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Second Thoughts on the Robbins Report

It was announced in our last issue that FORUM would devote considerable space in this number to the Robbins Report. In the symposium which follows, four main aspects of the Report have been singled out for discussion. Professor Armytage throws out a number of suggestions about the development of new universities. Mrs. Floud, in examining the material published separately as Appendix 1, assesses the Robbins projections in the light of the dynamics of educational advance. Mr. Cammaerts looks searchingly at the Committee's proposals for the future of teacher education, while Mr. Driver discusses the future of technical and technological education within the Robbins framework. If a general conclusion emerges, it is that, once more, projections of future numbers in higher education may prove to be an underestimate.

Operation Higher Education

W. H. G. ARMYTAGE

Professor Armytage is Professor of Education at the University of Sheffield. He is the author of Civic Universities and a number of other books.

Describing English higher education, Professor C. H. Waddington once wrote: 'This wastage of intellectual ability . . . no technically competent biologist would tolerate . . . in his rat colony for a week, and a pig business which treated the swine like that would be bankrupt in a couple of seasons.'¹ He should know, for with C. P. Snow, J. D. Bernal, Joseph Needham, Julian Huxley and Solly Zuckerman, he helped to forge the techniques of operational research during and after the war, which today are increasingly being used in government.

As Waddington asked, 'What are universities really training their students for? Are they giving a general education in culture and citizenship, or are they trying to turn out technical experts? If the former, what are the crucial lessons which can be taught in the different faculties and how are the courses related to getting these lessons across, or, if the latter, what kind of experts, what proportions of the various types of specialists, and so on?''²

No one could expect the Robbins Committee to provide an adequate answer to these questions. Yet, by addressing its collective self to them, it has enabled readers to frame different ones perhaps capable of more definitive answers. Acceptance of

its recommendations has been followed by the creation of a new Ministry of Science and Education, which presumably will inherit two major operational techniques already forged by the old Ministry: one concerned with buildings, the other with curricula.

By adopting the key ideas of annual building programmes, minimum physical and educational standards and a limit of costs per place, the old Ministry coped with the bulge cheaply and well. A programme similar to C.L.A.S.P. or S.C.O.L.A. for the universities, based on exterior shells, might well be the answer to crash expansion, allowing interiors, in science at least, to be pulled about by restless professors. The curriculum study group now under way might throw light on the dark corridors linking schools and universities, and enable basic skills of language and numbers to become less esoteric than they are at the moment.

The unification of the educational service under one minister makes possible further data-assembly for forward planning. Fortunately he inherits a good engine, meshed in consultative gear with the L.E.A.s and cited as worthy of emulation by the Machinery of Government Committee in 1918. On the schools and college side it works through four cylinders: the Central Advisory Council, the Secondary Schools Examinations Council, The National Advisory Council for the Training and Supply of Teachers, and the National Advisory Council on Education for Industry and Commerce. This is now redesigned on Vee type lines, with a similar consultative structure for higher education providing the opposite bank. Now targets can be set and operational research insights applied to the whole.

As the first chairman of the Central Advisory Council remarked 'developments seem to be moving towards the creation of some kind of Ministry of Culture, not indeed to reduce the natural jungle to a trim totalitarian garden but to minimise wasted

¹ C. H. Waddington, *The Scientific Attitude* (Penguin, 1947) 137.

² *Ibid* 123.

effort, to increase effectiveness, and above all to interpret and direct institutional action of whatever kind that has a distinct educational bearing so that it may contribute towards the ends of a genuine common culture'.

* * *

The clearest implication arising from the report is the need for vocational guidance on a scale hitherto not appreciated in this country. The 'pool of ability' whose depth and specific gravity Robbins (and Crowther) have plumbed needs proper piping to carry it upwards, and the necessary processing (if one may be allowed to continue the metaphor) should not be a hit and miss affair or a social explosion will result. It is all too easy to recommend the upgrading of C.A.T.s and the establishment of S.I.S.T.E.R.S., without at the same time endorsing the need for ensuring that aptitude is ascertained and verified.

Indeed the aptitude test at 18+ is now far more important than that at 10+. Some new universities have realised this by making provision for vestibular years, in which the student can shop about for a congenial field of study. If, after such vestibular years (or aptitude tests) a student definitely decides on a profession, is he to be given an advantage over those who have earlier chosen to 'go professional' from the beginning? Put in another way, will entrants to a professional college (i.e. of education) as opposed to an ostensibly non-professional one (i.e. the University of East Anglia) still be literally non-U(niversity)?

If that superior type of plumber known as a chemical engineer can obtain graduate status, why can't a teacher? Just as chemical engineering is applied thermodynamics, so teaching is applied human relations. Of the new universities, a majority, it is hoped, will be found, not founded, by upgrading teachers' colleges, and emancipating them from the leading strings of institutes of education, with power to chart their own courses (like C.A.T.s), drawing on a real tradition which the Utopian Sièyès-type new universities lack.

For one cannot but sympathise with the idea that the creation of large autonomous Colleges of Education, immune from the normal obligations of public accounting and with their own inner scheme of priorities, would create a mandarin class. It is not at all clear that the Colleges of Education will secure adequate academic support from the universities even if the goodwill were there. The spectacle of the committees that would proliferate is by no means reassuring. Here it is as well to

ponder on some observations of the Chief Education Officer of Leeds who expressed a fear that 'institutions of vital concern to the community and to the individual are moving farther and farther away from that community into realms where questions cannot be asked, actions justified or wrongs righted'.

Then too, we should give serious thought to Dr. Balogh's criticism that 'the reform of higher education necessitates much more than an expansion of what is'. It demands a profound change towards more democratic responsibility. For, as we move into an era where regional responsibilities become ever more important, it is surely necessary to expand teacher training facilities at Technical Colleges, Colleges of Art and similar types of institutions to enrich recruitment to the profession. I, for one, cannot envisage large University Schools of Education taking craft subjects quite as seriously as they need to be taken in the modern world.

In the training colleges lies some really untapped potential. They should, and could, take much more of it. For in 1961 11,475 girls entered them as opposed to 4,836 boys, whereas only 7,475 girls entered the universities as opposed to 18,067 boys. Nor do girls enjoy other forms of full-time further education: only 2,039 of them were to be found there as opposed to 8,200 boys. An even greater disparity in part-time education is revealed: only 1,272 girls as opposed to 33,958 boys! Indeed the total figures (22,261 girls as opposed to 65,061 boys) themselves are inadequate since these 22,261 girls represent 7.1% of their total age group, whereas the 65,061 boys represent 21.3% of their group! 'Here,' says Robbins, 'is an important reserve of untapped ability'. And 'Here, Here' we echo.

The case for upgrading of some of the bigger teachers' colleges to autonomous or autochthonous rank is very strong where such colleges are situated in industrial areas. Here Robbins' polite repudiation of U.G.C. policy over the last three years—six universities in Baedeker towns—will, it is hoped, mean what it says: 'the claim of the large cities and centres of population for further facilities for higher education will be taken seriously'. Large towns have colleges which might well federate with the local technical college or university without being shunted into a School of Education.

* * *

Nor should we be blind to the implications of federal relationships. 'Federal arrangements,' says Robbins, 'may in some places prove desirable if substantial advantage is likely to be gained, but there is nothing that makes federation preferable

to independence'. Presumably this would not prevent Manchester sustaining a college at Bolton, Liverpool at Crosby, Sheffield at Rotherham, or Leeds at Shipley where they could tap lodgings and provide as many civic amenities as they receive. Access to such amenities (libraries, museums and industries) can be repaid by the presence of professional trainees with their cultural interests: a two-way traffic that led Robbins to have 'no hesitation' in recommending that a city should have more than one university.

Much also might be learned from an American idea: the 'branch'. Just as the University of Michigan has colleges in Flint, Dearborn and Detroit supplementing Ann Arbor, could not the University of Manchester have colleges at Blackpool, Preston or Warrington—the last named indeed more than the others in view of its notable past? 'Branches' might solve other problems of space (e.g. students might do a first year in metallurgy or agricultural botany at Scunthorpe before carrying on to Sheffield), or of facilities (e.g. hospitals, schools and factories). Such 'branches' might well in time graduate to independent status. Such 'branches' might indeed be no more than 'recognised' training or technical colleges. Precedents already exist for this (e.g. Sunderland and the old University of Durham).

'Branches' would have three additional advantages. Transfer between the various stages of tertiary education would become easier. Variety in the curriculum would be encouraged—for field courses and in-service training could be based on them. Lastly 'branches' could, by taking some of the undergraduate load off the universities, enable them to concentrate on their increasingly quaternary rôle of research and of training research workers. Indeed, Leeds might have a large post-graduate school taking Masters' and Doctors' degrees whilst some general students at Dewsbury, Harrogate, Ilkley, Shipley and Normanton were making the grade. 'Branches' might well be the only means of saving some of the site-bound civic universities from becoming dropsical with undergraduates.

Until recently, municipalities have tended to worry more about racecourses than universities. This is no bad thing, for until recently the mention of handicaps, hurdles and stakes conjured up memories of horse racing rather than of the 11 or the 18 plus. Nor can municipalities be blamed, for the Ministry itself has a tradition going back to the days when the Vice-President seemed to care as much for veterinary as educational matters. But the racecourses are now closing. Like the Rivers

Alphaeus and Peneus, which swamped the stables of King Aegeus, the flood of teenagers now rolling up the academic tidewaters needs harnessing for a useful purpose.

★ ★ ★

On closer examination there is nothing revolutionary about Robbins. 'Crisis' apart, it virtually recommends the *slowing up* of the rate of growth of full-time higher education. The envisaged rate of expansion—5·4% per annum at compound interest—is rather less than that achieved over the last eight years. Only if this lower growth rate is *sustained* will the target figures of 560,000 places for 1980/1 be reached. The envisaged annual growth rate in part-time education is lower still—4·5% per annum—also has to be continuously sustained to provide 790,000 places by 1980/1 (from 356,000 in 1962/3).

Will this, like all the manpower projections, from Percy, Barlow, Zuckerman to Willinck, be just another under-estimation? Can the Robbins Committee (or any other so constituted) foresee the implications of new scientific developments? Will their projections be affected by entry into the Common Market with all its implications of mobile manpower? Will their report affect the career choices of children? Answers to these and other questions cannot, however, disprove the vital statistics in the report, which demand action. The 747,000 of eighteen-year-olds of 1964 become the 963,000 of 1965, the 882,000 of 1966 and the 724,000 of 1970. Teenage unemployment is already so serious that the first measure of Sir Alec Douglas-Home's government to pass through its main stages has been an Industrial Training Bill. As the erosive, intrusive kilowatt hour dislodges yet more teenagers from the crumbling cliffs of craft unemployment, the mere raising of the school age is miserably inadequate. We should use the brief breathing space allowed us after 1970 to set up the necessary tertiary structure so that by 1980 when the number of eighteen-year-olds rises to 900,000 (a level which the Robbins Committee consider will be maintained) a balance of professional studies is secured. Though such statistical projections, based on the best and most reliable evidence of future needs are, as Robbins admits, a continuous need, yet we should beware of unconsciously emulating our nonconformist forbears and regarding Robbins as a holy book. It is neither an Old nor a New Testament. Perhaps its red cover (a welcome contrast to the *blue* books of former years) symbolise that it will not be put into cold storage. Certainly its setting of the targets for 1980 indicate that 'Operation Higher Education' is now a major task of the new planning machine.

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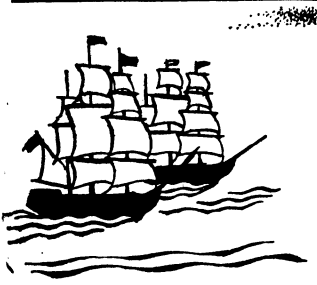
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Are the Robbins Estimates Conservative?

An assessment of appendix one

JEAN FLOUD

Now a Fellow of Nuffield College, Oxford, Mrs. Floud was until recently Reader in the Sociology of Education at the University of London Institute of Education.

The Robbins Report makes recommendations for the future expansion of higher education — for the scale on which places for full-time students should be provided in the years up to 1980. *Appendix One* presents the evidence on which the recommendations are based. This evidence is of great intrinsic interest; for example, it includes the most up-to-date and lucid statement to be found anywhere of the nature and incidence of social class and related inequalities of opportunity in English education. It also throws much light on the general approach of the Robbins Committee to their task, on the assumptions both explicit and implicit which informed their work and determined their recommendations as to the future scale and organisation of our system of higher education.

The first thing to notice is the decision of the Committee to work to the principle that "courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so". They explicitly rejected an alternative principle, that the provision of places should depend on the needs of the national economy, largely on the practical ground that in the present state of knowledge it is easier to arrive at sound estimates of the demand for places than of future manpower needs. They did not mention yet another principle to which they might have worked; namely, the principle of equality—presumably because they supposed it to be safely cared for by the "demand" axiom formulated above. Most educationists will instinctively welcome this single-minded choice of a basically liberal principle. It is therefore worth pointing out the conservative implications, for the Committee's recommendations both as to the size and the structure of our future system of higher education, of the "demand" principle as against either alternative — "economic growth" or "social democracy" as we may dub them.

To begin with economic growth. It is true that the economists have so far found it impossible to be precise about it, but it seems to be a safe assumption

that the manpower needs of a modern industrial economy, if they could be accurately assessed, would prove to be in excess of the output of a higher education system geared simply to the public demand for places, even allowing for the influence on demand of the stimulus of changing manpower needs. The danger seems to be less from educational overproduction than from specialisation and artificial obstacles to mobility; these seem to be the true problems for planners.

There is an interesting passage in the Robbins Report describing the Committee's visit to Russia. "In the Soviet system of planning much reliance is placed upon projections of manpower requirements, and these are made on a most ambitious scale. When we indicated our difficulties in understanding how, with all the uncertainties as regards invention and the advancement of knowledge generally, reliance could be placed on statistics of requirements for more than a very few years ahead, we were met with the reply that in the Soviet Union there would always be use for people who had been trained to the limit of their potential ability." Whilst stating unequivocally their sympathy with this view and their belief in "the value to the country of a greatly increased stock of highly educated people, and of the absolute necessity of a great increase in the present provision of places in higher education if this country is to hold its own in the modern world," the Committee reject the suggestion that they should base any part of their projections on an assessment of economic needs. With the exception of the need for school teachers, they harness their recommendations exclusively to projections of the demand for places.

The 'neutral assumption'

These projections of demand, moreover, are made with the greatest caution. *Appendix One* discusses the likely effects on demand of a variety of social, economic and educational developments; but in face of the undeniable difficulty of assessing them with any precision, the Committee falls back on a simple extrapolation of recent trends — that is, on the "neutral assumption" that "over the next twenty years the proportions of each age-group who are at school will increase at the same rate of simple interest (straight-line growth) as over the years 1954/62". (*Appendix One. IV.29.*) As Professor Martin Trow wryly remarks (in a perspicacious commentary in the March issue of *Universities Quarterly* to which I am greatly indebted in this review), the result is a projection which is "so conservative as to be nearly invulnerable to the criticism of being inflated".

He goes on to suggest a number of reasons why the projection may turn out to be not merely con-

servative but actually unrealistic: the raising of the school-leaving age; improvements in secondary schooling; further rises in the educational standard of living of the population at large (induced at least in part by the impact of Robbins itself); the changing occupational structure; the rising educational level of parents as the 1944 Act works itself out. He may well be right, that these factors, which are already at work in the recent trends extrapolated in the Robbins projections, will increase more rapidly in the future than in the past, and so cause the output of qualified school leavers and of applicants for places in higher education to overtake those projections. However, I am inclined to think that he has not taken sufficient account of our under-developed system of secondary education. He draws, not unnaturally, mainly on the American experience of rising demand for higher education, and this takes off from the sound base of a fully-developed mass system of secondary schooling.

More important, in my view, than the unwillingness of the Robbins Committee, of which he complains, to chance their arm on alternative, less precise but probably more realistic projections of demand, is the fact that in turning their backs entirely on the approach to their task from the side of the economy, they were led to ignore the problem of *mobilising talent*.

The 'demand' axiom

The same effect is produced by their apparent assumption that the principle of equality is safely cared for in their 'demand' axiom. The assumption is nowhere made explicit but one may perhaps reasonably infer from the general tone of the Report that had the issue been raised it would have been disposed of in this way. Yet it is evident from *Appendix One*, if it was not so before, that the assumption is false. Social class differences of educational opportunity and achievement as between children *at the same level of measured ability* are remarkably persistent. Expansion in university places today, just as between the Wars expansion in grammar school places, is for various reasons taken up more quickly by middle-class than by working-class children, and this is well documented in *Appendix One*.

Expansion in accordance with the demand for places in higher education will not, of itself, secure the principle of equality. The Committee has itself assembled the most convincing evidence in support of this proposition to which, however, it pays no attention in the Report. The admirably frank and convincing analysis in *Appendix One* of educationally irrelevant and damaging social differences

is virtually set aside in the Report, where it is used only for illustrative purposes in a discussion of the so-called 'pool of ability' and gives rise to no discussion of its possible implications for the Committee's recommendations as to the future size and structure of our system of higher education. I will come back to this point; but first I want to describe the analysis itself.

Table 44 in the Report compares the minimum number of places which the Committee estimate will be needed in the main sectors of higher education in 1973/4 and 1980/1 with those now available:

Places needed in full-time higher education: by sectors Great Britain 1973/4 and 1980/1.

	Universities	Colleges of Education	Further Education	All Higher Education <small>Thousands</small>
1962/3 (actual) ..	130	55	31	216
1973/4	219	122	51	392
1980/1	346	146	66	558

- Notes: 1. The first column includes Colleges of Advanced Technology, the Heriot Watt College and Scottish College of Commerce.
2. Annual figures of places needed are given in *Appendix One*, Part IV, Tables 51, 52 and 53.

Altogether, it can be seen, 342,000 more places will be needed overall in this period. Three social trends account for this increased demand: the rising birth-rate, which swells the annual age-groups passing through the educational system (this accounts for 7 per cent of the increased number of places recommended for 1973/4 and 1980/1); the rising level of educational attainment, which produces an increasing proportion of the age-group capable of proceeding to higher education (this will account for between 55 per cent and 60 per cent of the increased number of places proposed in 1973/4 and 1980/1); the waxing appetite for higher education, which results in an increasing proportion of those qualified to proceed actually applying to do so (the Report estimates that the application rate for full-time places will grow by about 10 per cent over the next two decades and this factor accounts for 18 per cent and 13 per cent of the additional places projected for 1973/4 and 1980/1 respectively); the small remainder (17 per cent) of the increases are accounted for by miscellaneous other factors.

Of the three main factors, the second — the so-called 'school trend' — is by far the most important, accounting as it does for well over half the total increase. A rising proportion of the annual age-group between 1954 and 1961 obtained G.C.E. qualifications; when projected, the picture in 1980 is as

shown in the following table extracted from the much fuller figures provided in Table 10 of Part IV of *Appendix One*.

Output of those with various G.C.E. qualifications as percentage of the age-group. England and Wales, 1961 and 1980

	1961	1980
3 or more 'A' levels	4.4	8.3
2 'A' levels	2.5	4.6
1 'A' level	2.1	4.1
5 or more 'O' levels with no 'A' levels	7.4	11.4

No illusions about the constancy of G.C.E. standards of marking, or indeed about the intrinsic educational merits of these examinations are necessary in order to appreciate their significance as a broad gauge of the level of attainment. Corresponding closely to this development there was, in the relevant earlier years, a marked improvement in reading ages at eleven and fifteen; so that as Robbins puts it: 'It seems reasonable to conclude that a part of the recently increased demand for higher education springs from better standards of education at compulsory school age' (*Appendix One*, p. 244).

The 'school trend'

The discussion of the 'school trend' represents the core of *Appendix One*. A careful analysis and projection of two distinct but related tendencies, to stay on at school and to obtain G.C.E. qualifications, is buttressed by a highly informed general discussion of the determining factors. I call it a general discussion because although for the most part based on the findings of particular enquiries (for instance, Dr. Douglas's follow-up study of children born in 1946, or the Committee's own survey of a national sample of 21-year-olds) the factors cited are none of them, as yet, capable of being quantified and incorporated directly into projections of the output of qualified school leavers.

A list is given of the main factors on which the output of qualified school leavers is likely to depend: the supply of potential ability, biologically inherited (the so-called 'pool of ability'); the influence of various features of family background on the attitudes of parents and pupils towards education; and the influence of local differences in industrial structure and primary and secondary school provision.

The Committee wisely decided to treat the 'pool of ability', for its own purposes at least, as pure metaphor and made no attempt to measure it. The discussion takes the form of a convincing demonstration of social class and local inequalities in the

educational achievements of young people of the same measured ability, with the inference that there must be considerable reserves of untapped ability adequate for higher education. In this matter, Robbins goes beyond Crowther in several important respects; in exploring the effects of local differences in educational policy and provision; in demonstrating the cumulative impact of social inequalities on educational achievement; and in showing that post-war reforms have not resulted in narrowing class differences in educational opportunity.

All this is very striking; the reserves of untapped ability are, as the Report observes, greatest in the poorest sections of the community (and among women—an even less tractable problem). However, no statistical relationships clear enough to use for the Committee's projections of demand were forthcoming and further implications were not explored. But if this evidence could not reflect itself in the projections of demand it is surely surprising that it did not give rise to some discussion of the problems and prospects of narrowing class and local differences of achievement?

The difficulties faced by the Committee in quantifying the rate at which reserves of talent might be mobilised in the future and which heavily conditioned their basically conservative projections of demand apparently led them to ignore the possibility of framing their recommendations as to the future pattern of higher education so as to influence the mobilisation rate. The crucial problem of combating inequality by means of a countervailing policy at earlier stages of education in the primary and secondary schools could reasonably be left to Newsom and Plowden; but it seems clear that if, for whatever reason—whether in the interests of economic growth or of social democracy, or of both—Robbins had envisaged an active policy of mobilising talent, the conception of the reconstructed system of higher education which emerges from their recommendations would have been different in important respects.

As it stands, the Robbins conception is an admirable one. Higher education and the higher learning are carefully wedded in a coherent structure articulated around the re-defined universities. The structure is open-ended—but perhaps not open-ended enough. Could the Committee have so readily and categorically dismissed the suggestion that new institutions might be created—local 'junior colleges' on the American model, for example—had they had in mind, not merely the select minority of pupils in the grammar schools or their equivalents, but the unselected majority? For many, if not for most of these (things being what they are at home and at school),

full-time further education rather than advanced work in school probably represents, not only the best hope of transition to some form of higher education but the best inducement to persevere at all with the cultivation of their talents. Professor Trow may be right that the Committee's attitude to the resources of the regional and area technical colleges is unimaginative and inhibited; and there is room for a great deal of experiment besides.

However, we know too little about the appetite for education, and particularly about class differences in the conditions of its growth at different ages. There is a great deal more work to be done before we can say anything useful about the tactics and logistics of a campaign to mobilise talent. *Appendix One* shows what can be done in the way of social investigation in a matter of no more than two years, given a sense of urgency and official backing. It is a pity that the Robbins Committee did not interest themselves in this problem; had they done so, we might now have the statistical foundations of a plan of action.

The Robbins Report and the Training of Teachers

F. C. A. CAMMAERTS

Mr. Cammaerts is Principal of the City of Leicester Training College. He was earlier headmaster of Stevenage Grammar school.

The appearance of every major report on an educational subject gives rise to high hopes and to profound disappointments. The committees who prepare these reports are bound in their deliberations by terms of reference which often prevent them from exploring fully major issues which are closely allied to their field of study but not really pertinent to their instructions. Such committees are even more restricted by the knowledge that what they recommend may be the basis of immediate legislation. If their recommendations are too radical their whole work may be permanently shelved.

Such considerations must have carried particular weight with the Robbins Committee. Their recommendations were of such immediate urgency that they could not take unnecessary risks; on the other hand the whole of their field of study was so closely linked on the one hand to studies which prepare students for Higher Education and on the other hand to the vast field of part-time further and technical education, that the separation of their

work from these considerations must give the report a somewhat lopsided appearance. We cannot, and must not, judge the report in terms of educational theory but rather in terms of practical politics and the achievements which may result from the work of the Committee.

It is, however, our task as observers, commentators or critics, to make sure that the next step forward is discussed immediately, and that we do not rest on the laurels of Robbins for a decade or more.

Teacher supply

Within these limits the first and most obvious weakness of the report, in terms of teacher training, occurs in the analysis of the supply of teachers (\$481-485). As long as government policy accepts standard sizes of classes as 30 for secondary schools and 40 for primary schools, their first task was to consider a supply of teachers to remove all oversize classes. Clearly the committee were influenced by the Crowther report on raising the school leaving age and doubtless they knew that the Newsom Committee would reinforce this recommendation so that they could, at least, go as far as considering this reform in their deliberations.

The problems of teacher supply during the next two decades will go far beyond the standard size of classes. Newsom's proposals for the nature of secondary education will be expensive in teacher manpower; it will undoubtedly produce a greatly increased demand for further education of all kinds. Every step forward will make a further heavy demand. Colleges of all kinds will need staffing, the very great needs in special schools will need provision. Indeed, teachers of all kinds will require one year in ten for attendance at courses for developing their professional skills; this is something which is put aside under the pressures of today but which must eventually be included in planning teacher supply. Our contribution of teachers to help the problems of emerging nations is pitifully small, an increased effort in this area is of vital interest to the world. All these factors can lead to only one conclusion. In terms of national or world needs we cannot over-produce teachers. The plan at present should not be to increase places to 145,000 and stay there, but to train every man and woman who is capable of being trained and who wishes to train.

The report recently published by the A.T.T.I.¹ stressing the needs for an adequate Educational Manpower Planning Committee, is a valuable addition to the Robbins proposals. Many of the conclu-

¹ *Memorandum on the Future of the Training of Teachers for work in Schools.*

sions of this report may be questioned, but its emphasis on the total planning of the output of all kinds of teachers, and the need for full long-term planning is undoubtedly timely.

The Robbins report can be seriously faulted in the separation of its recommendations for Colleges of Education from the problem of the preparation and training of Graduates and of all teachers who, at present, acquire their qualifications elsewhere than in the colleges.

Because 'University Departments of Education are at present reviewing the content and arrangement of courses', because 'multiple subject degrees' are increasing, because at least two Universities, Keele and York, are experimenting with concurrent studies in education, the Committee appears to regard the preparation of teachers outside the Colleges of Education as a minor matter. Yet, it is presumably still true that the situation revealed in 1961 by the Ministry of Education that 85% of all students from Colleges were required in the Primary schools, means that, for some time to come, the great majority of teachers in secondary schools and in further education will be recruited from the Universities. Certainly the report does not lay sufficient emphasis on this aspect of professional preparation.

The multi-vocational college

During all the debates and discussion which centred round the submission of evidence to the Robbins Committee, undoubtedly one of the most interesting was that which started with the advocacy of the Liberal Arts and Science Colleges. In about two and a half years opinion, at one time definitely inclined towards this idea, seemed to turn more and more towards the notion of multi-vocational colleges rather than an imitation of the American model. During this debate the part to be played by Colleges of Education in developing such plans was always the essential consideration. It is indeed disappointing to find this debate limited to a very cautious recommendation in §313 and quite excluded from the Summary recommendations. Yet the isolation of the teacher in his training must remain a valid criticism. The permanent commitment at the age of 18 to class teaching is an unreasonable demand to be made of the young, and there are many areas of our social services which have inadequate or non-existent training schemes and where interchangeability of professional training with teachers would have very obvious advantages. Youth leaders, youth employment officers and the child guidance services are the most obvious. Doubtless the Committee did not want to cloud the urgent

need of teachers supply, once more they can be faulted for a failure of emphasis rather than for neglect of a subject.

Finally, though it is highly comforting for those working in Colleges of Education to be told in both the Newsom and the Robbins reports that a three-year concurrent course is the right way to work, was it wise of the Committee to make such a clear assumption? The Committee obviously had no evidence of systems other than those studied abroad, and to suggest changes might have involved theorising, but such problems as the age of admission, the role of the school, and teacher-tutors, the real value of practical work done in schools could have borne more scrutiny, and present methods might have been examined with a rather more critical eye.

These are the defects, the omissions, the failures in emphasis. These are the disappointments. What of the proposals themselves and the vast amount of work and discussion which have arisen from them? They can be reduced for purposes of discussion to three. Firstly the size of Colleges, secondly the administration and finance of Colleges and thirdly the proposals for a B.Ed. degree.

Size of colleges

It is, perhaps, a little curious that the first, which in many ways is the most revolutionary of the three, has received so little attention. In §§ 317-319 the Committee make a very strong case in favour of large Colleges and ultimately consider that most Colleges will be Colleges with more than 750 students. The arguments given in favour of large Colleges are entirely convincing, but it would be idle to think that there are not many people who still would like to make the case for the small unit where everyone knows each other and where the idea of a single 'community' can be most readily developed. If we accept this part of the recommendations it will mean that the nature of the vast majority of Colleges will be changed.

The Committee may perhaps be criticised for not applying many of its arguments about the size of Colleges to their location. The argument about the availability of materials, of books, of varieties of courses and of schools applies not only to the resources of the Colleges themselves but also to those supplied by the areas in which Colleges are situated, and this applies particularly to theatres, concert halls, cinemas and the whole complex of social existence which can enrich the life of students. At present some forty of the one hundred and forty Colleges are situated in small country towns or villages or in country houses well away

from centres of population. Many of the others are awkwardly sited in places where public transport is not readily available. Only about 60 Colleges are in the neighbourhood of Universities, sufficiently close for the facilities of the Universities to be readily accessible to their students. The sites occupied by many of the urban Colleges do not lend themselves always to massive expansion.

The A.T.T.I. memorandum, quoted above, rightly points out that the meaning of the term 'integration with Universities' will vary very greatly with the actual situation of the College. The cost of acquiring land for building is one of the most formidable obstacles to expansion, and particularly to expansion in the right place. The A.T.T.I. thesis that Colleges remote from Universities should not be allowed to join them is not a solution of this problem. The question must however be asked, 'What should we do about Colleges situated in unsuitable areas?'

The site of the College as it expands will inevitably have a profound effect on the nature and quality of the life in that College. Colleges which are able at present to run youth clubs, play centres and nursery schools know how valuable such activities are. All students, but particularly future teachers, should be able to avoid an inward looking life, and should have available the fullest variety of social experience which the country has to offer.

Administration and finance

The second major recommendation of the Committee has caused the strongest emotional reactions. So strong have been the feelings aroused on both sides by the idea of Colleges being 'handed over' administratively and financially to Universities that the major issues involved have been obscured. §§ 351-356 do not, in fact, propose that Colleges should be simply 'handed-over' from the L.E.A. or voluntary bodies to the Universities. The proposals provide an opportunity for Colleges to plan their development over a longer period than the one year of existing estimates and expenditure. They recognise the national character which they already have, they allow for a proper degree of academic and administrative self-government with full participation of the teaching staffs of the Colleges, and they recognise the value that full responsibility can bring in its train. To say that governing authorities have done a good job in the past is no argument for saying that they alone should continue. The Colleges have now to safeguard their own rights and their own futures, the work of College academic boards

must become a work of real responsibility, they must establish their own priorities. It is true that these are arguments which apply to institutions other than Colleges of Education, and it is certainly to be hoped that the measure proposed for Colleges of Education will prove a good example for other institutions in the future.

The new degree

The final proposal of the Robbins Committee for the Colleges of Education which appears in §§ 331-341 is the most important because it contains so many possibilities for improvement or for the very destruction of the Concurrent Courses as we know them, if the B.Ed. degree is developed in the wrong way.

It may be considered a pity that the Robbins Committee did not propose a complete 'devaluation' of the first degree. It is somewhat illogical that, having shown that the pool of ability was not a finite reality, the Committee should have proposed a limit (6%) on the immediate expansion of first degree opportunities. Once the Committee decided that the title of first degree should not be given to all satisfactory three-year courses beyond the age of 18 then clearly they could not propose a three-year degree course for all teachers. The actual standard of the present first degree is not easy to perceive, but clearly, at present, many excellent teachers are trained whose academic work would not be considered to be at the level of the first degree standard wherever this was fixed.

Discussions are now proceeding in working parties and committees in all Universities to examine the possibility of establishing a four-year course acceptable to both Colleges and Universities, and reports of widely different conclusions are being talked about. Certain major issues become at once apparent. What subjects are going to be accepted as a valid part of the degree? Is the degree to be a classified honours degree or a pass degree? Is the whole of all work done in the four years to be considered as assessable for degree purposes? There is a great danger that in some Universities decisions may be made now that will prove of very serious consequence in the future. It is immensely important that, in their enthusiasm for this offered opportunity, Colleges should not feel that it is worth 'coming in at any price'.

The first question on the range of subjects acceptable for B.Ed. degree purposes is typical and fundamental. The Universities, through Institutes and Schools of Education, have had responsibility for

examining and approving all courses of study in Colleges. The principle should be clear, if the courses are suitable for the three-year course they should be suitable for the degree course. Any modification of this principle is a condemnation of approval in the past of admission of such courses.

Clearly the possibility of the B.Ed. being accepted as only a pass degree, which would deprive even the most brilliant student of equal standing with other graduates, is even more serious. It would mean giving a permanently higher status (and, at present, pay) to students doing the more orthodox University courses.

That Colleges, in the interests of future teachers, have to do quite a wide range of remedial professional work with their students, in mathematics, in speech, in music and art can surely be readily accepted, so that certain parts of College work may not count towards a degree. An important point, however, should be settled now. The B.Ed. students should not only be among the academically good students but should also be excellent teachers. There is a real danger that the concentration on book work might lead to a neglect of practical teaching and curriculum work and at this stage it should be agreed that only students who have a good three-year certificate in all parts of their work, should be admitted to the fourth year.

So far as can be judged, the attitude of Universities in these preliminary discussions has been, on the whole, generous and understanding. It is after first principles have been accepted that the real struggle for preservation of some of the best aspects of College work may take place.

Syllabuses will have to be agreed by boards of studies in particular subjects, and it is easy to think of the nature of such discussions in subjects like English, Mathematics and Science. The Colleges must not allow the concept of study in depth to destroy the range of work so often admirably developed along lines particularly suited to the future teacher.

If the Colleges have much to protect, they also have their own sacred cows, which they must be prepared to abandon. A recent conference conducted by the Ministry of Education at Hull on the nature of the Education syllabus, rightly stressed the need for more highly trained specialists in psychology, in sociology and in philosophy to enrich the content of the Education Courses.

If studies in Education are to advance they will involve much more team teaching and much less dependence on the individual tutor or lecturer.

Larger colleges, and more varied staff will make this work possible. We have to convince most of our University colleagues that Education is a real subject worthy of respect. The only way to do this is by constant review of the nature of the work that we are doing.

Part-time courses ?

§ 340 of the report will offer one of the most serious problems both for the Universities and for the Colleges. This section which recommends facilities for part time, or full time completion of the B.Ed. course, is clearly necessary and desirable. Those who recommend the separation of the B.Ed. from the Universities and the attachment of all such work to the proposed Council for National Academic Awards could readily quote the section as a strong argument in their favour. Full-time courses of one year do not seem to offer serious difficulties, the advanced diploma courses are often similar in nature and in administrative problems. Part-time degree work is regarded with deep suspicion by most Universities and the idea that a student could complete in one University a degree started in another is heretical in the extreme.

It is to be hoped however that the arrival of the Colleges in the world of University studies, and the creation of a new kind of degree will bring with it a new kind of thinking. If the progress to be made now will encourage large numbers of teachers to continue their professional studies it will accomplish a great change in the traditional pattern of the work of teachers in this country. These difficulties must be overcome.

Finally, there are those who fear the B.Ed. élite. The virtue of the Robbins proposals lies first of all in the opening of the possibility of a four-year training for all teachers. The proposals would indeed be unacceptable if they were interpreted as establishing for all time a University course for a minority. They must be taken as a first step towards four-year training of a higher standard for every teacher in the country. That the supply position may mean that this is an ideal that cannot be realised for some decades is the view that the Committee takes, yet the courses will be there and no teacher must be excluded from these courses if they are willing and able to take them.

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A further discussion of this topic may be found in H. L. Elvin, 'The Robbins Report and the Education and Training of Teachers', in *Education for Teaching*, November 1963.

Further Education: The Neglected Aspect

TOM DRIVER

Mr. Driver is Lecturer in charge of Liberal Studies at the Doncaster Technical College. He is a past President of the A.T.T.I. and a member of the Executive Committee of the National Union of Teachers.

When the Robbins Committee was appointed many people doubted whether its composition was likely to lead to a satisfactory analysis of the problems of technical and technological education. At least it can be said that the Committee did better than was expected, in spite of the many problems it failed to resolve and, in some cases, failed to tackle.

It is unfortunate that the terms of reference precluded a serious analysis of part-time education, for to discuss technical education without a fundamental analysis of the place of part-time study, certainly in the present, and many of us believe, in the future, is to omit a large slice of the problem. For this the Committee cannot be blamed: it even tentatively stepped over the borders of the terms of reference to hint at its importance.

In discussing the aims of higher education the Report begins with 'skills suitable to play a part in the general division of labour'. Not, it says, because this aim is most important, but because it has tended to be ignored or undervalued. The Report recognises at the outset that professional training is an important function of higher education, but one feels that at times the Committee had not the courage to pursue this recognition to its logical conclusion — especially in the proposals for the classification of institutions in which higher education is carried out.

As is well known, the Committee based its projections of future numbers in higher education on estimates of potential supply rather than forecasting the demand fifteen years ahead. This underlines the need for research into such problems. The Report, however, showed beyond doubt that there is a large potential reservoir of talent available which should be developed to the full.

Within the general advance proposed, the needs of technological education receive considerable attention. Attention is drawn to the progress that has been made since the White Paper of 1956 in the expansion of facilities for technical education in universities and in technical colleges of various types, but they rightly point out that much remains to be done. A table showing first degrees in technology as a percentage of first degrees in science and

technology in 1959 puts Britain well below the U.S.A., Switzerland and Western Germany. Further the students attracted to science have higher qualifications than those studying technology. The Committee concludes that means must be found to attract more of the ablest students to technology and in particular to encourage more girls to read applied science.

The status of technical education

The Report makes a number of sensible suggestions for closer links between schools and higher education, but does not indicate any special measures to solve the problems of popularising technical education. This is a particularly difficult problem, for most teachers who advise students are aware of the possibilities of pure science, but not many are aware of the possibilities in applied science. This is understandable, as the normal experience of most teachers does not make them aware of the intellectual challenge and stimulus which applied science can provide. Nor do we in Britain reward the applied scientist in a manner that reflects his importance to society. The result is that in spite of our shortage of technologists there are vacant places in many courses for technology throughout the country, in both universities and technical colleges.

Further, our volume of research in technology lags behind that of many industrialised countries. Although the quality of our best research is as good as anywhere else, the Report asserts that the quantity leaves much to be desired. For this reason that the Report suggests that post-graduate students in C.A.T.s, etc., should be substantially increased. It also proposes that five Special Institutions for Scientific and Technological Education and Research should be established, university institutions based on science and technology, but with related subjects such as social studies, operations research and statistics and with languages at least as ancillary subjects. These should have 3,500 to 4,500 students, half of whom should be post-graduate. The Imperial College, Manchester College of Science and Technology, The Royal College at Glasgow, a C.A.T., and an entirely new institution of this calibre are suggested. In so far as such institutions help to establish the importance of technology they can only be welcomed. At the same time there is a danger that unless the complex of proposals are operated in the spirit of all-round expansion envisaged in the Report the setting up of S.I.S.T.E.R.S. could lead to a concentration of resources which could inhibit the development of research elsewhere.

The Report recommends a substantial growth of scientific and technological education in the univer-

sities and in other institutions, some of which are recommended for university status, others not. The growth of the C.A.T.s is recognised and it is proposed that in general they should become technological universities with the right to award both first and higher degrees. In course of time they will have between 3,000 and 5,000 students each. This is in line with suggestions made to the Committee by all who were interested in technological education. What is more dubious is the treatment of other technical institutions. At present there are about 10,000 full-time and 19,000 part-time students in C.A.T.s, but there are some 20,000 full-time and 86,000 part-time students in advanced courses in Regional and Area Colleges; the numbers projected for the latter colleges by 1980/1 are 65,000 full-time and 200,000 part-time. It is suggested that a very limited number of regional colleges should be given university status in the future; some may get direct grant status; some may become constituent parts of universities old and new; others will remain, as will area colleges, under local authority control.

Problems of recruitment

Drawing a line between the autonomous institutions and other institutions providing courses of university standard is bound to raise difficulties of recruitment of both staff and students for the colleges outside the autonomous sector. At best they will tend to become second choices for those who fail to get entry in a university. And this difficulty of recruitment of students will be increased as they will not be included in the Central Council for University admissions. They may well find difficulty in getting the resources to maintain and develop the post-graduate work they are already doing.

It is vital that this should not happen. It is likely that pressure on places in higher education will maintain entry in the immediate future: the problems are likely to arise when the proposed crash programme has been carried through. As several of the regional colleges are already doing work equivalent to a C.A.T. there would appear to be a good case for upgrading some in the immediate future rather than starting from scratch to build new universities in towns where regional colleges are already well-established. More so, for as the Report points out, some of the regional colleges already provide a whole range of courses of degree level, and are not restricted to science and technology. In any case the status of regional colleges should be kept continuously under review so that as their work warrants it they can be given autonomous status.

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The Report proposes that the Hives Council (the awarding body for Diplomas of Technology) should be replaced by a National Council for Academic Awards. This body should provide degrees for a range of courses wider than those existing for the Diploma of Technology, including examinations for pass degrees as well as honours degrees. The Committee suggest that the pass degrees may well replace the Higher National Diploma and that there may be need for a new diploma based on a two-year sandwich course. It is recognised that the Higher National Certificate taken by part-time study will be required for many years. They suggest that entry to the new degree courses should be available to students with an Ordinary National Certificate. At present, students with a good Ordinary National Certificate are admitted to Diploma of Technology courses (i.e. to honours degree courses). Why should not a good Ordinary National Certificate be recognised as a condition of entry to appropriate university courses?

Part-time study

The Report leaves an open question whether the National Council for Academic Awards should award degrees to part-time students. It suggests that the London external degree should play a continuing role for the part-time student. In my opinion the Report underestimates the likely demand for part-time advanced courses. There is a general tendency these days to assume that part-time study for advanced qualifications will decline or disappear in favour of full-time study. There is another possibility which may well prove effective—an extension of day release to two or even three days. This is already in existence on a limited scale, but being outside the terms of reference of the Committee no comparison is made of its effectiveness compared with, say, sandwich courses.

If the Robbins proposals for general expansion are carried through, I think there will be a much greater number of part-time students than suggested. There is a very sound case for such students having the opportunity of taking degree courses of the National Council for Academic Awards as well as external London courses. It is important that the National Council for Academic Awards should not take a restrictive view of the recognition of colleges for courses. The Association of Teachers in Technical Institutions, in particular, has consistently pressed that all colleges should be permitted to put on courses whenever they have the students, equipment and staff. In a period of expansion such as envisaged by Robbins these should be the criteria applied when colleges make proposals for new advanced courses.

There are many points which will have to be considered in detail by teachers and administrators and other interested parties in fields covering technology, but one major question has still to be clarified.

The Robbins Committee recommended (with Mr. Shearman dissenting) that there should be two Ministers. This would have put the majority of higher education under one ministry but a significant part would have been under another. When the Committee discussed putting the training colleges under the university umbrella they talked of administrative and academic responsibility going hand in hand. But when they considered advanced courses in technical colleges they proposed that some advanced work should remain with the Local Education Authorities and be under one minister whilst the rest should go under the Minister of Higher Education.

The place of further education

The Government has decided in favour of one minister with two secretaries of state. But the problem of higher education in the technical field remains unresolved. It is not clear from statements made at the time of writing where further education is going to fit in. The problem is, admittedly, a difficult one. It is not possible to draw a tidy administrative line between further and higher education in Britain. Technical colleges have been open-ended and have taken in many students who had not the necessary qualifications for admission to a university. Many of these students have progressed to and completed courses which are recognised as advanced courses, many of degree standard. Up to the present the majority of members of many professional institutions have obtained their qualifications through technical colleges, by part-time study. As we have seen already some of these colleges will form the autonomous sector of education, others will not.

It seems reasonable that, as far as possible, advanced courses should have equal standing even if provided in different types of institutions. It is equally reasonable that if colleges are to be seriously considered for autonomous status as the level and quantity of their work expands the administrative arrangements should be such as to make this transition as easy as possible. For these reasons it would be more suitable for further education to come under the same department as higher education in general than under the department responsible for the schools. This is not to deny the need for closer links between the schools and further education. Nor does it remove all the anomalies that will continue to

exist. It is, however, more desirable to have some anomalies than to narrow the avenues to higher education for many students.

In general the proposals for expansion have been welcomed by those interested in technological education, but many feel that the proposals will prove too modest to meet the needs of the next twenty years. The difficulties of the Committee, when considering technical education, stemmed in part from wider man-power problems which are not mainly educational, in part from the limitations of their terms of reference, and in part, one suspects, from a failure to grasp fully the implications of their early statement that professional training in other than the traditional fields of law, medicine, the church, teaching is an important function of higher education.

FORUM

AUTUMN 1964 VOL. 7, NO. 1

The next number of FORUM will be mainly devoted to the problem of non-streaming in primary and secondary schools. It will contain:

EVIDENCE SUBMITTED TO THE PLOWDEN COMMITTEE BY THE FORUM EDITORIAL BOARD

A detailed statement of the case for non-streaming in primary schools

REPORT OF CONFERENCE ON NON-STREAMING IN PRIMARY AND SECONDARY SCHOOLS

Edward Blishen

A report of the Conference organised by FORUM on April 25, 1964

Other articles will include:

THE SWING TO COMPREHENSIVE EDUCATION

Further articles on local authority re-organisation plans

COMMUNICATIONS WITH PARENTS

Michael Marland

NEWSOM AND THE RAISING OF THE SCHOOL-LEAVING AGE

Peter Shuttlewood

Discussion, Reviews, etc.

Discussion

Team Teaching in Practice

During the course of the academic year 1963-64, an experiment in team teaching is being carried out at Henbury School, Bristol. The last issue of FORUM carried an article in which the general idea of teaching a whole year group with a team of teachers was discussed. Teachers and educationalists may feel that more details of a practical nature are required before they come to any conclusions, however tentative, on the merits and demerits of the idea.

The experiment at Henbury has been on a small scale; we hope to expand the scheme in the future. Two members of the History Department, myself and Mr. A. B. Rollings, Head of the Dept., have run a combined course for two streams of the First Year. The reason for our using a relatively small number of children (71) is simply that we decided to operate the scheme only after this year's timetable had gone into circulation and we were consequently obliged to work with but two streams.

Briefly the experiment began as follows. Henbury is a comprehensive school with a 9-stream entry, with a percentage of selected children in three forms. The two classes concerned in this scheme are those containing mostly selected children. Both forms have History lessons three times a week. By chance the two forms were timetabled to have History at the same time on Tuesday mornings. It was this fact more than any other that led us to choose these forms for the experiment.

The first History lesson of the week would be a joint lesson when the main theme of the week's work would be outlined. The other two lessons would be taken up by the separate forms in developing the topic in various ways.

The first step was to draw up a programme. The syllabus demanded that Roman Britain should be taught next so we drew up our topics as follows: the Roman Invasions; Roman Roads; Roman Fortifications; Roman Towns; Roman Villas; and a revision-cum-summing-up topic. Each topic lasted one week apart from two weeks for Towns and Villas. A copy of this programme was given to the pupils with instructions to acquire books, magazines and so on to read up the subject in advance.

The key to each topic was the joint lesson which was prepared alternately by Mr. Rollings and myself. In this lesson we aimed to make full use of audio-visual aids to prepare as polished a 'performance' as possible. Taped talks (with appropriate incidental music in some cases), slides (we made our own with colour transparencies in many cases), film-strips, charts and diagrams were used as liberally as possible. During the joint lesson the children took down short summary points for use later in the week. Many became quite sophisticated note-makers on their own account as the lessons progressed.

The next two lessons we termed development lessons and a homework completed the week's work. Development took various forms, e.g. maps of the Roman inva-

sions, roads, towns; diagrams of forts, road construction, villas, etc. This was routine stuff, enjoyed by the children, but the more exciting developments came in several new ways. Parts of the taped talk was requested again; odd slides were asked for whilst sketches or plans were drawn. On a couple of memorable occasions the whole class divided itself up quite spontaneously into various groups—some listening to the tape played quietly in one quarter, some working from textbooks or their own literature brought from libraries or home, some who had been absent, 'catching up' with the teacher's help.

Usually the last twenty minutes of the week were taken up with a short test. Retention was good in both forms as the stress throughout was on the 'learner learning' rather than the 'teacher teaching'.

Advantages of the scheme are many. Equipment is used efficiently and economically. Preparation of alternate topics gives staff the chance to read up the latest information with a resultant increase in historical accuracy and improvement of technique of presentation. Being presented in an up-to-date manner the subject assumes greater relevance to the pupil's life (especially important in History's case). Not least of the advantages was the stimulus we have felt in teaching in this new way—such a change from chalk and talk!

Disadvantages include finding suitable accommodation for the joint lesson; initial preparation of tapes, slides, etc., and a certain amount of capital expenditure on film, tape, etc.

The scheme has several exciting possibilities for extension. We have begun a second programme on Anglo-Saxon England for the same forms but feel that next year expansion should be the aim. Suitably graded programmes can be drawn up for children of different ability. Other subjects could easily use the same techniques. Joint efforts between History and Geography are already being planned. We will probably find that a larger team of this sort can produce a more effective joint syllabus than departments working separately. The bigger the team the more resources there are available. A technician attached to the team could prepare material and even run a well prepared lesson whilst field work or tutorial work goes on with small groups taken from the joint lesson.

We regard the scheme as still experimental but are convinced enough to view the future possibilities with great excitement.

NEIL FITTON,
Henbury School, Bristol.

Feedback

The story is told of the lecturer in Eng. Lit. who accosted the programmer with the remark: 'I hear you programmed a Keats Ode'. The programmer agreed. 'I hear also that the students learned nothing.' 'True,' said the programmer, 'but we know.' This, it seems to me, is one aspect of programming that merits more attention than was given it in the articles in the last issue of FORUM. Dr. Austwick refers to the enlightenment derived from the writing of programmes and this feed-

back to the programmer from the children is one aspect of programming which is least open to dispute. As a diagnostic instrument the programme is invaluable, and if the teacher himself has written the programme he learns as much about himself as he does about his students. Linked with this is the attitude of the programmer to teaching. The programmer from the beginning accepts responsibility if his teaching is poor. If his students don't learn what he prescribes as the aim of his programme, he doesn't blame the students, he revises his programme. This approach, I suggest, is little short of revolutionary. If teaching techniques generally are subjected to this sort of scrutiny, programming will have justified itself if no more machines are produced.

Another thing which seems to be worth stressing is the programme specification. Good programmes should be issued with precise specifications detailing for which students they are suited, at which level, the assumed competence of the students, and *what the students can be expected to know after working through the programme*. Using a programme for a given field would be similar to buying a textbook with a guaranteed student performance after use. There is, of course, a danger that the very factors which make a good programme will produce bad ones. Instant programmes which have not been subject to the laborious and time-consuming work of repeated trying out and revising, and hastily prepared for a new market are a real danger. Even good programmes will carry their own inbuilt inertia. Because of the great difficulty in preparing good programmes they may ossify once they are produced.

I believe those who see programming techniques as only applicable to the rote type of learning miss the mark. There is undoubtedly a great danger that programmes will be of this nature. This, I suggest, will not reflect the inherent nature of programming but rather the limitations of the programmer. The rote teacher will write rote programmes. Fortunately, indifferent lessons and poor teaching are exposed when done into programme. However, many teachers will find a stimulating challenge in incorporating new ideas on teaching methods into the framework of a programme. Arithmetic programmes, for example, need not return to the textbooks of thirty years ago, they can be built round structural apparatus. Programmes can use the imaginative approach of the good teacher bringing in illustrations, aids, other children, or the teacher himself. They need not be merely didactic verbalising.

Programming by teachers as well as in conjunction with psychologists might well bring closer links of theory and practice of learning and teaching than we have at the moment. Neither Skinner nor Crowder claim to base their work on a *theory* of learning. Skinner uses pragmatic techniques developed in the laboratory and, in fact, questions the relevance of theories of learning. Crowder also has a pragmatic approach, developed in the art of programming. It does seem possible, however, that we shall learn more about the processes of learning through programmed instruction, especially when computer based instruction is more extensively developed; possibly enough even to lift

teaching method from the state of a vaguely formulated amalgam of precepts from the educational philosophers and eclectic nostrums from the psychologists, to the state of an applied science.

It is commonplace now to point out that programmed instruction is only an adjunct to other techniques. But it needs to be borne in mind. Used in this way it does not ignore the social aspects of learning, mentioned by Mr. Linfield; it could make them more feasible.

I have concentrated on the programme rather than the machine, because the programme is the heart of the matter. Furthermore, the machine is the aspect of programmed instruction which has received most publicity since it lends itself more to sensational treatment. The publicity received by the machine is responsible for the nine days wonder which is now fading in the light of the realisation so aptly expressed in the A.P.L. Newsletter that 'Hardware needs Software'. And Software is very difficult to produce.

In conclusion might I comment on Mr. Linfield's point when he wonders how the teaching machine can assist us in our task of helping the growth and development of integrated human personalities, who realise their full potential as responsible citizens in society. To this I would reply with the classical remark made by the dedicated programmer: 'Define it and we'll programme it'.

E. STONES,

Kesteven Training College.

History and Class Teaching

Mr. Price, in turn, hurls a pretty hefty brick at me! I suspect, however, that he and I do not differ very greatly in our views of the aim of secondary education. I am certainly not preaching the need for our schools to inculcate 'rectitude'; I know only too well that one generation can learn from its elders only by example or indirectly, not by coercion.

I do not, however, accept Mr. Price's pessimistic analysis of the place of history in the curriculum. Of course adolescent children cannot be expected to be trained historians. Do teachers of any other subject aim at turning out experts? I do maintain, however, that adolescents can be taught the value and importance of many of the themes of the past and their relevance to the present. I do not want to labour the point, but if children understand why, from comparison of past and present, independent African countries today do not display the same political stability found elsewhere, then surely this is a net gain. If they understand that 'history is written by the victors', that one's political and social attitude to the present shapes one's view of the past, that our view of the past is *made* by the present, then this, too, is gain. We are trying to encourage independent judgment, but this is not an inborn trait; it must be trained. Mr. Price is worried about children being taught according to the teacher's 'predilections'. This is inevitable; what kind of teacher is it who has no 'predilections'? It is surely the task of the history teacher not to disguise his views, but above all to explain to children what controversies there are, why they are

important, and why no one can dictate answers to what must be matters of opinion.

'Wanting to find out' is all very well. But to find *what* out? Is there value in knowing about 16th-century homes if one has no view of the 16th century as an entity—no matter how enthusiastic one may be for modelling or drawing? Surely learning must be pertinent as well as enjoyable.

Mr. Price again is right in saying that in school the child will learn only a 'fraction of what there is' in the richness of the past. But it is not the *knowledge* that matters, it is the *attitude*. If children's minds are awakened, their intelligence stirred, their curiosity stimulated, what does it matter whether or not they remember the date of the Treaty of Dover? And where and when will one learn these things if not at school?

As an inveterate taker of day trips and school journeys I heartily endorse Mr. Price's advocacy of Tawnian boot-wearing. I am, incidentally, currently attempting to plan a school journey to Egypt.

As to Mr. Cunningham, his approach seems to me to be marvellous. He is obviously on the road to success in perhaps the most difficult aspect of school life. But the team approach, it would seem, is not at all in conflict with the attitude that class teaching should be the basic teaching situation. In fact, as Mr. Cunningham suggests, it would help to make class teaching far more flexible and hence more effective. More power to him!

DAVID RUBINSTEIN.

Specialist Teaching?

While non-streaming helps to lessen 11+ pressure and widen the primary school curriculum, I would disagree that it points towards a specialist approach in the Primary School.

The true basis of learning is the emotional spur arising from stimulated interest in a happy and secure environment. In school the relationship between children and teacher is the most compelling force towards helping the children to grow to emotional maturity.

Young children need the security and resulting confidence provided by one person who is interested in them and their whole growth rather than many people who are only interested in bits of them and usually intellectual bits. A relationship between two people can only grow over a period of time, and in what better situation could a relationship grow but in a full-time active classroom environment.

An unstreamed class and the resulting group teaching methods are very powerful weapons in the hands of a sensitive teacher, towards achieving the education of the emotions and so to helping the children to a deeper and more sensitive understanding of the world about them.

How then does the specialist approach fit into this pattern of education where the personal relationship spurs on both teacher and children to further adventures in learning?

BERYL GARROOD, Chelmsford.

The Swing Towards Comprehensive Education

SHEFFIELD AND BRADFORD

JOAN SIMON

Local authorities all over the country are preparing plans for the re-organisation of secondary education. Many of these plans are directed towards the abolition of selection at 11 plus, and the establishment of comprehensive secondary education in one form or another. This article reports on developments in two Yorkshire towns. In the next number of FORUM we hope to publish similar articles on developments in Manchester, Liverpool and elsewhere.

Both Sheffield, with a population of 500,000, and Bradford, with 300,000, are now bringing in a comprehensive system of secondary education. Both cities have planned to work towards a two-tier system of schools, end-on without an overlap as under the Leicestershire scheme, that is for ages 11-13 and 13-18. The way plans are being translated into practice in either case provides some interesting comparisons and contrasts.

To take Sheffield first, the Labour group, which has a large majority on the city council, decided in 1962 (to quote from an official memorandum) 'to move as quickly as possible towards a more comprehensive system of secondary education with the aim of abolishing segregation at 11+'. There was already one comprehensive school in hand, initiated in 1958 when additions were made to a modern school under construction in a western area of the city, instead of following the original plan of erecting a technical and two modern schools. In its 1948 development plan Sheffield favoured the tripartite system but with the proviso that wherever possible two or three schools should be built on adjoining sites so that reorganisation into larger units would be possible. This is what is now being done, new building being planned accordingly. The first comprehensive school, Myers Grove, has a 12-form entry, the sixth form is in its first year and results have been very encouraging; there will eventually be about 1600 pupils.

The rest of the city has been divided into three zones, North, East and South, each of which will 'go comprehensive' in turn. The North zone, which houses about a quarter of the population, is almost covered by a very extensive council housing estate, the remaining third comprising the city's east end. It will have two comprehensive schools by next September formed by combining modern and inter-

mediate schools; a third will be constituted from a boys' grammar school to which a girls' grammar school from another part of the city which needs rehousing will be added. All the remaining modern schools will become high schools for ages 11-13, except that for a time some will retain the 13-15's. The same pattern of reorganisation will be followed in the East zone, which also houses about a quarter of the population, so that the new schools are ready by the autumn of 1965. Finally, the South zone, which may yet be divided into two, will be reorganised. This includes virtually all the present grammar schools, seven, all of which are maintained; only in three direct grant schools (a G.P.D.S.T. school and two Catholic schools) does the committee at present take up 50% of places.

It will be seen that Sheffield is working on the principle that new accommodation must be provided before 11+ is abolished and the fact that grammar schools are last on the list for reorganisation implies that selection must meantime operate. But the course being taken is to discourage children from sitting the 11+ as soon as alternative facilities are available. Thus all the parents concerned in the North zone were circularised early this year urging them not to enter their children for the examination but to send them next September to the new high schools where all facilities will be provided. This is no empty claim insofar as extra heads of departments and graded posts are being provided in the 11-13 schools, particularly to cover teaching in languages and science, and additional laboratories and specialist rooms will be added. Between 50% and 60% opted out of the examination, which has hitherto been taken by all children, even at this early stage. Further, the parents of 13-year olds now in modern schools in the zone have just been circularised offering places in one of the comprehensive schools in return for a guarantee that they will keep children in school until 16; however many opt, places can be found.

There have been some doubts among the teachers' associations about the plan but proposals have been submitted to the authority and there is a permanent avenue of consultation by means of a committee consisting of the chairman and vice-chairman of the Education Committee, the director, and representatives of each association. Steps are being taken to guarantee protection of salaries and status but so far, with the expansion of departmental headships, there has been no real problem here. The teachers have themselves set up panels in both the North and the East regions to discuss the two-year curriculum to be followed in high schools and ways of ensuring co-ordination of teaching.

It is probable that the 11-13 high schools may eventually be extended downwards to take in the 9-13 age groups. The general aim is to have a completely comprehensive system consisting for the most part of primary, high and comprehensive schools, but consideration will be given to the possibility of a sixth form college in the South zone.

Some in Sheffield regret that during the reorganisation it is necessary to ask parents for a guarantee that they will keep children in school until 16 before admitting to comprehensive schools because it is felt that this definitely discriminates against the working-class child. But this is seen as a purely temporary measure. It may be noted that this implies an approach fundamentally different from that informing the present Doncaster plan. This envisages two different grades of secondary school; high schools taking in all children at 11+, without any selection, and grammar or technical grammar schools recruiting from the former 13-year olds whose parents guarantee to keep them in school until 18.

This scheme has been rejected by the Doncaster association of the N.U.T. on the grounds that it is framed according to organisational limitations rather than children's educational needs, puts the interests of one section before those of all children and accepts the 'academic tradition of the English grammar school' as the hallmark of secondary education. The teachers also say that staffing requirements and teacher shortage at all levels have not been taken into account and doubt that the sixth forms of the four existing grammar schools can provide a sufficient range of courses. They propose, on the lines adopted at Croydon, a sixth form college recruiting at 16 from a fully comprehensive system of schools. This and other alternative schemes are now under consideration by a development sub-committee of the council.

In this connection it is worth mentioning the feeling abroad in Yorkshire that the Ministry of Education now favours transfer at 13 in part as a means of retaining differentiation of secondary education. The 11+ has been entirely discredited, the move towards a more comprehensive system is irresistible. Very well then, let there be a common school up to 13 and then it can be argued that there is a strong case for separating schools with a leaving age of 18 from those with a leaving age of 16. It is no secret that, when the West Riding Education Committee recently proposed legislation to permit of schools for the 9-13 age group it was found that opinion at the Ministry had already moved firmly in this direction. The composition of

the Plowden Committee also suggests that this development would not be unwelcome; and it has already been rumoured that the committee, due to report in 1966, may produce an interim report recommending the necessary steps.¹

While this loosening up would be welcome in the West Riding, Sheffield and Bradford, where 9-13 schools would on the whole be preferred to 11-13 schools, it could also lead to more plans on the lines of the Doncaster one. Leeds, for instance, is evidently thinking on similar lines; a recent memorandum from the Education Committee proposed abolition of 11+ but selection at 13 according to parental choice for two sets of secondary schools with a different leaving age.

Bradford City Council resolved on October 22, 1963, to end all selection at 11+ and at the same time authorised reorganisation of schools to make this possible. There were immediate protests from the teachers' associations, on the grounds that there had been no consultation, to which the reply was that the elected council was bound to take decisions on general lines of policy but there would be full consultation as to how that policy was operated. This promise was honoured by the appointment of a panel of teachers assisted by members of the education department which divided into four working parties and in six weeks produced detailed reports on all aspects of reorganisation—curriculum and staffing, primary transfers and so on—which were then submitted to the various teachers' associations. When all the proposals came back to the Education Committee a few conflicting opinions could not be resolved but 99% of the suggestions were accepted, indeed found to be extremely helpful. The Committee which already has a scheme protecting the salaries and status of teachers for three years (those over 50 for life) has decided to extend this to protect all regardless of age during reorganisation.

There has also been an intensive programme of meetings in all parts of the city to inform parents of plans, at least 50 having been organised covering double as many schools and attended by over 9,000 parents. The Ministry ruled that the system of notices required under Section 13 of the Education Act when any school is closed, need not be followed, but asked that the widest publicity be given to the scheme.

Having decided to abolish 11+ forthwith Bradford was bound to plan on the basis of using exist-

ing buildings at first and then advancing towards its ultimate aim in phases. There are already two fully comprehensive schools in a southern and eastern area of the city. Elsewhere, old secondary modern buildings will initially be used as junior high schools for 11-13's, new buildings as high schools for 13-15's, grammar school buildings as senior high schools for 13-18's. This means some selection by parental choice during Phase I of the reorganisation in that there must be transfer either to a high or a senior high school at 13. The plan for Phase II is to amalgamate junior high and high schools into one unit for 11-15's from which there will still be recruitment at 13 to senior high schools. Then Phase III will see the extension upwards of the high schools, the extension downwards of senior high schools, to make a fully comprehensive system in all areas of the city.

At present the authority is committed to Phase I only and there will be further consultations with the teachers about the later stages. There is now considerable interest in catering for the 9-13 age range and the Ministry has been asked to approve an experiment in two areas of the city with 5-9 and 9-13 schools. It should be noted that this idea, as also the move towards comprehensive organisation, is congenial to Catholic schools—twenty per cent of Bradford's school population is Catholic—since it facilitates organisation.

Original objections to the Bradford plan centred mainly on the two-year junior high school, though this is only an interim arrangement and the similar two-year infant school has seldom been questioned though, perhaps, even more questionable. But, as in Sheffield, teachers have become very interested in working out a curriculum for these schools. They have advocated the teaching of general science, as opposed to specialist divisions, and initially only one foreign language (though there has been strong canvassing for Latin as well from the secondary associations) and recommend uniform teaching of mathematics in schools serving a single high school. It is suggested that schools will no doubt cater for different rates of advance 'by organising streams and/or sets'. Various steps are being taken to adapt old buildings to a new purpose, laboratories and changing rooms are being added, libraries extended, language rooms installed. Everything should be ready for operation of the new scheme this coming September.

This will involve some reshuffling in the first instance but the city has been divided into four zones to facilitate arrangements and favour future co-operation between schools at different levels. This autumn children of 11 will pass automatically

¹ Since this was written the Government has introduced legislation.

from primary into junior high or comprehensive school; those aged 13 in the present secondary modern schools, and those aged 14 who intend to remain in school another two years, will transfer to a high school if their school falls into the junior range. Others aged 14 in similar circumstances will remain in their present school; special arrangements will be made for this age-group during the year. Close attention is being given to providing adequate transport but only in two districts does a problem arise in that junior high schools on the spot will be short.

This plan effectively eliminates the need to select at all for the city's schools. There remain the 25% of places the authority felt bound to continue to take up on behalf of city children at two direct grant schools, the Bradford Grammar Schools for boys and girls, and 6 places it has at one other such school. Since only 42 places for boys, 24 for girls, are available to an age group of 3,600 the course taken has been to discourage applications at the primary level; this year some 500 were forwarded which were reduced by a selection panel to 130, so that only these children underwent a test for the 66 places. At present this remnant of selection must take place at 11+ but there is, perhaps, a possibility that as reorganisation proceeds more generally direct grant schools (if the category remains) may themselves begin to recruit at 13. It is unlikely they would remain outside a pattern that became general in the public sector of education when it is that already adhered to by 'public' schools. This may be another reason why the change of age is favoured, to approximate the public and private sectors of education.

Of other Yorkshire towns, Huddersfield, with a Liberal majority, is now considering a scheme, Halifax has postponed plans until next year, Doncaster and Leeds, as has been noted, at present plan to differentiate secondary schools according to the leaving age (as the Schools Inquiry Commission recommended in 1868!). There is no recent information from the North Riding. But the East Riding, having rejected the conception of the modern school, has developed general secondary schools providing academic and technical courses; as a result there are now markedly more 'non-selected' than 'selected' pupils (in the grammar schools) taking G.C.E. at 'O' level in a full range of subjects, and the percentage staying on after 15 is one of the highest in the country. All in all, with the West Riding firmly oriented towards a comprehensive system, Sheffield and Bradford now decisively moving to this end, and Hull also developing the comprehensive school, there is a major educational change under way in Yorkshire.

Science in its Context

edited by

JOHN BRIERLEY

with a foreword by

SIR HOWARD FLOREY

President of the Royal Society

The contributors to this symposium on a central problem in modern education include Lord James of Rusholme, Professor Benjamin Farrington, Dr. Kurt Mendelssohn, Professor D. M. MacKay and Mrs. Margaret Knight. They discuss the place of science in sixth-form studies, and suggest ways in which over-specialisation may be avoided. 30s

The Student in the Age of Anxiety

FERDYNAND ZWEIG

In this sociological survey of modern undergraduates Dr. Zweig compares and contrasts the attitudes of students at Oxford and Manchester. 30s

HEINEMANN

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Children Writing

A. W. ROWE

Mr. Rowe is headmaster of the David Lister High School, Hull's first comprehensive school to be opened in September. He is author of The Education of the Average Child and co-author with Peter Emmens of the English course English Through Experience.

*O Cuckoo! shall I call thee Bird,
Or but a wandering voice?
State the alternative preferred,
With reasons for your choice.*

So much for the kind of teaching which has been practised under the name of English in so many schools for so long. Yet to turn to creative, intensive, or personal writing, call it what you will, merely as an antidote to the hard but necessary grind of the 'real' English the quatrain adumbrates is not good enough. What is needed instead is teaching in which vivid sense-experience or its equivalent (i.e., emotion recollected in tranquillity, either through memory recapturing lost time or through literature), and its immediate expression in writing, are used as the theme from which all other aspects of English — punctuation, spelling, vocabulary, sentence-structure, speaking and writing of all kinds — may be developed, and in which literature itself is treated as an organic and indivisible part.

My co-author, Peter Emmens, and I have gone into this at great length elsewhere. Here I will discuss, in what I hope is a useful way, examples of creative writing done by children I know well in the secondary modern school of which I was until recently headmaster.

*My dog Curly has a friendly face,
And two happy, roast-brown eyes.
His nose is a shiny black button,
Which has smelt every rabbit hole around.
His pride is a silky ginger coat,
With patches of soft, sunlit yellow;
A large fox's tail
Droops mournfully between his slender, long
hind-legs
When he is in disgrace.
Suddenly out from his large toothy mouth
Appears a remarkably, pinky-red tongue,
And before you know it
You are being smothered with wet, loving kisses.*

Karen, the writer of that piece, was 12. Her father was a Pole who spent money on drink that would be better spent on his family of seven. Karen

wrote those lines after she had fondled a dog introduced into the classroom for the children to fuss over and to act as a stimulus to set them writing. Karen hadn't a dog. 'I wrote about my dream dog,' she told me.

Margaret had an even more important purpose to pursue. It was a recent and painful experience that she put into words and, by so doing, took an important step towards controlling and mastering it. Was it, I wonder, because she was so deeply engaged in the attempt to allay and come to terms with her grief that she was the only member of the class to write in prose? That she succeeded—even though she was almost certainly unconscious both of what she was attempting and of its success—cannot be doubted in view of the grave poise and rhythm of what she wrote:

*The sun shone in the azure sky but I didn't see it;
the birds sang merrily but I didn't hear them; blossom
bloomed on the trees but I didn't smell it; I only saw
Judy stretched out in her box. Grief overcame me as
I realised that never again would I hear her joyful
bark; never again would I be able to feel her smooth
coat beneath my hand. As I gazed for the last time at
her cold still body, with her badger-coloured face
looking so pretty, my eyes filled with hot tears and I
turned sadly away.*

One of the children brought a wide-eyed kitten, which kicked its way over the teacher's desk with a kind of fastidious distaste as if it were walking on ice. This was enough to set Harry off. In the first line of his poem he uses the rather surprising word unsouciantly. I wondered if that was what he meant: but he soon convinced me that 'insouciantly' was exactly how his cat pursued its prey:

*The soft furry creature races insouciantly after
mice,
His body streaks past.
Through hedges, darting between trees, he goes.
But when one is caught, he turns and rolls in glee,
For now he has a wonderful dinner.*

Teresa owned her own pony. She called her piece *Black Beauty*, but that wasn't the pony's name:

*Her coat of black shines in the light of the sun,
As she gallops round in the long green grass,
Her mane and tail proud as a peacock.
She can be ferocious,
But never with me.
With me she is gentle and loves me to pat her.
When riding her I am always so proud,
As she holds her head so high.
Erect she stands!*

And the clumsy, uncontrolled boy who wrote this incantatory piece had never even touched a horse:

Horse, horse, how gracefully you run,
 How you jump,
 I wish I could frolic like you.
 Not the juicy saplings of trees,
 Not the green grass in the ground,
 Dance in the dew as you do.

On the walls of the classroom were a number of fine pictures of animals. Some of the children, after watching and enjoying the antics of the live animals, turned to these for inspiration. One was of a group of large pigs. Martin expressed his powerful revulsion in equally powerful language:

The pig is a slow, sluggish, ignorant animal,
 It has no point in life but to eat and sleep.
 It scoffs food and gluts water.
 The hair on a pig is like pieces of coarse string
 A pig has no feelings except for its greedy self.
 In conclusion: the pig is a walking mound of hair
 Entangled on a lice-infected body.

Stephen, writing on *The Sow*, took a more complex view:

This great heap of filth and strength,
 Her massive belly swinging to and fro
 Barely off the ground,
 Lollops around
 Eating everything in sight,
 An animal garbage bin,
 Putting the dustman out of work.
 Romping carelessly in the stink,
 Then basking in the sun,
 Mud sticking, drying to her bark-like skin,
 As she lies soddenly asleep.

Another picture was of an elephant. In a few lines Robert summed up the genius of the great beast:

He stands erect
 Like a soaring tower,
 His fan-like ears cooling him,
 In the heat of the day.
 As gentle as a kitten,
 As strong as a castle,
 He raises his trunk
 And with a mighty blare
 Fills the jungle with his trumpet call.

A penguin caught the fancy of the class jester, a true original if ever there was one. The wild logic of the first line of his poem was turned against him, as one would expect, and became his nickname:

The waddling Antarctic national emblem,
 Approaches the clear and icy water.
 He comes to a halt, lifts his head,
 As if to say,
 'My, the water looks cold today'.
 He crouches, his black flippers edging forward,

Then dives. Down under its icy bubbles
 He looks as tall as a moonbound rocket.
 Out pops his head for a breath of air.
 After engulfing new life, he dives again,
 And disappears beneath a floating house of ice,
 As swift as an eagle.

In almost every piece that the children wrote on this occasion there was something memorable. One girl began her poem about a swan with:

Its neck one dazzling arc of beauty,
 Graceful is the swan.

Another ended her's with an image which her imagination had created from precise observation, just as a poet's does:

Feet forward, it skids along the water,
 Making a net of spray.

Roy, however, wrote about neither the animals in the classroom nor in the pictures on the walls. His seagull was in the best and most secure place of all—his own imagination:

The wind blows in all its fury.
 Waves crash upon the rocks,
 Spray rages in the air like a swarm of mosquitoes,
 But still the seagull swoops in the sky,
 Rolls, twirls, and then turns over.
 The sky holds it like a magnet holds steel.
 Now and again it dives into the sea,
 Plopping out with a fish in its mouth.
 Then suddenly the sun comes out,
 And the seagull shines like a new star.

We do well to enjoy and treasure the freshness and naïve innocence of writing of this kind. It has, moreover, a bold hit-or-miss quality. Reading it one is constantly brought up sharp by the unevenness of texture—by the unwitting juxtaposition of the banal or the clumsy with touches that a poet might envy. And it is precisely this fortuitous unevenness of texture, these flaws, if you like, that give the writing its own ingratiating flavour, its own inimitable quality. In a word, such writing is a true mirror to children in all their lovable and trying unpredictable ability.

Of course it is in a sense easier for children in secondary modern schools than for their more verbally-sophisticated fellows in the grammar schools to produce writing of this quality. You will have noticed, I'm sure, the complete lack of literary echoes, of the imitation, conscious or unconscious, of literary models—and this in itself accounts for the fresh and original impact of the writing just as much probably as the immediacy and naïvety of the child's own vision. The children were quite deliberately not given an additional literary stimulus—no poetry or prose on animals was read to

them. The primary sense-experience of seeing and fondling animals in the classroom, combined with looking at pictures of animals and their own past experience of them, was enough.

On this occasion, too, no words were provided on the blackboard—the aim was for them to use what words they possessed to write about what they had observed and felt. Because they have comparatively few ‘literary’ words at their disposal—*insouciantly* and *arc* are I think the only two that could be so labelled—they had no need to purge their vocabulary of these before they could write as they did: their vocabulary was there ready-made for the job. They did not therefore, as the adult poet does, consciously produce their effect—they could not have produced any other.

And again, it is worth remembering that it is *easier* for them to write in free verse than in prose: their logic, unlike the logic of some of their more verbally-gifted fellows, is a poetic logic, not a prose logic. It is this poetic logic, this kind of creativity, though, that good teaching can and should nourish in all children.

All kinds of starting points in experience may be used to set children writing eagerly and enjoyably—and often freshly and creatively, too. For example, a piece of wave-worn driftwood, some dried bladder-wrack, and a bag of sea-shells were taken into a third-year classroom. It was suggested that the driftwood was once part of a wrecked ship, as indeed it was. The children handled it and the bladder-wrack, and smelt them. Then they were asked to take some of the shells. They were encouraged to spend a few moments getting to *know* these shells. They closed their eyes the better to feel their textures and explore their curves; they looked closely at their shapes; they held them up, twisting and turning them in the light; they smelt them; they collected and examined the grains of sand and particles of seaweed that still clung to some of them. Words provided by them and by the teacher were put on the board. Then they were asked to write. Some began by composing such little pieces as these:

Small shells, large shells, sharp shells, smooth shells,
Pearly shells and dark shells.
Some shells might have been there for centuries
And yet some shells there for just a week—
So small and sleek.

That was Catharine’s; and this, Christopher’s:

The great sea came thundering in,
The shells came with it,
Pearly-bright and dark,
And they are a great colour.

Some of them are hard,
Some are brittle.
But all are beautiful
In the rising swell.

These children had done a lesson (on bubbles) in which certain words had been provided for them. In the next pieces we see some of these words—elegant, delicate, iridescent, receded—cropping up again:

There was a shell fine and strong,
Shiny and wrinkled, silver and grey.
The lapping of the waves made it move so
elegantly,
Backwards and forwards,
To and fro.

David’s piece is longer than Mary’s, and filled with regret:

The delicate, iridescent shell lay at my feet
Its open end yawning at me.
The whorls of the shell lay partially buried in
the sand,
And the sea lashed out to destroy it.
As the sea receded the shell moved slightly
And then settled to wait for another attack.
The next wave lashed out.
I quickly seized the shell, for safety,
But it crumbled in my hand.

Christopher’s strikes a philosophical note:

Sea-pounded, animal-riddled,
Found in uncountable multitudes on the shore
and in the sea.
Endless varieties, crude yet intricate,
With beauty that paint can only spoil, not add to.
Some lifeless, yet alive with loveliness,
Alive with beauty that only nature can produce.

The poem that follows is an astonishing effort and harks back to the kennings of Old English verse. The writer was a Dr. Barnado’s boy, quick to take offence, volatile, moody. He ended the poem with an unexpected question-mark, a masterly stroke:

What is a shell?
A frail delicate thing battered and tortured by
the unmerciful rending of the sailor’s
nightmare.
A mighty fortress to the tiny flesh within its
towers.
A shell is surely a great thing, functional yet—
marvellous?

One piece among them astonished us. How explain it? Clive, the writer, was a big tough boy whose English was both weak technically and lacking in sensitivity. Yet on this one occasion he wrote this:

Ah, sea shell,
With iridescent colours,

What wrecks, what deaths have you seen,
Twisting and turning,
To and fro,
Across pebbles, rocks, wrecks, bones?
Sea shell,
Where did you come from?
How many years on the sea bed did you live?
How many times on the shore have you been
tumbled?
What lived in you at first, little sea shell?

Picasso has said that the origin of his inspiration is in fact play; and that his never-ending game with objects and ideas is an essential part of his process of creation. In the above pieces the children were given objects and words to play with; and these became at least in part the origin of their inspiration. There is no doubt, too, that they enjoyed their writing, that they were indeed playing a creative game with words.

But note that the words were not given to them in a vacuum. No, what they were given was first a stimulating sense-experience to which the words could be referred and through which their meaning could be demonstrated: the words were afterwards elicited or supplied to enable them to control and shape and come to terms with that experience and by putting it into words to enrich it and make it a part of their own sensibility. As Auden has said, How do I know what I mean until I see what I have written?

There are a number of questions we need to ask about this kind of teaching. Does some at least of the vocabulary stick? Is in fact the sensibility of these non-selective school pupils enriched by their attempts to verbalise such vivid sense-experiences? Can such children be led to *play* with words, to *enjoy* writing it, to make a *creative game* of it?

Perhaps the following may suggest the answer. The teacher of a fourth-year class was suddenly called away. He had time only to ask the class to look at the pictures on the wall, and then to write about whatever they wished. The class was then left without supervision. One of the pictures, 12" x 9" in size, was a very indifferent coloured reproduction of a tame-looking waterfall. Six children chose to write about this, all in verse.

Jennifer began:

The water comes rushing down in a torrent of
fury,
Racing downward, gushing around stones and
over branches.
This waterfall is
A place of mystery, especially in the dark,
When the bubbling, splashing, spluttering,
raging water
Sounds like a million unidentified animals.

Harry opened with:

The water came surging over the rocky cliff,
Splashing, spluttering, raging downward,
Crashing on the rocky ledge below,
Sending up spray—fountains glittering in the
sunlight.
The pale green trees hung their branches in
the water.
The water plunging past the trees,
Roaring on its way, gushing and sparkling.
Near me tiny pebbles shimmered under the
surface.

And Margaret noted that:

Spluttering, frothing, chatting, bubbling,
The edge of opaque water
Sprays onto the splaying bank.

Roy saw the water as:

A glinting, spectacular, foam-tipped power
Ricocheting off the rocks and running like an
athlete.

Joy had never seen a real waterfall. Yet:

With the rushing sound of water thrumming
in my ears
I stand facing the gigantic cascading waterfall.
The air smells clear, clean and crisp as morning
frost.
Water sprays on my face, in my hair.
Water looms above me with terrifying might.

Some vocabulary has certainly stuck, hasn't it? And who can doubt that these children are enjoying their creative game with words. As to what is happening to their sensibility, that will be as obvious to you as it is to me.

Fortunately, the teachers who take these children write themselves, because they must or because they find it enjoyable and satisfying. They are therefore in the position to tell the children out of their own experience that writing is indeed a creative game of trial and error, the success of which depends sometimes as much upon chance or luck or inspiration as upon craftsmanship and art.

They often write when the children write and offer their work with its crossings-out, re-phrasings, and second-thoughts for comment and criticism just as the children offer theirs. The page which shows this kind of creative travail is becoming the standard: the neat and tidy and oh-so-dull page is dying out.

To teach in this way, teachers of English should be writers first and readers second: and the most important question training colleges and departments of education can put to the would-be teacher of English is 'What do you write?', not 'What do you read?'

Notes by the way

NORMAN T. MORRIS

Education must be dragged into the 21st century somehow and between now and the year 2000 there will be plenty of forward-looking. But there will also be some backward glances. Those Queen Elizabeth Grammar Schools, for example, will be celebrating quatercentenaries. Why a spate of foundations about this time of the century? and why Grammar?

The dissolution of the monasteries cut off the supply of Latin speaking clerics and a Crash Programme (yes, it seems to have taken about a whole century, even in those days) of New Education had to be undertaken to provide lawyers, diplomats and civil servants, for all of whom Latin was a vocational and not primarily a cultural subject. The teaching of Latin and Greek had been secularised by men like Colet of St. Paul's who had persuaded Erasmus to write a primer, the ancestor of Kennedy.

Shakespeare in *Love's Labour's Lost* has given us a picture of the Stratford G.S. pedant, Holofernes, and the curate, Sir Nathaniel.

CURAT. NATH. Truly M. *Holofernes*, the epythithes are fweetly varied like a fcholler at the leaft but, fir. I affure ye, it was a Bucke of the first head.

HOL. Sir *Nathaniel*, *haud credo*.

DUL. 'Twas not a *haud credo*, 'twas a Pricket.

Ben Jonson does the same for lawyers in *Epicoene*.

No one will ever know how many child-hours and teacher-hours have been consumed on the ingestion of Latin and Greek conjugations and declensions and no one will ever know if it was worth it.

★ ★ ★

Another best-seller in the grammar schools must have been Hall & Knight's *Geometry*. The Greeks (like the Egyptians before them) being inspired builders, had to develop a technology to cope with the engineering problems involved. This, being Greeks, they did, and a certain Euclid attempted to systematise the basic principles of mathematics in a pure form. Unfortunately Euclid's theorems are only true if you believe the earth is flat. Next time you are thinking of flying over the North Pole, make sure the navigator is using the right sort of geometry.

★ ★ ★

The articles in a recent issue on the role of Headteacher led to certain degree of self-examination—by one reader at least. Presumably I was appointed Head because of a certain skill as a teacher—but no

one is more aware of the differences between the two jobs than I am.

I dare not begin to moan about a Headteacher's lot but the people who I think could give some help are the psychologists. Not the 'I.Q.', normal curve and come and look at Jimmy; he's a bit disturbed' lot who arrive with a bulging brief case each, but the white overall types with four biros in the breast pocket and a stop-watch in each hand.

I was once conducted over a factory where the Time and Motion boys had had a free hand and I was very impressed. Wasteful operations had been eliminated; parts of the plant had been re-planned and re-built; the morale of the employees had been examined and positive efforts made to avoid boredom and monotony.

Compared with this streamlined job my establishment (built 1886 and not changed much) seems a real museum piece. Possibly something has been done about the choice of colours in the periodic wash-downs and paint-ups but I should have thought the Industrial Psychologists of, say, Birkbeck College, University of London, could have planned a course of Advisory Service for left-handed administrators like me. They might even re-plan my day so that I could get into a classroom and teach occasionally.

★ ★ ★

To equate education with war is wrong, I know, but parallels and analogies between the conduct of our educational system and the prosecution of hostilities in that last old-fashioned conflict some of us took part in are continually occurring to me. For example: Inspections and visits from other top-brass at H.Q. They come, they say what is wrong, they depart. Then there are the Training establishments, where usually those who are past it try to train those who are not up to it. Also Correspondents—even some Memoirs. It was calculated that it needed eleven men behind the lines to keep one fighting man in contact with the enemy. It seems like that in teaching sometimes.

Those of us who were up at the sharp end felt that the real crunch came between us and the enemy and I can't help feeling now that the real crunch in education is still in the classroom—the personal relationship between teacher and taught. That is where the struggle is and teaching machines, closed circuit T.V., tape recorders, visual aids, do-it-yourself books and universities of the air will never reproduce the interaction of personality in classroom, lab, on school journey or at school camp.

The Cost of Applying Newsom

JACK WALTON

Mr. Walton was until recently headmaster of a secondary modern school in Nottinghamshire. He is at present head of Beaminster School, Dorset, a comprehensive school in a rural area.

'The less successful a pupil is, the more courage he needs to keep working.' This quotation from Newsom could easily be supplemented by saying that the less successful the pupil, the less attractive a proposition he appears to the teacher, and indeed it is inferred that such children often get the least help. But evidence is also provided that schools are attempting to meet the challenge and suggestions made to help others to do so. How can these be translated into practice? What would be the cost to a Local Education Authority? I should like to consider some of the implications so far as fourth and fifth year children in a rural comprehensive school are concerned, taking into account only the bottom third of the year group; that is, children who would have difficulty in taking any of the present external examinations.

The school in question has 512 children and the first three years are streamed, the fourth and fifth unstreamed; admission to the sixth form depends on age, industry and the potential advantages to the child concerned. At present children opt for one out of eight courses at the end of the third year. Some of these are straightforwardly academic, others have technical biases of various kinds; one, 4 Practical, is the natural gravitation point for those without either academic ability or great gifts as craftsmen and most leave during or at the end of the fourth year. Though many of these children need a further year of education there is nothing to attract them to stay on. I think that, if they could be persuaded to remain, the school would have achieved as much as, if not more than, it does by gaining university scholarships for eighteen-year-olds.

It was at the moment when I was reviewing the 4 Practical course that the Newsom Report appeared and some of its suggestions were very relevant. 'Each year in full-time education ought to be assisting pupils in their progress towards maturity,' the course 'will need to have a substantial craft or practical element with an emphasis on real tasks undertaken with adult equipment', the scope of 'handicraft' could be widened 'to include, for instance, building crafts'. All this leads up to one of the main points emphasised, that courses should be outward looking; in this connection it is

suggested that experience of different kinds of employment be provided 'on a release from school basis', school visits extended, periods of living away from home organised. It is, however, emphasised that practical experiences 'should lead to thought and expression, they are not to be regarded as a substitute for thought for the less intelligent'.

This warning should act as a brake on those who might think in terms of larger amounts of workshop or cookery-room periods. On the other hand the course should be designed to encourage the abilities of children who are not going to be literate in the accepted academic sense rather than to re-emphasise weaknesses. Bearing all this in mind my 4 Practical course for a 35-period week would read as follows:

Metalwork/Domestic		Rural Science	4
Science	4	Maths	5
Other Crafts	4	English	4
Woodwork/Dress		Music	1
Design	4	Divinity	1
Art	2	General Studies	3

P.E. and Games 3

The course is planned to be an integrated whole as far as possible and the linking point would be the general subjects. The three periods allocated would be blocked to cover an afternoon and taken by the careers master, who would be responsible for the whole course. Regular meetings of the teachers responsible for the various subjects would take place under his chairmanship.

It is a growing contact with the world outside the school that would differentiate such a course from its predecessors. This is the change which is going to be expensive. If new crafts are to be introduced, outside people with a specialised knowledge of various crafts and techniques not catered for in the normal curriculum will often have to be brought into the school. In the periods headed 'other crafts' I would wish to invite local hairdressers, plumbers, farmers, carpenters, joiners, nurses and many other representatives of local trades and professions to teach the children. As the school is mixed I would normally need one man and one woman for three hours each a week. These would earn the unqualified teacher's rate of 17s. an hour. For an academic year of 38 weeks the cost to the authority would be £193 16s.

Naturally there would have to be careful planning and a common thread running through a term or a year's work. In the 'boys' case it could very easily relate to the home as a material unit with its plumbing system, its design and construction. The girls might be more concerned with homemaking and/or the more feminine skills associated with care of the person. The course may tend to be

vocational in its content. Implied in all this is a willingness on the part of the locality to be involved in the education of its children and the ground would have to be well prepared. An added expense in the case of my school would be the erection of a wooden building to serve as a centre where rough crafts could be practiced. Even if built by the boys the cost would be at least £250.

As for outside visits, I would wish every child to become thoroughly acquainted with the industries and opportunities of his local area. The cost of twelve visits a year of this nature would be about £63. Three longer journeys to take the children right outside their district would add another £30 to the transport bill. Fortunately, the Dorset Education Authority has catered for this sort of development by increasing the school's travel grant by some £90. A further aspect of this movement out from the school would again depend upon the willingness of local industry to help. I should like each pupil taking this course to have the opportunity of working for some period in a local place of employment. This is already being done in urban areas but raises problems in a rural district where farming predominates and many of the children concerned already work on the farms in their spare time. Variety of employment is difficult to find.

The Local Education Authority should not always be expected to pay. It is important that in each year of the course a residential week outside the area should be considered as obligatory but the cost of accommodation and food should be borne, where possible, by the parents. I estimate that each year £5 would be required from the children for this purpose. The aim here would be to introduce the children to parts of the country new to them, to give them some opportunity of living together and meeting other people.

In this school, then, the development of a new pattern of education for 46 children in the category outlined will be expensive. Excluding the cost of residential courses I estimate the bill would read as follows:

	£	s.	d.
Payment of unqualified teachers from local industry	193	16	0
Cost of transport	93	0	0
Cost of building to be erected by boys for rough work: plumbing, brick-laying, etc.	250	0	0
Total	536	16	0

Leaving aside the building, which if secured would be a permanent fixture, the cost to the local authority would be about £6 10s. per child for one year of the course. Some of this Dorset has already covered. The cost of the unqualified teaching help and insurance of pupils has not yet been considered by the Education Committee. I have not referred to extra equipment which will not be necessary in the early stages; with some good fortune it may be borrowed at a later date on permanent loan. The cost per child for this would vary from school to school depending on whether they already have courses of the kind outlined.

If therefore, Newsom is to be implemented for the country as a whole the sums required would be large; 4,000 schools of the size of mine, catering for the same ability range, would need £1,000,000. The Central Advisory Council, in the introduction to their report, make no apology for recommendations which will involve an increase in public expenditure on the education of the average pupils. Not only is their future role politically, socially and economically vital to our national life, but, even more important, each is an individual whose spirit needs education as much as his body needs nourishment. Without adequate education human life is impoverished. It is the responsibility of this country to recognize the worth of the case presented in the Newsom Report and be prepared to pay for its implementation.

A New Book on Comprehensive Schools

Comprehensive Schools in Action,¹ by Roger Cole, deputy headmaster of the T. P. Riley School, Walsall, is a welcome addition to the growing literature on the subject. Based on an M.A. thesis on the origins and development of the London comprehensive schools (Mr. Cole taught earlier at Eltham Green School), the book ranges widely over the whole field of comprehensive education. Mr. Cole starts logically with the historical development of this type of school and the reasons which brought it into being; he describes the variants of the principle of the common school and deals with their structure and organisation. One chapter is given to a detailed examination of his own school, Eltham Green. There is a general discussion of comprehensive type schools in other countries and the book closes with a look at the future. This book, which is well-written and illustrated, should be particularly useful for students and others coming new to the topic.

¹ Oldbourne Press, 25s.

Book Reviews

A Statue for Mr. Clegg?

The Excitement of Writing: A report by the West Riding Education Committee.

One day, when the revolution in the teaching of writing in our schools is as widespread and generally successful as the revolution in the teaching of Art—when it is no longer supposed that you can give children a sense of the pleasure and profit of writing unless you enable them to experience writing as a personal act of communication, as a source of incessant and shared surprise and delight—then one of the West Riding towns *may* decide to erect a statue to Mr. A. B. Clegg.

Already the *enfant terrible* who dared to suggest to the TES that parsing might be, for most children, a fruitless activity, he has now gone round the West Riding schools collecting 'some of the best original writing' by children. When he had done so, he discovered that the very best writing of all came from schools that made no use, or little use, of those books of English exercises the main effect of which is to suggest to children that writing is a minefield, full of exploding traps of punctuation: or a matter of fixed official synonyms: or a business of cataloguing the female forms of masculine nouns: and that in general it is a hazardous tinkering with someone else's language, and not a creating of one's own. Hence this book: which is a collection, delightful to read, of the children's work, together with statements from their teachers.

The teachers, of course, healthily and firmly, all say that 'we learn to write by writing'. They all lead their children to write about their own experiences and sensations, to delight in words. They all have the essential understanding that the techniques are most surely learned when a situation is created in which a child *insists* on learning them: that is, when he comes to care about his writing, and so wishes it to be as efficient a means of communication as possible.

It is interesting, and no surprise at all, that many of these schools are unstreamed: the respect for the individual, and delight in him, that underlie the resolve to unstream, are exactly that respect and delight from which spring truly sensitive teaching of English. There is a striking foreword from the chairman of the Education Committee, saying that 'tens of thousands of pounds are spent each year' on books of English exercises 'in this County alone', and that the question arises 'as to whether this money might not be better spent in some other way, for example, on good reading books or books of information'.

To this question, the examples of children's writing in the book give all the answer that is needed, one would

think: but to hammer the matter home, Mr. Clegg himself adds several chapters on examinations and English exercises. The examples he gives make one groan afresh. The whole moral of this book can be taken in by flipping from page 129, with its example from a textbook ('Complete the following—Night is to Day as Moon is to'), to page 21, on which there is a very tiny piece of writing by a slow learner of seven:

Once upon a time there was a little baby bird and he was a little rascal in the nest. He fell down flat on his bum, and he went looking for his mother, and he cried and cried till his mother came.

There are still many teachers who would reach for their blue pencils on reading this, and would long to switch the child to a course of curative exercises: but one hopes that Mr. Clegg, the West Riding Education Committee, and the children and teachers who contribute to this little book, will have made inroads among them.

EDWARD BLISHEN.

The Roots and the Power

An Experimental Study of Mathematics Learning, by Z. P. Dienes. Hutchinson (1963), 202 pp., 50s.

The Power of Mathematics, by Z. P. Dienes. Hutchinson (1964), 176 pp., 21s.

One of the voices which may persuade us into making a radical reappraisal of our mathematics teaching, rather than being content with a superficial modernisation, is that of Dr. Dienes. In his latest two books he pursues the train of thinking begun in his *Building Up Mathematics*, modifying and developing the theory of mathematics-learning formulated in that intriguing little book.

The *Experimental Study* is the more valuable, as well as the more costly, of these rather expensive volumes. It describes a year's investigation which he made, in collaboration with Bruner at the Harvard Center for Cognitive Studies, into the thinking-processes of children who were building up mathematics. Aged between 7 and 11 years, they worked in five groups, each group tackling different learning situations—though all of the Dienes variety. Verbatim reports of parts of these sessions give a vivid picture of the proceedings out of which Dr. Dienes attempts to draw some conclusions as to the manner in which children achieve the mathematical processes of abstraction and generalisation. He considers the function of play (Einstein was playing, in Dr. Dienes' use of the word!), the problem of noise (in the electronic, rather than the usual classroom sense), the use and abuse of symbolisation, the roles of construction and analysis. Not that he arrives always at firm conclusions. 'Our study,' he says, 'was undertaken more to help research workers ask relevant questions than to answer these with any certainty. We do offer some tentative eventual answers . . . ' Though it should be added that not only research workers will find value in the book, except in the sense that all progressive teachers are research workers. It will illuminate



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experiences in the classroom and will help in the evaluation of other researches, theories and practices.

I do not feel so happy about *The Power of Mathematics*. Here we move into the field of the secondary school with a fairly detailed description of the kind of methods and the kind of mathematics which Dr. Dienes would recommend for the period in which the child's powers of abstraction are maturing. The mathematical stories which he proposes—the magician whose spells lead to logarithms and to the differential calculus, the dance-hall in which violent changes in the age and sex of the patrons embody vector spaces and the complex algebra, and other bizarre fantasies—these are great fun, but one wonders whether too rare a skill would not be required in the telling of them to prevent their complexity from stifling, rather than stimulating. The games which follow are more familiar, though it is the playing with the rules, rather than the games themselves, which give them their point—the construction of mathematical structures.

The last two chapters give the book its title. They deal with the power of mathematical symbolism and of mathematical reasoning, and it is Dr. Dienes' contention throughout the book that our teaching should enable our pupils to use mathematics powerfully. All too often it is an unmathematical straitjacket that we offer them.

R. E. HEMMINGS.

The Elite and the Folk

Moral Education in a Changing Society, ed. by W. R. Niblett. Faber and Faber (1963), 172 pp., 21s.
Education in an Industrial Society, by G. H. Bantock. London. Faber and Faber (1963), 238 pp., 35s.

Both the books under review are, in their own way, stimulating as well as exasperating. The lectures on different aspects of 'Moral Education in a Changing Society', originally given at the University of London Institute of Education in 1962, contain much that is thought-provoking and little that is trite. What exasperates is not so much the uneven calibre of the essays—with nine different contributors this is to be expected—but that so many promising ideas are not pursued to greater depth. The book is full of observations that make excellent starting-points for student discussions. But as few of them are elaborated to any extent, they make less of an impact and present less of a challenge to one's thinking than they deserve.

Bantock's *Education in an Industrial Society*, on the other hand, is a most challenging and disturbing book, in which a distinctive point of view is put forward in detail and with vigour. Although, as always, Bantock's positive presentation of his case is on a much higher level than his attacks on whatever he objects to, the latter are more subtle on this occasion than in some of his earlier writings. This makes the book all the more persuasive—some might say, all the more dangerous. It certainly presents a formidable challenge to those who profoundly disagree with the aristocratic viewpoint

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182 High Holborn, London, W.C.1

which pervades the book, and they may well wish that the egalitarian case had spokesmen as eloquent and scholarly as Bantock.

Yet, for all the high level of presentation, Bantock's argument suffers from over-simplification. And in spite of the fact that the contributors to the other book under review could not develop their ideas adequately, they seem to recognise more fully that stereotyped thinking about young people can do much harm, and that all efforts at categorisation can be no more than serviceable falsehoods. None of them, for example, would advance claims such as Bantock's in referring to the highly intelligent as peculiarly 'those from whom we can expect responses in terms of individual moral judgments rather than through an appeal to group loyalties'. None of them would refer to pupils in the lower range of the grammar school as 'those who are capable in some degree of participation in the "minority" culture but who lack the ability to make it in any sense a part of themselves'. None of them would venture such wild generalisations as the claim that 'no appeal to learning for its own sake is likely to evoke much response in our non-academic children'. They would not deny the existence of different levels of ability to arrive at rational decisions, but they would have serious doubts about the adequacy and above all the rigidity of the distinctions between people which Bantock makes in his book.

Admittedly, the contributors to the other book are concerned with *moral* education, where such distinctions are harder to make than in the *academic* field. But Bantock, although he is preoccupied with the latter, leaves little doubt that differences in intellectual capacity and in moral sensitivity go together, and that the intellectual élite are, at least potentially, also the moral élite. Many of the academic pursuits, which Bantock reserves for the sophisticated minority, permit 'an incomparable extension of moral sensibility' and equip them to achieve that 'self-realisation through self-transcendence', which is Bantock's conception of the good life. In spite of all protestations that he does not have in mind 'an isolated minority remote from the concerns of the folk majority', this is in effect what his theory does imply. And in spite of all he says about the sinister implications of the egalitarian trend, an education in terms of caste will in effect make for greater uniformity than an education in terms of individuals who matter equally.

KLAUS NEUBERG.

To Fresh Fields

The Migratory Elite, by F. W. Musgrove, Heinemann (1963), 186 pp., 30s.

The increased mobility within our contemporary society brings new problems for forward-looking educators. The 'brain-drain' of so many academic minds from this country to the United States has been much in the news recently. Long before this, other migrations were taking

place and we note that in the decade 1870-1880, of all male migrants into America it was those from Great Britain 'who surpassed all others in their entry into the professions'. The quantity of migration overseas in the 19th century was greater than it is now, but Dr. Musgrove argues that there have been considerable changes in the quality of migrators, and in the stresses and strains which they have to bear. Both mobility and migration concern Dr. Musgrove and in this interesting, if somewhat inconclusive, study of the factors which have accounted for able people migrating from the land of their birth to foreign fields and from their home village to a series of periodic urban settlements, it is the 'movement within' which provides the major part of the book.

Undoubtedly, greater opportunities for individual social advancement have been largely post-war in origin. In fact, until the 1944 Education Act introduced secondary education for all according to age, aptitude and ability, it was useless to talk of an 'élite' which could be fairly interpreted in any sociological sense. Dr. Musgrove, however, dates élite migration from the 1860's and closely associates it with the report of the Taunton Commission in 1868, with its recognition of 'the function of the day grammar school as an avenue from the immediate locality to wider fields of opportunity and service'. This same report held that the severance of the school's and the pupil's attachment to the immediate locality was the hallmark of high civilisation.

In order to carry out his investigation of the migratory élite (mostly grammar school pupils) the author used a midland city as his population group and concludes that 'there can be little doubt that today the great reservoirs of high ability are in our big cities, particularly in the middle-class residential sectors', and also 'that the main currents of élite migration are inter-urban (or suburban) rather than rural-urban'. Some of his conclusions are very important in relation to educational planning for if towns are now superior because 'of the concentration there not only of professional and managerial families, but of skilled workmen and technicians, whose children have shown themselves particularly able to profit from the educational "ladder" which has been erected in the course of this century', the future of rural education seems completely challenged. The latter part of this fascinating book deals with some of the problems involved in migration from community to community and of its implications for higher education.

Readers of this journal will probably wish to consider this book alongside Jackson and Marsden, *Education and the Working Class* and May's *Education and the Urban Child*, for although this extremely interesting book pleads for a more liberal approach to migratory problems, educationally, more flexibility and more opportunity may challenge some of Dr. Musgrove's basic assumptions about the function of the grammar school today.

ERIC LINFIELD.

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