see that all boys and girls should in some way continue their school education till they were 18, but we should also provide facilities for all adults who wished to take advantage of them. A whole new realm of education will be thus opened out, and only when it has been conquered shall we be a really educated nation.

In the same way a more effective belief in the national value of education will produce many changes in our system of education. Our schools will set themselves more deliberately to fit their boys and girls for playing their proper parts in the nation's organised life. Already we talk of education for citizenship, and many schools give lessons on civics or the elements of politics. But, valuable as these efforts are, they affect only a small part of the problem by which the schools are faced. That problem is how to help our boys and girls not only to be intelligent voters and efficient in their callings, but also to prepare them for grappling with the wider questions upon our answers to which our future welfare will depend. I will give one example only of the questions with which our children must be prepared to deal. One of the difficulties which, as a nation, we have to face, is that our culture tends on the whole to be the kind of culture characteristic of the leisured and professional classes. It bears traces of its origin among the slave-owning peoples of Greece and Rome. It has lost that intimate relation to daily life which gave its characteristic charm to mediæval art in all its forms, and it retains something of the aristocratic flavour of the eighteenth century. Thus it fails to beautify and inspire the details of our daily lives.

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We admire a cathedral and build a magnificent town hall, but we also build houses by the thousand which are either mean or else pretentious and therefore intrinsically ugly. We go to a museum and wonder at the beauty of Greek vases, but have vases on our own mantelpieces which are useless abominations. Even our poetry has not wholly freed itself from an esoteric tradition and only a few poets have tried to show us the romance and spiritual meaning of the daily toil of modern life. The result is a disastrous cleavage between our love of truth and beauty, our art, literature and religion on the one hand and, on the other, our interests in material things as embodied more particularly in our industry and trade. We are apt to make and buy ugly things because they are so cheap, and the ugliness of many products of our industry is reflected in the conditions under which they are manufactured. We have here one chief cause of the division of the nation into opposing camps. On the one side we have the inheritors of our traditional culture, and on the other those who supply our economic needs. The division can be healed only by widening our culture until it beautifies and ennobles the common things of life and becomes the common possession of all our people.

It is happily true that we have begun to broaden and popularise our culture. Ruskin and William Morris did not preach in vain, and workers in many fields are essaying the hard task of deepening and widening our interests in what is beautiful and good by bringing these interests into closer touch with all sides of our lives. The schools are taking the lead in this revivication of the nation's higher interests. But their efforts will be successful only if they gather force and enlarge their scope. At present the schools, as a whole, still stand for the narrower tradition. The best schools have rendered the nation an invaluable service by keeping alive the ideal of liberal education as the gate through which boys and

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girls can enter on their inheritance of culture. But their teaching has tended to transmit the culture of the learned or leisured part of the community and not the culture of the work-a-day world. School history or geography or science or mathematics is apt to be primarily a matter of book-learning. Boys are told that Lancashire is the centre of the cotton industry, but they do not often use a loom or visit a mill and so get to know something of what the manufacture of cotton goods really means. Much less do they try, as Dover Wilson says, "to make poetry out of spinning-mules."¹

The general failure of the schools in spite of many partially successful efforts to bring together industry and culture has been one reason for establishing technical schools of various types. These schools attack the problem from the other side. They start from industry and through industry advance to culture. The work of the best technical schools shows how effective this course may be. But as at present constituted they are mainly schools for special classes of boys and girls, and are hardly likely to take the place of the traditional type of secondary schools. They are, however, making an important contribution to the problem we are discussing. The schools of the future will owe much to them as well as to the present central and continuation schools.

In the third place the schools of the future will both express and satisfy our interest in the ideal aim of education. In the end the value of our schools depends upon their success in leading their boys and girls to feel the claims of such ideals as truth and beauty, freedom and loyalty, justice and religion. It is only by so doing that they can rightly help their boys and girls or do true service to the nation. In what particular ways our children's schools will fulfil this task we cannot at present

¹ *Humanism in the Continuation School*. Board of Education Pamphlets, No. 43, p. 107.

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tell. We could do so only if we could prophesy the next great advance in painting or the next great discovery of science. I shall, however, hazard one suggestion regarding the spirit of their work. They will, I think, in arranging their curricula and in the details of their teaching, lay much more stress than we do now upon the ideal background or underlying principles of the subjects which their boys learn. For example, the old-fashioned way of teaching history was to make the boys learn the names of kings, the dates of laws and battles, and other similar facts. History is now often taught rather as the story of how our civilisation has evolved. The boy learns about the life of people at different periods and follows the gradual growth of institutions. Both methods of teaching have their value, but there is another way of looking at history which is not less important. Since history tells us of the progress of man's life, it can be intelligently studied only if we have some idea of the general meaning of that life and of the nature of its progress. Any treatment of history implies answers to such questions as the following : What kind of advance does history chronicle, and what were the forces that inspired it ? Is historical development a process by which men gradually achieved ideals of ultimate value, or is it primarily an advance in wealth and material comfort ? Did individual effort and loyalty and courage count for much, or were the men and women of whom history speaks the creatures of their environment ? Upon our answers to these and similar questions will depend not only our conception of history but also to some extent our attitude towards the world in which we live. For this reason it is important that when the schools teach history they should do so with a background of right general principles. To draw moral lessons from history is always dangerous and generally disastrous. Conventional morality is a poor standard by which to measure

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men like Cæsar or Napoleon. We want our boys to recognise greatness in many forms, and yet to feel with Carlyle that courage and sincerity are the basis of true human life and progress, and to see with Ruskin that no false knight or lying priest has prospered in the end.

I believe that the schools of the future will recognise the influence exerted by effective teaching upon the deeper springs of the boys' thoughts and conduct. For education should give not merely useful knowledge and the power to use it, but also the right attitude of mind towards fundamental questions. I do not suggest that the teachers will talk at large about moral virtues and philosophical principles, but I imagine that they, like our best teachers now, will know their own minds about the things that matter and will not be afraid to let their convictions create an atmosphere for their teaching. We teach most, it has been said, by what we do not say. "A man may teach by doing" says Emerson, "and not otherwise. If he can communicate himself, he can teach, but not by words. But your propositions run out of one ear as they run in at the other."¹ We all agree that boys should be helped to feel the claims of truth and beauty and right conduct, but we sometimes forget that we can help them most effectively by showing these ideals actually at work as the inspiring motives of real men and women. The story of Leonidas, told simply as history but with a sense of its ideal meaning, is a better lesson about courage than many dissertations.

Plato has distinguished once for all the two chief methods by which this kind of teaching can be given. In the case of young boys and girls a right attitude of mind must be encouraged indirectly rather than by explaining the principles implied. But in the senior classes of our schools, and especially in our universities, more direct means should be employed. Boys and students can be

¹ Essay on Spiritual Laws.

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helped to think about the deeper problems which all serious men must face. In schools this can be done, as many good teachers show us, without any systematic study of philosophy, which would be premature. But for many university students an introduction to philosophy broadly treated is likely to be helpful. It is to be hoped that the English Universities will see an increase in the number of students taking courses in the elements of philosophy even if they do not follow the Scottish system of making a course in philosophy compulsory for Arts students. We may also look forward to the time when all students, whatever their special subjects, will gain some acquaintance with the philosophical principles involved in their fields of study.

In proportion as education achieves its threefold aim the schools will embody in their own field the nation's true ideals. A boy at school will, for instance, learn the meaning of democracy and of playing the game in life. They will thus justify and strengthen our belief in education as one means of bringing us individual freedom and social peace through a common faith in what is just and true.

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