

- There is something wrong with British society, and a good deal of it may be attributed to deficiencies in education.

## EDUCATION AND SACRIFICE

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We are in a mess about our education. Or rather we have let ourselves settle into a pattern so crystallised that it is going to be preposterously hard to break. Unless we break it soon — and I mean in years, not decades — we shall slide into genteel decline. To break it is going to mean sacrifice. It is going to mean the sacrifice of money, which will have to go quite deep in our society, of privilege, of intellectual comfort, of self-esteem. To begin with, we have got to see our education clearly, not through our fog of familiarity, but as foreign observers do.

First, a simple statement about it. There is too little of it. It is too narrow both in spread and concept. It divides us more than any education should. By and large, in fact, we are doing rather badly, and we don't

like ourselves because we are. Let us be crude. I am not imagining the extreme slowness of our growth in national production. The figures are these: for 1938 let us take the national product as 100 in each case. In the United States it has since gone up to 225; in West Germany to 228; in the OEEC countries on average to 164, and here to under 150. If you take the base of 100 for the year 1950, West Germany is now 225, France 170, Italy 202, Netherlands 158, the OEEC countries on average 164, and this country 129. There is something wrong with us. A good deal of what is wrong, though of course not all, should be put down to our educational deficiencies. This part at least — if we have the spirit — we can put right.

But we are a deeply conservative society. I do not

mean conservative primarily in a political sense. Some of the most dangerous conservative elements in our feeling come from people who would think of themselves as liberal-minded. On the other hand there are many who are calling themselves conservatives, who have a sense of the future and who would make much sacrifice — not only of money, which is the easiest to make — to see us on the way to health. I have to warn you however, that a society which is psychologically conservative has three successive techniques for dealing with a disconcerting truth. The first is the technique of the absurd denial. That is, when General de Gaulle announces that Great Britain is an island, the first response is to say: 'No it isn't.' Or if one says that the number of persons getting PhD degrees is many times higher per head of population in the US or the Soviet Union than it is in our country, the first response is blandly to deny the plain facts.

### *Defensive Techniques*

This process, however, cannot be maintained indefi-

nitely and it is succeeded by the second stage, which is the technique of the intricate defensive. One wants to discuss something fairly straightforward, like the benefits or otherwise of hanging. Any really practised practitioner in the intricate defensive will start off by asking interesting questions about the kind of rope. One produces concrete evidence about American and Russian higher education. 'Ah yes,' says one's interlocutor. 'But before we go any further, are you really certain about the second-year standard at the University of Irkutsk?' Finally, there is the third stage. This is the technique of hopeless acceptance, when the game is given up and the need for previous action accepted — but alas, now it is too late! This will happen unless we are careful, in some of the bitter controversies of our time 20 years hence. We must not let it happen in this.

I think we should all agree that many of our academic friends have a peculiar mastery of these techniques. I remember seeing them in full operation early in the

war. It was obvious that, if we were going to use the radar systems first invented by Watson Watt, we should need a very large number of scientist educated to something like degree standard in electronics. It was obvious that, unless we trained these men, our chances of survival would be perceptibly reduced. On the other hand, there were some who saw the problem differently. I had an old friend, a good and honourable man, who played a considerable part in university administration. I will call him Robinson. The first defence was, of course, to deny the need and to say that we could get on perfectly well with about 500 scientists. The second was to say that even if the need existed, the universities could not possibly do anything about it in three, four, or five years, or any time which was relevant to the war.

Fortunately, the third technique of hopeless acceptance — that is, that we ought to have done something earlier, but now it was too late — never really came into play. For we went into action ourselves. The conditions of

war had a way of clarifying men's minds, so the arts we could bring to bear managed to prevail over the intricate defensive. In fact, we educated in four years considerably more scientists and technicians than the men who fought on both sides at the Battle of Waterloo. But I have never forgotten Robinson. He had only three words to describe any effort to alter universities. The mildest was 'scandalous'. He would then go on to 'disastrous'. When he became really moved, he said that our proposals were 'catastrophic'. We became a little moved ourselves.

Well then, let us begin with what we do well. I once asked one of my wisest American friends what he thought was the chief positive merit of our education. He is himself an academic, he knows us intimately, and has lived among us for years. His reply was this: if one had a really startling specific talent, the sort of talent which sticks out unmistakably from early childhood, such as a genuine gift for mathematics, he would rather be born in England than in any country

He knew, certainly his own. That was our saving grace. If he were any other kind of child, even one whose talents were great though not so specific, he would much rather be born in the United States.

I would like to suggest three other proficiencies of ours — though these are proficiencies which are interwoven with our shortcomings. The first is that our honours degree at all universities — the standard varies very little, despite what snobbish persons think — is taken at a younger age and is in a specialized way more exacting than the first degree in other countries. That is, anyone who gets a first or a good second in any English university at the age of 21 has been through a severe professional training. More severe, perhaps, than is reached elsewhere until the age of 23 or so. I use the word 'professional' with care. In many respects he is less thoroughly and sensibly educated than his foreign contemporaries. But I do not want now to talk much about English specialization. There is no doubt that the English first

degree, in its higher reaches, is a remarkable example of what can be done in the way of intensive instruction.

#### *The Cost of Private Schools*

This leads back, of course, to our second skill. At our secondary schools, both private and state, we also achieve extraordinary feats in the way of intensive instruction. There is no real equivalent to our scholarship forms in America and Russia, the countries whose education I have studied with some care. At 18, the kind of student who is going to get a higher honours degree is, in his own specialized field, normally much ahead of his contemporaries elsewhere. Thirdly, we perhaps have something to teach others in certain aspects of primary education. We start educating children at five, which is maybe too early: but heroic feats are performed, in circumstances which do not bear examination, in a good many state primary schools. And we are astonishingly good at teaching the clever children of those who can afford to pay handsomely for the privilege, between the ages of six and

13. There is no equivalent anywhere that I know of to our private schools for children between those ages. That is, of course, where our social division begins.

We do all this, and it is not to be laughed off. But we do it at a heavy and, in the not too long run, at a crippling cost. At all levels from 15 upwards we educate so few of our people. Look at a few figures. I have said before that the only two countries about whose education I can claim to know even a little at first hand are the US and the Soviet Union. I will start at the top of formal educational training. In his speech on 29, January on the state of the nation, President Kennedy devoted much attention to American shortcomings in education, both in quality and in quantity. The President was specially worried because the number of PhDs graduating each year was too small: only a half of 1 per cent of each age group. This means something over 12,000 a year. I did not realize it was so large. The administration now appears to think that 20,000, or even 25,000, is the

kind of figure which should be achieved very soon. And 'very soon' in American terms does not mean 10 years ahead. The figure for Soviet PhDs — they call them Candidates, but they are exactly equivalent — is about 10,000 a year and is rapidly rising.

Before I go any further, don't fall into the English trap of thinking these doctorates inferior to ours. If you are tempted to do so, go and try to get one. In general, I should guess that the average standard of quality of PhD theses in the US and the Soviet Union is somewhat higher than our own. They are taken a good deal more seriously, and usually require considerably more of a graduate student's time. Five years is by no means an abnormal period to spend over one's PhD in the US. In Cambridge, at any rate, it used to be fairly difficult to be turned down for one's PhD once one had got started on one's research.

With all that said, what is the number of our PhDs each year? The curious thing is, no one seems to know. But our number of

PhDs is certainly less than 1,500 per year, and probably appreciably less. Multiply that by three or four, and you get a reasonable comparison per head of population. This, remember, is right at the top of educational training, where our assumption is that we are at our best. Of our final number, a substantial proportion, as the Royal Society's report has told us, are moving to the US. There is nothing sinister about this. All countries are short of trained and able men, and are going to remain short for the foreseeable future. Trained and able men tend to go where they can do the best work. Incidentally, nearly all these men are interested in education. They are academics or other sorts of professional. One of our best hopes of getting them back is to let them see that we are reshaping our education, and that we need them to help us do it.

There are some other figures which are perhaps not well enough known. The revenue expenditure on universities is at present between £60 and £70 million a year. We ought to make

allowance for the fact that in this country a good deal of higher education is carried out outside the universities. For instance, we spend about £16 million a year on teacher's training colleges, and £3 million a year on advanced technological institutions. Let us err on the generous side and add in another £13 million for expenditure on further education, which in some countries might be done in colleges. This makes a total of £100 million a year. The American expenditure on college education alone is £2,000 million a year. As in this country, the greater part of this sum comes from public funds. But it is a bit of a shock to find that annual private gifts to universities and colleges in the US amount to about £400 million a year, that is, four times our total expenditure on higher education. Soviet expenditure on higher education is roughly equivalent to American.

The number of students receiving higher education in the US, the Soviet Union and Great Britain is roughly what these figures suggest.

In the US approximately one third of each age group enters college at 18. The number of students receiving higher education is about 3 million. The comparable number in the Soviet Union is about 2 million. With us, the number at universities is 110,000; and probably we should add something like 50,000 to this, to include students at technical colleges, teacher's training colleges, and others working for professional qualifications. It is true that the wastage at American universities and colleges is very high. The number of students who graduate is about half the number who enter. But I have a good deal of sympathy with the American attitude, which is that it is better to open your doors to a number of students who are going to profit much, in order not to close those doors against students who are going to profit a great deal.

The Soviet wastage is about the same as ours. It is slightly baffling to visit the fifth-year class at a Moscow or Leningrad institute and find its numbers have actually grown, not shrunk,

from the first year. This is, however, simply because there is a good deal of movement between universities, as in Germany, and good students in, for example, physics from all over the Union have a knack of arriving in Moscow for their final year or two.

What is our defence against these facts? First, I think, refusal to realize how uneducated we are. The only stratum where we are rich in ability is in jobs which are being done by boys leaving school at 15 onwards, who either did not want to go to a university or could not get in. Much of our middle-grade clerical or minor administrative work is done much better than in America and Russia, and probably as well as anywhere in the world. But that is a wretched consolation. We may not realize the half of our danger for another 10 or 20 years, when the results of American and Russian education have had time to show. Educating a whole people, as they are trying to, is a long business. Often the results seem disappointing. The Americans have already

been at it for two or three generations.

It is important to remember that university education in any recognizable modern sense, with provision for organized research, is much older in the United States than with us. Similarly, Soviet education did not start in 1945, although it was then, by a heroic decision, given the highest priority. I believe that visitors to either country can now get the first intimation of what this investment in education is going to bring. Ours is a comfortable country, one of the most comfortable of all countries to live in. It comes as a little of a shock, if one gets out of New York and centres of recent immigration and settles down somewhere else in America for a few months, to realize that through great stretches of their population they are appreciably better educated than we are.

Our final line of argument is that we don't believe in mass education; we believe in educating an elite. Yes, but a tiny one; much smaller than we think. We often speak, and have managed to

persuade ourselves, as if our minute army of 110,000 students at universities were all starred first, the perfect product of the English competitive and specialized education. If that were true, though it would be socially dangerous in the extreme, we should be getting on in practical terms a good deal better than we are. In fact, the number of students whom our singular system of education suits and who really succeed in it, is quite small. If one guessed about one fifth of the whole, that would probably be a considerable exaggeration.

Together with our illusion about elite education, we say something else much more mischievous. It is that we have collected all the talent that exists in the country. There is no one else who could possibly benefit by our university education. I cannot conceive how this ever came to be said. It means, first of all, that the English are much stupider than everybody else, since, as we have seen, other countries carry the highest level of education to a far larger proportion of their people



than we do. It means something else, which is very wicked. It is roughly that the children of the working class, together with female children of all classes, are beyond hope, predestined to ignorance, not capable of any serious higher education at all. Once again, the facts speak for themselves. Manual workers are still the bulk of our male population and hold about 70 per cent of all jobs, yet only a small fraction of the university population of this island is drawn from their children, probably less than 25 per cent. At Oxford and Cambridge, as is now well known, the number of students from working class homes is bizarrely small — something over 10 per cent for Oxford, and less for Cambridge. This cannot be right, unless you believe that the separation of our people into castes has been so genetically complete that most of the working class are predestined to be stupid.

Women get almost exactly the same treatment as the proletariat. Out of each four students at our universities, only one is a woman.

This is grotesque. We, of all countries, can't afford to waste half our talent. Even if we could, it would be wicked to discriminate on sexual grounds. In fact, there is only one reply to the grosser troubles about our higher education. Put the wrong right. And that means, without the kind of finesse which plays with little truths in order to conceal big ones, immediately increasing its extent. There must be more of it. Starting not 10 years ahead, but now.

#### *Our Distorted Priorities*

The trouble is, we talk a lot and do so little. We are all setting much hope upon the efforts of the Robbins Committee. We have set up some new, small and promising universities. But the years are passing by, and other countries are acting while we sit and watch. Unless we act too, and far more decisively than has been contemplated, we shall, in 10 years' time, be giving higher education to a lesser proportion of our 18-year-olds than we do now. That would be a remarkable achievement. But let us take heart: it is

likely to happen. I believe that public opinion is now getting to some extent informed; parents and children are beginning to realize what they ought to demand; perhaps they will have the fighting-power to get it.

But whatever we manage to do, the one certain thing is that it will still be too little. Once a country has got its priorities distorted, over a very long period, it is maddeninigly difficult to make them sensible again — unless one is living in a revolutionary situation, which we are not. In our kind of society, the power of political action or of government decision is usually more limited than we think. Since 1945, there have been a number of years when we in this country spent appreciably more on egg subsidy than we did on universities. No one in cold blood sat down and decided that this was a rational order of priorities. It just happened. Our pattern of higher education has also just happened. It will take immense political judgment and will — probably more than our situation can permit — to alter it enough.

But, even if we can't, that is no excuse for doing nothing.

It will be realistic and sober to say that we can double our university population in 10 years. The cost will not be excessive. No one now doubts that the ability is there, even if we continue to allow our university education to be dominated, as at present, by the specialized honors degree. That is an argument which will continue as we get into action, just as others will. How much stress do we lay on this faculty or that? How can we get students of high talent into the technologies (we are very bad at this) and how do we develop the technologies into a first-rate humane education? We should answer some of these questions if, in the process of expanding our universities, we diversified them more. The most economical method of expansion not only in money, but in staff and buildings, is by magnifying existing institutions; and no doubt, for harsh practical reasons, that will have to be our major way. But my own impulse would be to experi-

ment with as much variety as we can contrive.

Until quite recently — until Keele and Sussex and the newest foundations — the English and Welsh universities have modelled themselves on Oxford and Cambridge, as if there were no other concepts of university education at all: although they had only to look north of the border to see a radically different system, sprung from roots as deep but in the best sense more democratic, more flexible and more capable of adapting itself to a world which we must foresee.

Perhaps the strongest single impression of American universities and colleges today is their variety. Most English people tend to think of them as being of enormous size. Some are. The University of California has getting on for 50,000 undergraduates, just about as many as the total student population of this island in any pre-war year. Most of the California undergraduates are taught in two gigantic campuses, at Berkeley and Los Angeles. Like all other known methods of university

education, this has its disadvantages; but it has also spectacular advantages. By all the criteria by which we justify our own, the University of California is one of the greatest in the world. That is, its record of original research stands comparison with any university — and that may be an understatement. Its top rank of students equally stands comparison with any. If any university ever educated an elite, then California does; and this as a result of a supreme effort of mass education.

These great state universities — California, Wisconsin, Michigan, Minnesota, Illinois and several more — are going to become more important, not less. Through their sheer size and through their public support, they have resources which no other universities can compete with. There are already many fields of research which they alone can touch. I suspect that for many of the ablest and most adventurous of undergraduates their size is not in the least frightening, but a source of energy.

It's an English mistake,

however, to think that all American institutions are large. As usual, they go to all extremes. Some of their most famous colleges are tiny. Haverford and Kenyon run to 500 students or so; Amherst to 900. These are all liberal arts colleges — which doesn't mean that science and engineering are not taught. They are, and very well. The title simply means that normally the colleges will not arrange organized research courses for the PhD. The undergraduate courses are usually as various as in a large university, and as fully staffed. That is, of course, an expensive method of teaching; the amount of individual tuition would startle those who boast of the Oxford and Cambridge tutorial system. It produces some most impressive results. For a great many students — and for some of the most valuable — it seems the most effective undergraduate education now available. Some of my friends who agree with me on most of these topics, disagree on this; I won't budge I suppose we can't manage to afford a couple of liberal arts colleges, just to

try them out? No government would feel that it was enough, in the way of numbers, for its money; but they would be an admirable object for a benefaction.

As we increase our universities, we have the chance of variety. And we have got to break some of our stereotypes now. Some could be broken by administrative action without a penny spent. The Colleges of Advanced Technology, which are universities in everything but name, should be called universities. They will equip themselves with their own education in the arts, just as MIT and Cal. Tech. do; for these technological educators, of whom B. V. Bowden is the most eloquent spokesman, believe passionately in what can be done by the interweaving of technological and humane learning. Give them their head: they are one of our sources of strength and hope. But why are the Colleges of Advanced Technology denied the name of universities? Who had the stupefying idea of labelling their graduating award with the gro-

tesque appellation of Dip. Tech.?

Labels ought not to matter overmuch. In the US almost the whole of higher education is conducted at universities and colleges, and the label one gets, when one passes the course, is that of a bachelor's degree. This label is attached to some courses which are not, by English standards, academic, as well as to many which are. The convention is nationwide, and is understood. The convention in the Soviet Union is more like our own. There are only 40 universities, most of which are of middling size. The great bulk of Soviet higher education is not done at institutions bearing the name of a university, but at a medley of others, some very large, like the Polytechnics; some small and concentrated, like the Gorky Literary Institute. From many of these one graduates, with various kinds of complex formulae. There is no single label like the bachelor's degree, but no one appears to mind. All that matters is that anyone who graduates anywhere—whatever his label—can go on to post-graduate education

and is in the field for responsible jobs. If you study the careers of, say, the present generation of high ranking Russian diplomats, you will find they were trained at engineering colleges, pedagogical institutes, all kinds of institutions. Their selection and use of personnel, at this level, must be far more flexible than ours.

This loose and adaptable system, with much higher education outside universities (in the narrow sense) would suit this country very well, from every point of view but one. The label of a bachelor's degree ought to matter: it matters only when it becomes something of a class label; and that is precisely what with us it has become. The invention of the label Dip. Tech. was the English vice carried in *excelsis*, the fine flower of our instinct to create a helot-class if humanly possible, even in learning.

#### *Salvation for the Few*

On primary and secondary education I want only to say some of the simplest things. This is not because I think they are less important than higher education. On the

contrary, for a good society, they are probably more so. It is simply that recently I haven't seen much of them at first hand. But there are some facts which stick out painfully into all of us. First, money. We spend about £800 million on education as a whole. The US spends approximately 10 times as much; and so, as far as one can estimate, does the Soviet Union. Comparing head with head, we are under-spending. Secondly, as in higher education, the children of manual workers, and girls everywhere, get less instruction after the age of 15 than anyone else; not quite so grossly as in higher education, but grossly enough to be human non-sense. Thirdly, the national drift to a narrow conception of academic excellence, which reaches its operative point in the degree, spreads right down through our schools. Our 15-18 years-old education is geared to be a preparation for the honours degree and nothing else. And this concentration begins far earlier. It is shown, in a genesis which is both dramatic and absurd, in the 11-plus. The 1944

Act had a lot to commend it; but only a mandarin society would have carried it into action in the way we did. We rather like the 11-plus because it tells us what we are only too ready to believe, that there are a few destined for salvation and a multitude who can be courtously forgotten.

This is not a process which we can view with any pride. It is wasteful in the opposite sense to the American wastefulness. They waste through being too indiscriminate; we waste through being too mean. It is not a humane process. If you have done any selecting at any age, you would hate to select at 11 — even if you believed in the purpose for which the choice was being made. Of course, at 11 you could pick out a stratum of academic flyers — that is fairly easy. You could pick out another stratum of children not equipped for any kind of academic training, though they are also God's creatures. In between comes a gigantic belt; and, if you are going to choose within this belt at 11, you might as well toss up for it.

*(Concluded next issue)*