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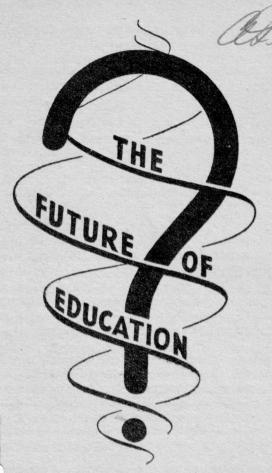
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AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH



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No. 5

UNIVERSITIES IN AUSTRALIA

ERIC ASHBY

PRICE

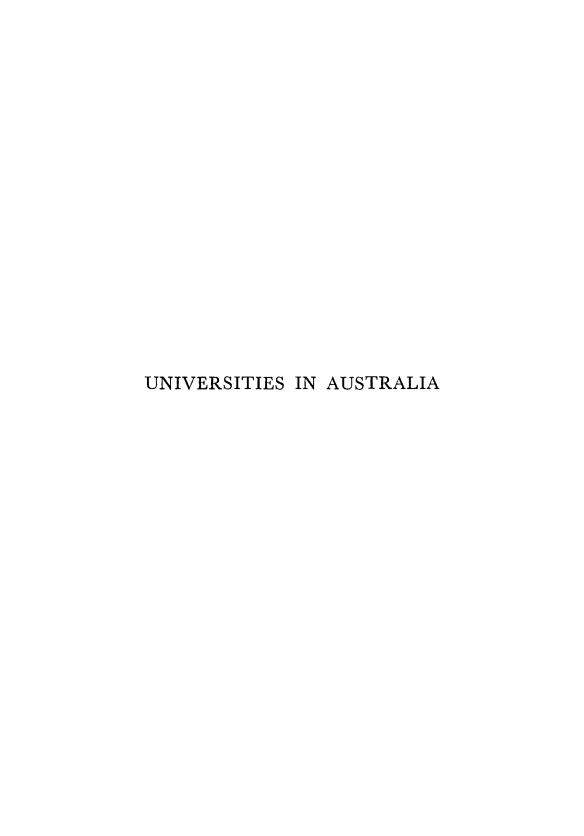
SIXPENCE

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# THE FUTURE OF EDUCATION

No. 5

# UNIVERSITIES IN AUSTRALIA

BY

ERIC ASHBY, D.Sc., D.I.C. (UNIVERSITY OF SYDNEY)



AUSTRALIAN COUNCIL FOR EDUCATIONAL
RESEARCH
1944

#### UNIVERSITIES IN AUSTRALIA\*

Y purpose is to put before the Australian public the case for universities. I have not penetrated to the tough core of the problem of university reform, for to do so it would be necessary to discuss technical matters which concern only the academic man: curriculum revision, faculty organization, finance and the What I have written is of little interest to my colleagues, who will have heard most of it before. It is directed to parents who want their children to get a degree; to industrialists who employ (or refuse to employ) university men and women; to those public servants who look on graduates with suspicion and to those politicians who look on them with contempt. The Australian universities have never been in such need of an advocate as they are to-day. In the Press they are rarely mentioned except to their discredit. On the platform they are too often used to enliven the speeches of irresponsible public men, who refer to the university as out of touch with affairs, a 'citadel of wealth and privilege.' At the city luncheon table the business man boasts that his graduation from the 'University of Hard Knocks' is a better qualification for life than his son's degree. The universities have to be satisfied with a few unspoken but sincere tributes to their work: for instance, a lively desire on the part of thousands of young men and women to enrol as students.

How is it that our universities are at once the goal which thousands of young Australians set before them, and at the same time a favourite butt for belittlement and criticism? How does it happen that parents will go to law rather than see their children excluded from the university; yet these same parents, as likely as not, regard university professors as erratic creatures who should not be entrusted with any public responsibility? Clearly there is some public misunderstanding about universities. I shall try to remove this misunderstanding. I should like to do more: I should like to convince the man-in-the-street that upon the universities depends in large degree

<sup>\*</sup>The opinions expressed in this essay are those of the author. It must not be assumed that they are the opinions of the Governing Body of the University in which he serves.

Australia's future; that universities are the defenders of the intellectual life, and if the intellectual life is crushed by prejudice and stupidity and selfishness, then it will profit us nothing to win the war against the Axis, for we shall still be dragged to defeat by our own ignorance.

In this essay I shall deal with the problems which Australian universities face to-day. They are problems which should be tackled now: for the future of this country depends on men and women; and men and women are slow to develop. If we want to produce sound citizens in ten years', in twenty years' time, we must begin now.

At the outset I concede that there is something wrong with Australian universities. Just what is wrong is hard to diagnose. We have universities as large as Edinburgh or Oxford. We have faculties which cover every subject from Icelandic to Orthodontia. We have dozens of professors and hundreds of lecturers. We have all the insignia of the European universities: vice-chancellors, gowns and hoods, proctorial boards, bedels. One is tempted to say, as Macaulay tartly said on another subject: every trace of intellectual cultivation is there, except a harvest.

There is a common idea that the university is a mass of ecclesiastical-looking buildings, where a student can be taught almost anything under the sun. After passing some stiff examinations set by petulant and incompetent professors, he is given a degree. He is then able to enter a lucrative profession, like medicine, or (if he is short of money and cannot aim higher) a 'safe' profession like teaching. But this idea that the university should be a sort of intellectual service station for the professions is wrong. To understand why the popular idea of a university is wrong it is necessary to go back to the origins of universities, and to see how they have assumed their present shape.

#### Origins of Universities

The first universities arose about 800 years ago. They were 'built of men.' There were no halls and lecture rooms, no colleges, no administrative offices. Scholars taught in their own homes or in hired rooms, and students combined together to take lodgings in the town. The

courses of lectures, and such academic organization as there was, were not called 'university' at all, but 'studium.' The name university was first used in Bologna for the guilds of foreign students, formed to protect their interests against those of the town and the professors. These guilds of students were no milk-and-water affairs, as their Australian counterparts so often are. The guild engaged the professors. It fined them if they arrived late to lecture. It fined them if they lectured too long. It took charge of all but academic standards.

Happily for the academic profession, those days are past. Students no longer have to take an oath not to stab a professor who fails them in an examination. Professors no longer tout their students with the obsequious persistence of an insurance agent. For better or for worse, modern universities follow the tradition of Paris rather than that of Bologna. In Paris the university was the company of masters, not the company of students, and it is through this tradition that the word university has come to mean what it means to-day. Of course, the modern university is a vastly different place from those turbulent houses of medieval scholars. Being concerned with an earthly, not a heavenly kingdom, the universities have had to shape themselves to a changing society. They have assumed obligations to industry. They have become encrusted with buildings and offices. In different cities and in different ages they have fulfilled now one function, now another. But through the whole eight centuries it has remained the vocation of universities to uphold and to transmit certain imperishable traditions. Often they have been frail vessels into which to pour such precious oil of humanity. At one time and another they have betrayed their trust. But the traditions have been preserved, and they have been handed on to Australia. To-day our universities, criticize them as you will, are the trustees of Australian intellectual life; despite their weakness, despite their unworthiness for this high office.

Most of the traditions and customs of medieval universities have vanished, but two essentials have survived every change in society, every government. The two essentials are these: universities are 'built of men'; and they are concerned with what could be called 'intellectual

health,' that and nothing else. It is in the light of these essentials that Australian universities must be judged. Let us examine these two essentials as they apply to universities at large.

#### Universities "Built of Men"

A university should be a society of teachers and scholars; of teachers who have devoted their lives to the kingdom of the mind, and of scholars who are determined to enter this kingdom. In the pursuit of modern knowledge expensive libraries, large buildings, elaborate equipment and laboratories are necessary. But this should not blind us to the fact that the spirit of a university depends on the men and women who assemble there. Given a good teacher sitting on one end of a log and an eager student sitting on the other end, the central problem of education is solved: you have the germ of a university. most sumptuous lecture room and the most splendid laboratory do not make a university if the teacher is a pedant and the taught are flippant children sent there to qualify for a profession. This solution to the central problem of education is not so easy as it might appear, because there are too few good teachers and too many flippant students. But a solution is not impossible. Universities which put their money into men before buildings are bound to succeed. In its early days the Johns Hopkins University in America began this way. It picked first-class men; it took as students only graduates; initially it occupied two converted lodging houses. When a newspaper sneered at it for undertaking to 'conduct its classes under a tent and to keep its books in soap boxes,' the President of the university replied: 'That is precisely what we propose to do.' To-day the Johns Hopkins University has splendid buildings and equipment; but it was in two lodging houses when it brought about a revolution in American education.

Of course, it is not only universities that are built of men; so are governments, churches, schools, armies. It should be easy, therefore, to persuade the public that any university enterprise—a new faculty or a new college—will never become first rate unless men of the highest quality are used for the enterprise. And men of the

highest quality cannot be secured and held cheaply. It is simple to call a place a university. It is easy to go through all the motions of lectures, laboratory work, examinations, degree ceremonies. It is pleasant to spend endowments on stones instead of flesh and blood; on buildings, quadrangles and halls. If the men are third rate, the university is third rate. And a third rate university (unlike a third rate government) is not better than none at all. Australian universities must be encouraged, therefore, to pursue the policy of securing the best men the world can offer, irrespective of their place of birth, and irrespective if need be, of the cost to the community. Australian youth is too precious to be given third rate teachers.

#### Intellectual Health

It is unlikely that anyone would misunderstand the proposition that a university should be built of men; but on the functions of a university there is gross misunderstanding. From the time of the Crusades universities have trained men for the professions of medicine, law and the It is likely that the first universities grew up solely as professional schools, and it is still one of the functions of a university to train men for certain pro-From all over Europe men rode or hiked to fessions. Paris, Bologna, Oxford. There they learnt how to cure disease, how to interpret the law, how to dispute over philosophy. By the standards of those days, they were trained for their professions; but they gained far more than this training. Seven centuries ago it became obvious that what had been a secondary, perhaps unexpected feature of university life, had become its main function. In lodgings and in taverns ideas were born and nursed. They were vague and unpractical ideas that a man of the world would not entertain for a moment; yet thousands of students discovered that the rest of their lives were filled by a growing and maturing of these ideas, and the very subjects taught matured in this atmosphere. versity broke down the isolation of community from community imposed by the feudal system. From an undergraduate's room at Trinity College, Cambridge, we can trace the first stirring of that system which overthrew the authority of ancient philosophy, and made modern science and modern technology possible; for it is out of Bacon's Novum Organum that modern experimental science has grown. Two hundred and fifty years later in his rooms at Christ's College, Cambridge, Darwin, who was then studying for the church, conceived those ideas which led to his becoming a biologist, and which years afterwards produced the Origin of Species and brought about a world revolution in the kingdom of the mind. From earnest talk in the lodgings of a Jewish law student in the university town of Bonn, there began a movement which has shaken civilization; for it was while he was a student that Karl Marx received that fertilization which led to Das Kapital. The universities never seem to shake society, because the ideas born there have to grow and become hardened in the world, and this takes time. Always the universities have trained men for the professions and they will continue to train them; this is one of their main duties to society. But apart from this, universities have been the nurseries for intellectual progress. They bring men together. They give access to books and opportunity They encourage a ferment of thought. for talk. tolerate and nourish ideas, however feeble and embryonic they are. For the thoughtful man the university opens two doors: the one to a profession, the other to the man's own intellect. Although professional training is still the university's business, cultivation of the intellect has become its vocation.

That is why universities resist the pressure to set correspondence courses as substitutes for attending the university: such courses would be even less valuable than going to church by correspondence, and for the same reasons. Naturally there must be facilities for adult education by correspondence. But this is not the university's business.

It is a matter of cold fact that most of the discoveries and ideas which have shaped history began as speculations, as disinterested curiosity, as thinking for the sheer delight of thinking. Intellectual revolutions are often the product of leisure, even though they cannot be completed without immense industry. When Coster, in 1440, cut letters from the bark of trees and used them as type for printing he

did it to amuse children, not to advance civilization. Faraday set up his experiments with wires and magnets to please himself, not to meet a demand for motor cars and aeroplanes. Plato's Republic was written for his own satisfaction, not as a Royal Commission report. Of course, most of the world's work has to be done ad hoc, to meet some particular demand of society. But without a spring of disinterested thinking, without the welling-up somewhere in the community of discovery for its own sake, civilization would dry up. Constructive thinking will always have to be the work of the very few, but even the very few need an atmosphere of encouragement and understanding. It is the vocation of universities to cultivate the intellect so that disinterested thinking can go on, and can be appreciated by the public; and the value of a university to the community depends upon the extent to which its staff and students recognize this fact and its consequences.

How do the universities regard this vocation? If we appeal for an answer to two leaders of universities, as utterly different as two men could be, we get the same reply. Cardinal Newman, in a discourse to the Catholic University at Dublin ninety years ago, confessed that he could not find a word which expresses for the mind what health is to the body and virtue is to the soul. 'Knowledge' does not express the idea, for knowledge is not a 'state or habit of the intellect.' 'Wisdom' is not the right word, for wisdom relates not only to the intellect, but to conduct and morality. It is this elusive quality of 'intellectual health,' for which our language has no word, which comes within the scope of a university; this and this alone. The university, according to Newman, is concerned with intellectual culture, just as a hospital is concerned with healing the sick and a gymnasium with exercising the body. It is not concerned with conduct, duty or bodily 'Its function is intellectual culture; here it may leave its scholars, and it has done its work when it has done as much as this. It educates the intellect to reason well in all matters, to reach out towards truth, and to grasp it.'

It is a far cry from Dublin in 1852 to Chicago in 1942; and from Cardinal Newman to the iconoclast of College

Presidents, R. M. Hutchins. But Hutchins has the same answer. A university, he says, is a community of scholars. Its object is intellectual, not moral. Its emphasis is on the mind, not on the body. It is not concerned with character except insofar as character affects intellectual health. It must not be confused with a country club, a reformatory or a preparatory school.

No one would pretend that the culture of the intellect is more important than bodily health or moral character. That is not the point at issue. The point is that a Cardinal of the Roman Church and a Chicago University president, nearly a century apart in time, agree that cultivation of the intellect is a university's clear-cut job; and that the university must stick to the job tradition has assigned to it. To this view all who have seriously thought about the function of universities would subscribe.

This clears the ground. If it is agreed that the university is built of men, and is concerned to bring about a state of intellectual health in its students, we can now discuss what subjects should be taught to bring about this end, and how they should be taught. It is at this point that we are brought up against practical problems. So far we have generalized; what we have said is true, if it is true at all, of any university, in any city, at any time. But our concern is with Australia in the twentieth century. Provided a university is not disloyal to its tradition and does not lose sight of its purpose, it can, and should, shape itself to the society around it. The rest of this essay is, therefore, about Australian universities now and in the future.

#### A Criterion for University Subjects

Australian universities are modelled on the patterns of the University of London and the Scottish universities. It is a tribute to the enlightenment of our predecessors that the first Australian university (Sydney) was founded in 1850, when there were only four universities in England and none in Wales, and when the whole population of N.S.W. was less than the present population of Perth. The University of Sydney was founded to give the facility 'to the child of every man, of every class, to become great and useful in the destinies of his country.' When the bill was read in Parliament in 1849, Wentworth

said: 'From the pregnant womb of this institution will arise a long list of illustrious names, of statesmen, of patriots, of philanthropists, of philosophers, of poets and of heroes.' Rather a florid ambition, perhaps, and one that has not yet been fulfilled. Meanwhile the complexion of the stream of graduates has changed. Not so many poets and philosophers now, but more economists, engineers, dentists and veterinary scientists flow from the university. In a few more decades, will the stream include masseurs, journalists, technical salesmen, pharmacists and surveyors? Here is the first practical problem. Universities are being pressed all the time to divert more and more of their resources to professional training, to satisfy the desires of modern society. But universities are concerned first of all with the needs of society, which are not the same as its desires. On grounds of tradition and of expediency it is well that some professional techniques (e.g., surgery) should remain university subjects; but in responding to the popular demand for more technical training, where should the line be drawn? If medicine and economics, why not massage and salesmanship? applied chemistry, why not laundry science? If English literature, why not journalism? A century ago the medical profession scoffed at the idea of teaching surgery in universities. Half a century ago engineers thought apprenticeship the only way to learn engineering. Either there is some criterion for distinguishing a university from a non-university subject, or else all this resistance to new subjects is no more than academic snobbishness.

Fortunately there is a criterion. Academic snobbishness is, of course, not unknown (many desirable reforms will be made only over the graves of some professors!). But the resistance to journalism, salesmanship and such is legitimate, and the criterion which determines this is as follows:

I have described how universities began as professional schools and later discovered that their peculiar contribution to society was the culture of the intellect. They continued to train for the professions, but their real training was for adventure in the world of ideas. There grew up, therefore, a body of knowledge around the professional courses which did not consist of technique to be

applied in professional practice, but consisted of abstract ideas, ideas of no immediate professional value; ideas with no currency in day-to-day life, but only in a kingdom of the mind. This knowledge knew no national frontiers. It crossed centuries as easily as it crossed oceans. ruled the thoughts of men from Aberdeen to Alexandria. It followed the explorers. It sprang up wherever Europeans settled. It moulded governments and made laws. The love of ideas has filtered, through universal education, even into the simplest homes. It is the vocation of the university to defend and to expand this kingdom of the mind. Therefore the university lays more emphasis on ideas than on facts, on learning than on teaching, on general principles than on special techniques. Whitehead has expressed it excellently: 'The university course,' he says, 'is the great period of generalization. The spirit of generalization should dominate a university . . . . A wellplanned university course is a wide sweep of generality. I do not mean that it should be abstract in the sense of divorce from concrete fact, but that concrete fact should be studied as illustrating the scope of general ideas. . . . Whatever be the detail with which you cram your student. the chance of his meeting in after-life exactly that detail is almost infinitesimal; and if he does meet it, he will probably have forgotten what you taught him about it. . . . The function of a university is to enable you to shed details in favour of principles.'

Here is the criterion for determining what subject or what parts of a subject should be taught at a university. If the subject lends itself to disinterested thinking; if generalization can be extracted from it; if it can be advanced by research; if, in brief, it breeds ideas in the mind, then the subject is appropriate for a university. If, on the other hand, the subject borrows all its principles from an older study (as journalism does from literature, or salesmanship from psychology, or massage from anatomy and physiology), and does not lead to generalization, then the subject is not a proper one for a university. Let it be taught somewhere by all means. It is important that there should be opportunities for training in it. But it is a technique, not an exercise for maintaining intellectual health; and the place for technique is a technical

college. That is why universities will not introduce lectures in journalism, advertising, typewriting and salesmanship. Journalism, advertising and the rest are important. one denies it. They are more immediately appropriate to a business career than are Latin and philosophy. No one denies that. If universities consented to teach these subjects, a real public demand would be satisfied. This, too. no one denies. But satisfying public demands is not the university's business: it is not a state-subsidised intellectual department store, to satisfy this or that demand for skilled labour. The university has no antagonism to any kind of learning, technical or otherwise. But its resources are very limited (tenpence per head of population per annum in Australia): accordingly it has to adopt a policy of expediency. This policy demands that a great many subjects should be excluded from the university curriculum; the criterion I suggest will determine which these subjects should be. The university must at times give society, as Flexner has said, not what society wants, but what it needs.

I want to make this criterion quite clear, because there is a good deal of misunderstanding about it. Universities are accused of holding tightly to useless subjects and of hankering after the curriculum of their medieval ancestors. They are accused of neglecting useful subjects simply because they are useful. Now the criterion of a university subject has nothing to do with use or lack of use; it has only to do with intellectual content. When a new subject appears before the university for admission, the questions asked are: Does the subject breed ideas? Can research be done in the subject? Is it merely derived from other subjects? Never: Is the subject useful? There are still a few professors so bemused with medieval culture that they would like to drive out agriculture, commerce and the rest from the university, in favour of the trivium: grammar, rhetoric and logic. They are like the affected aesthetes of the last century who longed for the maypoles and yule logs of Merrie England, and forgot the dirt and the stinks. When I assert that the university stands for the world of ideas and that its mission is to fight 'triviality,

<sup>1.</sup> St. John's College, Annapolis, U.S.A., is said to plan its whole course on the trivium. History does not relate what happens to its graduates.

vocationalism and mediocrity,' I do not advocate a retreat to the classics and philosophy, important as these are. In twentieth century Australia our prime need is to understand the twentieth century A.D., not the third century B.C. If it is properly taught, as much 'culture' can be put into a course on political science as into a course on Greek drama. Both subjects have a rich intellectual content. Both subjects involve the humanities. Both subjects are a training for intellectual health.

#### Curriculum Revision

When this criterion is applied to the curricula of Australian universities, a need for curriculum reform appears at once. Broadly speaking, the professional faculties are too preoccupied with 'ad-hoc-ness,' as Flexner has called it; and the faculties of 'liberal' studies have lost sight of the needs of society. It takes a good deal of courage and a good deal of experience to conduct a professional course on the paradox that the best practical training is the most theoretical one; yet the paradox is true, and its truth has been demonstrated over and over again. What are needed in most professional courses are more ideas and fewer facts; though this puts the teacher to a lot more trouble, for it is easy to test facts in an examination, and hard to examine ideas. A rule that students should be allowed to take into the examination any books they care to would go some way towards minimising the value of inert facts to the examinee. Bateson said of the Natural Sciences Tripos in Cambridge that 'it would be possible to extract question after question that ought never to have been set, referring to things that need never have been taught, and knowledge that no one but a pedant would dream of carrying in his head for a week.' The science examination papers of Australian universities are no better than those at Cambridge. Perhaps they are even a trifle worse.

It is through overhauling the content of their professional courses, not through pep talks on culture, that we shall enlarge the intellectual calibre of doctors, dentists and engineers. Of course, professional men must have a considerable technical and vocational training: ideas and general principles are not enough. By tradition it has

fallen to the lot of the universities to provide some of this vocational training. It would be pedantic and foolish to change this state of affairs. But in Australia there is continual public pressure, especially from our new secondary industries, to introduce more and more vocational training at the expense of general principles. And we sometimes yield to this pressure. Time and again universities have dropped one more fragment of the basic studies on which the standard of a profession rests, and replaced it by vocational training. They have put in a little less biology for a little more clinical training; a little less mathematics for a little more workshop practice; a little less art for a little more architectural construction. The kingdom of the mind has its Munichs, too.

It is beyond the resources of our universities to give adequate training in principles together with adequate training in technique. It is essential, therefore, for universities to concentrate on their proper job, and to leave technical training and the tricks of the trade to technical colleges and apprenticeship periods. In a post-war reorganization I should like to see a much closer co-operation between university and technical college. In the university the student would learn the principles on which engineering, industrial chemistry, agriculture, etc., are based. the technical college the student who wishes to become a professional can learn how to translate the principles into practice, as far this ever can be learnt 'off the job.' university education is not what many parents would like to think it is; a substitute for experience. I call to mind that passage in Sir Walter Raleigh's address on the meaning of a university: 'You cannot apply the test of utility to knowledge that is living and growing. The use of knowledge is often the application to practical ends of knowledge that has ceased to grow. It is the timber, not the growing tree, which serves for ships.'

If the common fault of professional faculties in Australian universities is that they stuff their students with facts and vocational technique at the expense of intellectual health, the common fault of liberal faculties is that they do not realize what kind of intellectual health is necessary for our intellectual climate. In Britain a classical education still has career value. A first in 'Greats' opens

the door to the Senior Civil Service; though even this door is now open to men who have distinguished themselves in the social sciences. In Australia it is otherwise. We recruit the bulk of our Public Service from boys and girls of eighteen or less, with Leaving Certificate or less. A degree in classics never has opened the door to senior administration of the States or the Commonwealth. It is not likely to do so in the future. Of course, Faculties of Arts must still preserve and encourage classical studies: that is their obligation to the past. But Faculties of Arts, no less than Faculties of Medicine, have an obligation to the present. They must send into modern society graduates who appreciate values, not only in the context of the Parthenon and Pericles, but also in the context of greyhound racing and soap box oratory.

Universities should continue to teach classics by all means, but they should try to offer also some synthesis of modern society. Some such synthesis comes from a study of the social sciences: economics, geography, history, political science, anthropology, and so on. Both in 'Modern Greats' at Oxford and in the Ph.D. in Social Science at Chicago we see the same foresight: that society will need men who have thought disinterestedly about the problems of the twentieth century, and whose intellectual health has hardened them for the harsh climate of the post-war world.

Australian universities offer no such synthesis. A great contribution to our time and country will be made by the university which sets up a school of new humanities, and which offers a degree to the student who has thought intelligently about the history of technology, the culture and society of Pacific countries, economic stresses and the political frameworks which bear them. It is likely that any university which undertook to do this would be restored to its rightful place in public esteem.

#### Attitude to the Student

The matter taught in universities is important; but there is no end to disputes over it. Courses of study will inevitably vary from one university to another. Just as important as the matter is the manner of learning. About this there is less dispute, though there is just as much room for reform. The transfer from school to university ought to be one of the great re-orientations of life, as radical as the change from school to a paid job, or from living at home to marriage. In fact, there is very little re-orientation. The school attitude continues. Instead of allowing the student to work out his own salvation and to rely on his own conscience, some university teachers appoint themselves gratuitously as keepers of their students' consciences. The result may be a successful examinee, where perhaps there might have been a failure; but the cost is high, for the examinee has very little confidence in his knowledge. R. G. Collingwood, in his autobiography, says:

'Going up to Oxford was like being let out of prison. . . . In those days a candidate for honours was expected to read Homer, Virgil, Demosthenes, and the speeches of Cicero more or less entire, in addition to a special study of other texts, . . . This was not only leading a horse to the water, but (hardly less important) leaving him there. The happy beast could swill and booze Homer until the world contained no Homer that he had not read. After long years on a ration of twenty drops a day, nicely medicated from a form-master's fad-bottle, I drank with open throat. One hour a week I had to spend showing compositions to my tutor; and there were a few lectures which he had advised me to attend: otherwise my time was my own. Nor were these exceptions very serious. If I had shut myself up in my rooms for a week together, to do some work of my own choosing, my tutor would only have passed it off, when I emerged very apologetic, with an erudite, good-humoured joke. In short, I had come to a place where, even if it was not actually assumed that one had an adult attitude towards learning, at any rate one was not penalized for having such an attitude; and all I had to do was to forget my school life and let myself go.' In his first three years at an Australian university, a student is not permitted to forget his school life and let himself go. That is one reason why our universities, despite their sincerity, are disappointing.

There is an easy way to distinguish the bad university teacher from the good. The bad teacher prepares his class (perhaps very efficiently) for the examination at the end of the year. The good teacher prepares his class for ten or twenty years hence, when they will have forgotten all he is teaching them, except one or two guiding principles.

Apart from the two weaknesses I have mentioned: defects in the curricula and in the manner of learning, Australian universities suffer from a third weakness, due to the intellectual standard of students and the spirit in which some of them come to the university. The percentage of bright intellects in Australian youth is doubtless as high as for any other country in the world; but the universities certainly do not get as large a proportion as they should get. And even the bright students who succeed in reaching the university often have their brightness dulled by the school examination system.

#### Barriers to University Entrance

There is a view in some quarters that a university education is a right to which every Australian is entitled, and that universities break faith with the people if they try to restrict entries. This view is not only stupid: it is dangerous. The view is stupid because if it prevailed the universities would simply collapse under a weight of mediocrity, and Australia would find itself without any trustee of intellectual standards; it is dangerous because all Australian universities are in fact so dependent on Government support that they would be hard put to it to withstand pressure to lower the standards of admission. There are illegitimate and legitimate barriers to a university education. The proper policy is to remove the first and to keep the second intact: not to clear them all away indiscriminately.

The chief illegitimate barrier is poverty. Of every hundred children who entered primary school ten years ago, only ten stay on to Leaving Certificate. This means that partly through lack of intellect, but partly also through poverty, ninety per cent. of Australian youth is not even eligible to apply for entrance to a university. In some States this situation is due not only to individual poverty, but to public neglect of education. In N.S.W., for instance, there is a quota system for entry to High School. Not every child who is eligible for High School is

allowed to go there. This is presumably not a deliberate policy of the Education Department; it is merely due to lack of accommodation in High Schools, which is the fault of the public. It, nevertheless, puts the university out of reach of some deserving children. Finally, poverty has, until recently, barred the way to the university even for students who have matriculated. This last barrier has been greatly lowered by the Universities Commission. By paying bursaries to quotas of students picked on merit, the Commission has to some extent excluded mediocrity and encouraged ability, irrespective of income level. This is the first step toward providing equality of opportunity in university education. Of course, it is only the first step: it covers adequately only certain faculties; it is hampered by a means test; it operates under National Security Regulations and is, therefore, only temporary. Its most serious defect is one beyond the Commission's control, namely, that its benefits can reach only the ten per cent. of children who complete a High School course.

So much for the chief illegitimate barrier. The chief legitimate barrier is matriculation. If the universities are to serve Australia, this barrier must be maintained and means of circumventing it must be stopped. My own opinion is that the barrier should be raised; for to-day (and it will be far worse when the war ends) the universities find themselves in the embarrassing position of wanting to exclude matriculated students because their quality is too low!

When a student matriculates it means, if it means anything at all, that the university considers him a fit person to study for a degree. A fit person, if he studies conscientiously, should pass the examinations and qualify for a degree without mishap. But this does not happen. In one Australian university only 66 per cent. of the students in the Faculty of Medicine graduate in the minimum time (six years). Some take ten years to complete the course. In the same university some 65 per cent. of students who take the second year Engineering course fail in the examination. The standard of examinations in Australian universities is no higher, and the level of teaching is no worse than in British universities; but failures in Britain are less common. Therefore, the qualification for entrance must

be too low; and it should be raised, if only in fairness to the student.

#### Obstacles to Education Within the University

It is not enough to raise the intellectual level of entrants, for there are obstacles to a university education even after the student has enrolled in the university. I will mention three of them.

The first is a large first-year class where personal contact between student and teacher, which is an essential for tertiary education, is impossible. A first-year chemistry class, for instance, may contain children of 16, returned soldiers, students with honours chemistry in Leaving Certificate, students who are uncertain what chemistry is about: six hundred of them; in post-war years perhaps 800 or 1,000. No one can conduct a university on these lines.

The second obstacle to university education within the university is a *laissez-faire* attitude to knowledge. We agree that training for the Army is a whole-time job. An army which trains from 9 a.m. to 5 p.m., five days a week, thirty weeks in a year, would make a poor show in battle. Yet we are satisfied with this part-time training for the defence of the kingdom of the mind. Of course, students work after-hours at night and they work in vacations, but often under conditions totally unsuited to study: at home with the radio on and younger brother wanting help with his home-work. In the University of Sydney something like half the students come from homes where the family income is less than £500 a year; that is, from homes where the family must help with the housework and where meals cannot be prepared at all hours for individual members of the family. Time and again domestic responsibilities and distractions ruin a university career.

The third internal obstacle to university education is the immaturity of a great many first-year students. In Britain, according to a report of the University Grants Committee, less than thirteen per cent. of students are 17 years old or less at enrolment. For the professional faculties of the University of Sydney before the war the percentage of students 17 years old or less was about 40. It is now 68. This drift toward the cradle is dangerous and ought to be stopped at once. It harms the schools. It harms the university. It harms the students themselves. You cannot treat a class as adults when 68 per cent. of them are no older than 17, and unless students are treated as adults they cannot be educated at the university level. The Committee of the British Association on Post-War University Education suggests that the 'modal' age of entry to universities should be not less than 19, preferably after a year of approved national or international service.

How are these obstacles to be removed? As the last shot is fired in this war men will come crowding back to the universities, demanding, and quite rightly demanding, a free university education for all who are eligible. The universities, with their staffs depleted, their finances low, their buildings inadequate and their equipment out of date (all owing to the war), will have to meet this demand without delay. And so the big classes will grow bigger, the wide age-spread will grow wider, and the eight-hour-day attitude to knowledge is likely to deepen. The universities have stood up splendidly to the strain of war; they have given high service in men and knowledge. But those of us who are in universities fear that they will not stand up to the strain of peace unless preparations are made now. What should these preparations be?

#### Decentralisation of Universities

First of all, provision must be made for more students than Australian universities have ever been asked to hold. Is this to be done by increasing the size of our universities or by creating new ones? This is a dispute which all but draws blood from academic men. On the one hand it is maintained that Sydney and Melbourne, with three or four thousand students, are too big; expansion should, therefore, be through university colleges outside capital cities. On the other hand it is maintained that until we can provide better staff and equipment for the universities we already have it is bad policy to dissipate our limited resources on what are certain to be third rate colleges. There is no difficulty in demolishing both sides of the argument; but, unfortunately, the problem still remains.

If Sydney, with about 4,000 students (including part-time students), is too big, what of Cambridge with nearly 6,000, Oxford and Glasgow with more than 4,000; Harvard with 10,000; Paris and California with over 20,000? On the other hand, where would Britain be to-day without her 16 universities? If some of the counsels of Oxford and Cambridge had prevailed, the University of London would never have been founded, and every obstacle that reactionary pedantry could devise would have been put in the way of the provincial universities.

The bulk of academic opinion favours some decentralization of tertiary education, in order to stimulate local interest and because it is absolutely essential to abolish the mass teaching of first-year students. Now there are, broadly speaking, two ways in which cleavage into new universities and colleges can take place: either vertically or horizontally. If cleavage is vertical, the new college covers the whole gamut of the mother university, up to pass and honours degrees and post-graduate work. If cleavage is horizontal, the new college, in its youth at any rate, reaches only the first or second year stage. It aims to give a general higher education, but not to train specialists.

The combined testimony of half a dozen Royal Commissions on university colleges in Great Britain and New Zealand points to the dangers and difficulties of vertical cleavage. If students at the daughter college are to enjoy the privilege of degrees from the mother university, the mother university must clearly control the curriculum and examinations. This means that the college teaches (or crams) for an external degree, and that the student writes after his name the imprimatur of a university he has never attended. Since the passing of examinations is only one ingredient of a degree (according to some, the least important ingredient), there is a serious risk that the currency of the degree will be debased. The university may complain that its standards are being observed in the letter only, and not in the spirit. The college may complain that the university is an influence in favour of 'unprogressive uniformity,' cramping the development of

<sup>1.</sup> I omit from this discussion the question of whether new universities should be set up, granting their own degrees.

the college. Any extension of this system of vertical cleavage in Australia would seriously prejudice university education, and would lead, as it has led overseas, to a melancholy series of Royal Commissions. Far better, if political largesse has to be distributed, to institute regional bursaries which bring students from this or that district to the university, than to make a vertical cleavage of the university system.

On the other hand, horizontal cleavage into satellite colleges is more likely to succeed, and it would certainly increase the opportunities for university education in Australia. At present the universities do not deal properly with students of 16 to 18. There are too many students of this age and they are too immature. Can country colleges be set up to take these students? How do Britain and the United States deal with this age group?

In Britain students who would go to a university stay

at school for one or two years after matriculating. These last years at school are for some students the richest educational experience they have ever had: for they begin to take part in school government; they have time to read; their relation to the teacher ripens from the formality of the classroom to the comradeship of walks and after-dinner chats. The metamorphosis from school-child to student is unconsciously and painlessly completed. Some universities co-operate in this, by granting exemption from the first year at the university to students who successfully complete a post-matriculation course at school. This has the happy result of reducing first-year classes at the university. It is very common, for instance, for all non-professional subjects in the medical courses to be taken before leaving school.

In the United States this metamorphosis from schoolchild to student takes place at the Junior College. The Junior College gives general survey courses. It initiates school children into the university attitude to study. It turns out in its graduating classes students who have a bird's-eye view of the field of knowledge, and who know what part of it they wish to settle on at the university. It completes the general education of the American.

In Australia the metamorphosis takes place often painfully, and sometimes with serious injury, at the university. The university is not designed for this purpose. At nine a.m. the professor has to lead some three or four hundred children into the traditions of scholarship. At ten a.m. he has to discuss honours work or post-graduate research problems. It is unlikely that he can do both these things well, and in any event he must do the second thing well or he is not worthy of his chair.

Clearly the Australian system is inferior to both the British and American. The English need no Junior Colleges, because their schools can cope with post-matriculation education. Most Australian schools cannot cope with it: therefore we cannot adopt the British system exclusively. It would be a mistake to adopt exclusively the American system, because this would inhibit the growth of post-matriculation work in schools and would prevent the great stimulus to the teaching profession which would accompany that growth. In my opinion the solution for Australia is to use both the British and American systems. This might be done in the following ways: (a) Encourage high schools and 'public' schools to offer post-matriculation courses. Offer exemption from first-year courses in the university to students who complete satisfactorily a two-year course at school. (b) Where necessary set up Junior Colleges in country towns under the State Department of Education. These would provide a two-year post-matriculation course. Offer exemption from the first year (in some circumstances from the first two years) of the university to students who complete a course in these colleges. Some of these Junior Colleges will become absorbed into the High School System. Others may develop so well that they seek to teach to degree standard in some subjects. Out of this, rather than out of an ab initio university college, should come any new universities that Australia may need. There is another advantage: the Junior College would act as a buffer between the university and the school. It would lessen the baleful influence that universities are supposed to have on school curricula. The Junior College would offer courses parallel to those in full-time technical colleges and agricultural colleges. It might grant a diploma which Government departments, banks and similar institutions would regard as qualifying applicants for positions. (c) Arrange, with the necessary safeguards, for some work done at approved teachers' colleges and technical colleges to count toward a university degree, provided the college student completes his course at the university and spends at least two years there.

Such measures as these would give a far better deal to the 16 to 18 years old student; they would enable university teaching to rise to its proper level; they would vitalize the teaching profession by providing a greater incentive to High School teachers. measures were adopted the average freshman would come to the university more mature and with a clearer purpose than he does at present. The fact that he would not be earning his keep until a year later does not matter, because he is likely to get so much more out of his undergraduate career that he would be more useful to society afterwards. It would be possible for the university to demand a more rigorous intellectual discipline than it does at present, and to provide better opportunities for the good student; this could done by two simple changes: the first to encourage interchange between universities, and the second to encourage a more wholehearted devotion to the intellectual life.

#### Other Internal Reforms

One of the valuable features of the continental universities is the student's freedom to go from one city to another during his course, taking his physiology in Bonn, his chemistry in Freiburg, his zoology in Munich. The custom was carried over into the American universities, though it has lost much of its flexibility there. Britain has no such tradition because until recently it never occurred to an English student that physiology might be better in London than at Cambridge; or chemistry better at Manchester than at Oxford; while Oxford and Cambridge ignored each other in a spirit of chronic adolescence. It would be quite practicable to introduce this migratory habit into Australia, and it would do incalculable good. All Australian universities will never be equally good in

all subjects. For years to come our intellectual resources will be limited. There is already some loose cohesion between the Australian universities through the Vice-Chancellors' Conference, which meets regularly. It would be quite possible to make provision for the best honours students to spend part of their undergraduate time at another university. The Universities Commission would probably support the There would have to be a recasting so as to coordinate the present systems of courses and examinations in the different universities. That would be all to the good. And there would have to be an agreement among the universities to recognize work done in one university as contributing toward a degree in another. The result would justify the trouble. There would be a cross-fertilizing of ideas and a consequent stimulus to intellectual life. The good student would feel that he had the whole cultural wealth of Australia put at his disposal. Students who had travelled would be more mature and responsible citizens; and they would have (as so few of them have at present) some first-hand knowledge of Australia. The proposal involves very little public expense: in fact, nothing more than an agreement by State Governments to give free rail passes to students nominated to travel by their universities. Even the shipping companies offered free passages to England before the war. Only through some such measure as this can we make the best of our cultural inheritance.

That is the first change. The second change refers to the tightening up of life within the university. A student who would go any distance in the adventure for ideas must soak in the intellectual atmosphere. He cannot do that if the university is sealed after 5 p.m.; if he has to get home to the suburbs to a six o'clock tea and the rhythm of a B-class station.

The utopian remedy is to make all students reside in the university. But we are dealing with Australia, not Utopia; and in any social structure we are likely to have after the war, complete residence in universities would be quite impracticable. However, there is a middle way which we could follow and which would, I think, transform the whole spirit of any university which had the courage to try it.

This is the way. Suppose the university says to its students: 'University education is a whole time job. We know you cannot all live at the university; but we want you in our atmosphere from after breakfast until bed time. Accordingly we include in your fees a composite charge for lunch and dinner. You will be attached to one of the colleges or societies of scholars, and you will be expected to lunch with us and dine with us during term. Naturally we shall not cram you with work all that time. We shall give you lectures morning and evening, but none in the afternoon. We shall keep open all libraries and laboratories at night. We shall provide study rooms where you can read and write and club rooms where you can argue and smoke. We want you to spend not only your working hours, but a good deal of your leisure in our atmosphere. We shall make it our business to give you opportunities not only to work and to meet the professors and lecturers, but also to relax, to talk, to hear music, to see plays. We shall bring to Australia the best men we can afford from all over the world. None of it will be organized for you, but all of it will be available for you. And if you take advantage of these opportunities you will find what you have come here to find; and you will not go away disappointed.'

'The hungry sheep look up and are not fed,' wrote Milton; and President Hutchins of Chicago took this line as a text for one of his tilts at modern education. In Australian universities we feed the sheep. Our fault is that we deny the sheep the opportunity for digestion.

#### Universities and the Public Service

I said at the beginning of this essay that my purpose was to state the case for universities. In order to do this it has been necessary to emphasise that universities do not exist to satisfy the whims of society or the adhoc demands of industry. I have had to emphasize that the undoubted need for journalists and salesmen does not oblige the university to teach journalism or salesmanship. I realize that my words may be inter-

preted to mean that universities should flourish aloof from Society, in a vacuum, sealed off from the atmosphere of the city. Such an interpretation would be false: I want to forestall it.

Universities are instruments of Society. primary purpose is to meet Man's perpetual need for knowledge and ideas. From time to time and from place to place the need changes. It changes in ways Society itself cannot diagnose; and the universities have to make the diagnosis. Therefore universities must always walk among the people so that they can predict how Man's intellectual needs will change. I think that the universities have in large part failed to carry out this duty. Without much deliberate planning, without any clear foresight of Society's needs, they have either petulantly refused to yield to a deep and unexpressed pressure for change, or they have yielded impulsively to capricious demands. Fortunately Australian Universities have modelled themselves on Mr. Obstinate rather than on Mr. Pliable: they have not so much prostituted their powers to unworthy ends as failed to apply their powers to worthy ends. This policy has drawn them away from the Australian community.

The gravest symptom of this is the gulf between the universities and the administrative arm of the Public Service. In England senior grades of the Civil Service are recruited from the pick of graduates. For many positions men with less than a first-class honours degree are not considered. Even the mediocre graduate finds opportunities in the Civil Service. For instance, between 1925 and 1930, 295 junior posts in England were filled by pass degree men; posts including Assistant Inspectors of Taxes, Third Class Officers of the Ministry of Labour, Assistant Auditors in the Ministry of Health.

In Australia the administrative arm of the Public Service is all but closed to graduates. The upper age limit for applications is 18. This shuts the door on graduates. In most Government departments Under Secretaries and permanent Heads cannot, except by chance, be university men. There has been a gesture

by the Commonwealth and some State Public Services, to admit up to ten per cent, of graduates into the permanent staff; but Public Services have not in fact admitted as high a percentage as this, and it is understood that the Commonwealth Public Service has discontinued the appointment of graduates for the duration of the war. Now I do not suggest for a moment that the present method of recruitment gives incompetent administrators. That is not the point at issue. Nor am I concerned to show that graduates are the only fit recruits for the senior Public Service. That would be nonsense. But I do maintain that Australia's present policy is inconsistent, short sighted and harmful. On the one hand we have established an educational system which has the university at its apex. We expand on the need for equality of opportunity; we demand a university education for all who matriculate. Therefore we apparently set a high value on education. On the other hand we set a high value on service to the state: no school speech day is complete which doesn't mention citizenship, and the need for our best brains to serve the country. cannot have it both ways: either the entire educational system of this country is built on a fallacy, or the Public Services should be recruiting men for administration from the universities. At present we put this choice before our best brains: either go to the university (if you can afford it), or into the highest of all professions—the Government Service; you cannot do Now that financial assistance to students has removed the motive which drove many young men into the Public Service at eighteen, recruitment into the Service will be still more diluted. The universities should not provide a vocational training for the Public Service: that is not the point. To ask them to do so is like asking (as Graham Wallas puts it) a man to learn to swim before entering the water. university merely cultivates that intellectual health which is as necessary for public service as physical health is for swimming.

Many of our leaders admit that our present policy is inconsistent; it needed a war to convince them that

it was perilous. To meet the problems of war graduates have been drafted wholesale into Commonwealth departments. It was found that their training equipped them to deal with situations requiring foresight and The 'professors' in Government offices judgment. became a great joke for the newspapers. Every distasteful decision was laid at their door. Every fantastic regulation was written up against them. When the history of this war comes to be written it will be found that they averted many a crisis. But they came into the Public Service too late. Some of the crises would never have occurred if the public had listened to the counsels of some professors and had seen the need for graduates in the Public Service before the war. In fact the universities did not make it their business to offer the right (non-vocational) training and to influence the policy of Public Service Commissioners. The universities failed to anticipate the need successfully; not only in Australia; they failed in England.

For good and sufficient reasons which cannot be traversed here, a training in the classics admirably fitted men to run the British Empire of the nineteenth century. Articulation between universities and the British Civil Service was smooth and efficient. But The administhe nineteenth century has passed. trator now has to reach decisions on power alcohol, irrigation systems, aluminium production, malaria control: all problems of technology. The traditions of an aristocracy in a Greek slave state, admirable perhaps for solving India's problems, are impotent against engineering problems. The British Civil Service has technical experts by the thousand, 'on tap.' But a first in classics does not tell you when to turn the tap. In Australia the story is the same, except that the administrator does not have the wrong sort of higher education: he has none at all.

It is the universities' duty to work out what sort of education a public service in an age of technology needs. The State is now a gigantic enterprise of engineering, chemistry, agriculture, economics. Administrators cannot be experts, and (except in rare

instances) God forbid that experts should become administrators. But administrators can be trained to know when to call in the expert, how to question him, and in particular what are the social implications of his science. Courses in the history of applied science, in scientific method, in the social impacts of technology—these would enable the administrator to understand the context of his age. It has been suggested in many quarters that as Capitalism crumbles, so the administrators will inherit the earth. If they are to inherit the earth, it is the universities' business to see that they understand their inheritance.

When the universities agree to remodel their courses, and the public services agree to recruit more men from the universities (or to send more of their officers to the universities) then there will be some prospect of higher education having its place in the administration of the post war world. And what I have said for public services could be said too for industry and for many professions, including the teaching profession.

#### The Ideal Pass Graduate

The kingdom of the mind is no longer compact and homogeneous, as it was in Bacon's day. No longer can a university be expected to take all knowledge for its province. Therefore modern universities find that they have to restrict their sphere of influence. Within their sphere they will act as trustees for knowledge; they will teach knowledge and advance it. Knowledge outside their sphere should be the responsibility of some other institution. In this essay I have tried to define this sphere in order to help toward a better understanding between the Australian people and their universities. Our welfare in this Commonwealth requires that universities shall not only be worthy of appreciation, but that their value shall be appreciated. As I read over this essay I feel I may still not have satisfied the 'practical man,' who asks me precisely what use a graduate would be to him in the meat trade. I can only repeat that universities traffic in quality of mind, not merely in technical information; he knows as well as I that in the end quality of mind prevails over all else, even in the meat trade. Perhaps I can put it this way. Here is a testimonial to the ideal pass graduate: His individuality has been developed. He knows where to go to find information. He can distinguish facts from opinions. He can bring together data about almost anything, and lay them out and draw conclusions from them. He has a high standard of thoroughness. He can state his opponent's opinion as fairly and sympathetically as he can state his own. He can dismantle a complex situation as a mechanic dismantles a car engine. He never accepts or rejects an idea through prejudice, in his work or in politics or in golf: he examines it first, and accepts the conclusion even if it is distasteful.

All this seems unsubstantial. Quality always does; it is only quantity that can be measured. But this is the intellectual health at the heart of living: all other things derive from this. Universities are concerned with thought; it needs verse to express the contrast between the impermanence of things made by Man, and the permanence of Man's thought, formed out of dreams. Mary Coleridge has put it into verse:

Egypt's might is tumbled down
Down a-down the deeps of thought;
Greece is fallen and Troy town,
Glorious Rome hath lost her crown,
Venice' pride is nought.

But the dreams their children dreamed Fleeting, unsubstantial, vain, Shadowy as the shadows seemed, Airy nothing, as they deemed, These remain.

# AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH

#### "THE FUTURE OF EDUCATION" SERIES

The Australian Council for Educational Research is publishing, under the above general title, a series of pamphlets aiming to show the need for, and to provide a plan for the reconstruction of education in Australia.

I	Pamphlets already published are:
1.	'Education for Democracy' J. D. G. Medley
	'A Plan for Australia' A.C.E.R. Staff
	'Education for Some J. A. La Nauze
4.	'The Primary School' J. M. Braithwaite, C. R. McRae, R. G. Staines
5.	'Universities in Australia' Professor E. Ashby
6.	'From School to Work' W. M. O'Neil
	The following are in course of preparation: welve to Eighteen' Professors Browne and McRae (Education of the Adolescent)
4 A	dult Education' C. Badger
	he Pre-School Child' Miss C. Heinig
	hild Problems and Clinical Work' Dr. I. Sebire
E	ducation for Parenthood' Miss Z. Benjamin
.tIn	dividual Variations in School Pupils' Dr. H. S. Wyndham
^Pl	nysical Education' B. F. G. Apps
	chool Buildings and Equipment' A.C.E.R. Staff
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It is proposed also to publish pamphlets on other subjects, including the School Leaving Age, Technical Education, and Libraries.