Education at the local level seen in the light of the 1972 report of the International Commission on the Development of Education.

Preface

The aim of this thesis is to consider the interaction of the type of international report of global extent and content, (which has only comparatively recently made its appearance in the field of education), and a local educational situation.

Rather than define the terms of reference and treat both report and local situation completely generally, it was decided to consider in some detail the U.N.E.S.C.O. report (of 1972) on education entitled "Learning to Be" and a local educational situation with which the author is fairly familiar. The local educational situation is that of central Scotland.

At this point I shall not define my terms any more exactly. It is the intention in this dissertation not so much to particularise from the general, but to reduce the degree of generality. That the process of reduction has been accompanied by other processes so that the content of the original report as it appears in this treatise is modified in other respects than that of reduction is not in conflict with my intention.

Although the summary of recommendations on page 79 here should not be considered an essential end-product of this thesis, a pre-sequential glance at this summary may assist the reader's orientation relative to this treatise.

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Introduction

Certain publications, such as the reports commissioned by U.N.E.S.C.O., view the developments in some subject, such as education, in a truly global fashion. These reports are probably the most compact, informative, comprehensive and unbiased that have ever been available. Mostly such reports are consulted in two ways. Firstly from an academic viewpoint and secondly from the viewpoint of a narrow specialism. Both of these are, of course, commendable and desirable. In the first case there is seldom concern with the short-term practical consequences of the publication. In the second case the concern is often with the short-term practical consequences of the report, but only in some small part of the conceptual area covered by the report. The effect of consideration of such material by a professional who is naturally biased towards his own region of specialism is that any application of the principles and practices enumerated in the report tend to be made in isolation. The consequence of this is that innovative decisions made by such specialists tend to be merely to the short-term advantage of a sub-division of a larger system and can be severely to the detriment of the system in toto. Furthermore, the advantage to that sub-division is often not maximised because the innovator's field of operations is limited by the narrow horizons of his speciality. This very same viewpoint tends to preserve obselescent institutional structures which do not serve present needs. Many of the desirable developments indicated by such reports as "Learning to Be" (U.N.E.S.C.O. 1972) will eventually take place as legislation at the national level steers local systems towards them. However, such developments if left to national direction would be a long time in coming. In the light of these arguments /...

arguments I consider that it is valuable to examine such a report as the 1972 report of the International Commission on the Development of Education, so as to determine the relevance of the material therein for immediate application at the local level. This is my intention in writing this thesis.

The relevance of the report.

The report in question is the product of a commission composed of experts representative of the major cultures of the world. In it they study, analyse and reflect upon the state of education in the world and recommend improvements where they deem these to be necessary, and there is no region geographical or otherwise which they find educationally satisfactory. Because of the cultural diversity of the group they are able to view any situation upon which they focus their attention with greater objectivity than the members of merely national commissions and furthermore are not vulnerable to pressures of a socio-political nature which their physical presence or dependance on any one culture might entail. Of course individual members will be subject to such pressures, but the individual in such a commission is, by the international nature of the commission, always in a minority. In short, extreme views are tempered by views of a rational and probably less biased majority.

An additional advantage which this commission has, quite apart from its contemporaneity is that it was able to call directly upon the services of eighty one of the world's foremost experts on education, including its harshest critics as well as the more obvious members of the educational establishments of many countries.

I do not delude myself that these few words are, in quantity or quality, sufficient to persuade my reader as to the relevance of this universal report to a local situation. However, I hope that it may help postpone too early a judgement of irrelevancy. Given this stay of judgement I hope that relevance will become clearly apparent as this dissertation proceeds. Finally, I think the following quotation from the report's terms of reference may speak more eloquently in its own favour /...

favour than have I: "... education ... should be aimed at the ... betterment of man in all respects and throughout his life". (p.296)

I shall aim to view the local situation in the light of the general principles, practical suggestions and philosophy suggested by the report.

Democracy in our society.

Early in the report (Preamble pp.xxiv, xxv) the commissioners make the point, "What is known as formal democracy - which it would be wrong to deride, for it marked great progress - has become obsolete. The delegation of authority for a fixed period had and still has the advantage of protecting the citizen from the arbitrary exercise of power and of providing him with the minimum of juridical guarantees." I think that this is a clear enough reference to our own society (as well of course to the societies of many of our contemporaries). The implication is that democracy in its present state is a foreward step in societal evolution, but that our familiarity with it must not blind us to the fact that further steps forward are not only desirable but in progress, and that an acceleration of this progress is for the universal good.

The above quotation continues, "But it is not capable of providing him with an adequate share of the benefits of expansion or with the possibility of influencing his own fate in a world of flux and change; nor does it allow him to develop his own potential to best advantage." I interpret the reference to "influencing his own fate" to be a plea for greater participation and this is borne out by subsequent development of this theme throughout the report (in particular pp.70-80). However, I find "nor does it allow him to develop his own potential to best advantage" a charge that our society is stunting its members - the elite as well as the non-elite. Societal change is at present so rapid that if it takes the form of progress rather than mere alteration, then in fifty years time our present society may correctly well be regarded as we regard that of the dark ages.

An attitude to science.

It would appear that the commissioners see science as an essential instrument of mankind's betterment, but that this improvement will not be merely by science (and technology). The implication is that "a scientific frame of mind" is an essential for us to see our way through the forest of inherited cultural biases and those self-created hazards which are the by-products of our own incautious manipulation of our environment. It was with some small surprise that I observed that the report puts a name to its philosophy. The origin of this surprise I suspect is that named philosophies tend to be associated with academic disputation (and have small practical impact) or with prejudiced sub-groups. Naming the philosophy might be seen as raising a banner for the persuaded to rally about, but it equally well became an easily recognised target for reactionaries.

The name in question is "scientific humanism" and it makes its first appearance in the report in the preamble (pp.xxvi, xxvii) and subsequently on pages 146, 147 and 158. In the preamble we have, "any educational action must lay stress on: A common conception of what may be described as 'scientific humanism'. It is humanistic in that it is mainly concerned with man and his welfare as an end in itself; and it is scientific to the extent that its humanistic content remains defined - and thereby enriched - by the continuing new contributions of science to the field of knowledge about man and the world.

Technology, ... to enhance the effectiveness of all his activities."

Thus we see that science is not merely seen as unapplied technology, but as a development of mankind's consensual philosophy that ideally should not be viewed as one of the components of the familiar "two cultural" /...

cultural" dichotomy, but rather as part of a humanities-science gestalt which has not emerged more rapidly due to such factors as reactionarism in the humanities camp and economically encouraged narrowness amongst the scientists, who as pawns are only just achieving the opportunity of growth at the terminal extremes of the board. In the preamble we get a summary of the commissioners' view, "... the commission considered that it was essential for science and technology to become fundamental, ever-present elements in any educational enterprise; for them to become part of all educational activities designed for children, young people and adults, so as to help the individual to control not only natural and productive forces, but social forces too, and in so doing to acquire mastery over himself, his choices and actions; and, finally, for them to help man to develop a scientific frame of mind in order to promote the sciences without becoming enslaved by them."

Later (p.258) we have, "For in our time, education is an enterprise of universal dimensions, ... implicit in which are aims which have universal application. ..... We see these .... aims in scientific humanism .... ".

These quotations are I think sufficient evidence that the commission recommend science and technology as liberalising and truly educational factors rather than as being of merely vocational utility. Furthermore the recommendation embraces all age levels and all educational activities.

Consumer motivation in formal education.

"The study of motivation is the key to every modern educational policy". (Preamble p.xxviii). In practice it is found that motivation is mainly related, either directly or indirectly to the consumer's present employment or to the future employment to which he aspires. In early school years it may be indirect in that it is not the pupil (consumer of education) who studies because he aspires to a certain future employment, rather it is the parents who desire that their child go in a certain employment-orientated direction and exert conscious or unconscious pressures upon the child. In the latter years of the child's schooling or in further education it is more likely to be a direct motivation.

Education (in the sense of development), rather than mere schooling, for its own sake, is a familiar cry of the educational philosopher. He maintains that the libido sciendi or the desire for learning is innate in man and should be the prime educational motivation. All to clearly this is not the primary motivation and it is reasonably argued that this is because our society (largely in the guise of the educational institutions themselves) kills this desire to learn. Remarkably the commissioners also embrace this idealistic view and justify it in a manner fully in keeping with the spirit of scientific humanism. In the preamble (p.xxvii et seq. - which is incidentally the only mention of motivation save for the specific case of individual motivation in functional literacy) it is stated that, "stimulation through ambition and the search for employment is not enough .... to ensure that school-attendance in developing countries remains constant." Again we have "Motivation deriving from employment ---- has the great disadvantage of giving /...

giving credit to the idea that every degree brings with it the right to correspondingly qualified employment. The consequence of this is that graduates unable to find work corresponding to their qualifications feel cheated, and prefer to settle into unemployment rather than demean themselves by practising a less-reputed skill". Again, ".... half fail to adapt to it (school), and become discouraged even during primary education".

I shall not go further in the justification of the plea for a change in the emphasis of motivation to learn. The commissioners go on to consider how such a change might be effected, but I shall postpone consideration of these suggestions until later (my p.15) when I consider this matter in the local context.

The isolation of the school.

It has been asserted that schools are custodial to a far greater extent than they are educational. The main task of many schools would indeed appear to be to keep children off the streets and it is debatable how many pupils these schools would have if schooling were not compulsory. Another evidence of the school's nature as a day-prison is the degree to which the curricular material is divorced from that society for which the school claims to be preparing its pupils. Much of a child's school-time is as useless to him as if he were employed stitching mail-bags. What are the alternatives? Here is an implied suggestion by the commissioners (Preamble p.xxxii), "Out-of-school education comprises a wide range of possibilities which all countries should use productively. Disdain for it is merely a relic of times past, and no progressive pedagogue can subscribe to this". Thus we see that it might be more reasonable to regard school as an intermediary between the child and his society rather than as a barrier between them, or as a middleman whose vested interest causes him to prevent the customer and the supply coming into direct contact. However, this dissatisfied view of schools does not lead the commissioners to suggest extreme measures as some might attribute (from careless reading) to the deschoolers such as Illich, Reimer and Goodman. Indeed, in support of the need for schools, we have, "... knowledge, and ideas, regarded as a distillate of what is general and essential in things and phenomena, and more especially, systems of knowledge and methods enabling individuals to form their own personal interpretation of this mighty flow of information, and assimilate it in positive fashion, almost always require organized education, dispensed by properly designed educational institutions." The report continues /...

continues, "... many aspects of school education call for thorough-going reappraisal and reformation." The matter is put explicitly in, "on the one hand, improvements to be made to existing systems and, on the other, alternatives to these".

The commissioners return to this topic when considering the principle "The dimensions of living experience must be restored to education by redistributing teaching in space and time" (p.183). More explicitly, "Education must cease being confined within the schoolhouse. All kinds of existing institution, whether designed for teaching or not, and many forms of social and economic activity, must be used for educational purposes". And again on the same page we have, "they (the present institutionalised systems) must abandon their rigid interior divisions and become more open to the world".

A major constraint upon the opening of educational systems or institutions.

If it be granted that in principle it would be better if the educational system had not the barriers which divide it internally so that individual institutions and even classes of pupils are isolated from each other, and externally so that it has little contact with the exterior community, then it would appear that the major obstacle to this change is the examination system. Whatever criticisms may be levelled at the teaching profession as a whole, it must be owned that the majority of teachers exhibit great concern for the interests of their immediate pupils. This concern familiarly takes the form of protests that the pupils in question have externally-set examinations to sit, and that the failing of these examinations would prejudice not merely their careers, but the very quality of their lives. The occasion for such protests is generally when some proposal to improve the educational situation at the immediate or the general level is mooted.

The proposed opening-up of the educational system would initiate this protest. How can these two worthy aims, namely to open-up the educational system and to see that the learner receives proper credit for his achievements be reconciled? In the long term it is of course desirable that the examination system be changed so that it does not inhibit education as it does at present. However, I am here concerned with education at the local level and the changes in the examination system must take place at a national or even international level. Thus at present we must try to open up education subject to the constraint that we must work towards examinations of a certain type. On the other hand, at a local political level, we must do all that we can to reduce the value of these examinations as a means of selection used by both employers and institutions of higher education.

Programmed learning as a means of opening an institution.

The traditional enclosed classroom involves a class, a teacher and subject matter. The teacher presents the subject matter to the class. In the traditional system this is achieved by constraining class and teacher to one room; thus we have the spatial constraint. Furthermore, there is also a temporal constraint in that each datum or concept arises at a discrete time. Both of these constraints could be abandonned if more use were made of programmed teaching. With every learner proceeding at his own pace or convenience the temporal constraint immediately vanishes. Since the learner can now work independently there is no reason for the teacher and all the learners to be confined to a single room.

A typical argument frequently brought forward against programmed learning is that the cost of the machines makes it unsuitable for widespread application. However, this is only true at present of programmed learning in the narrow sense. The commissioners state this explicitly (Preamble p. xxxiv), "programmed education is confused with the utilisation of very modern and costly methods with which most educational systems are unable to equip themselves". One instance of programmed education in a sense not confining it to teaching machines is the programmed book. An instance more relevant to my present theme is an interconnected series of programmed units (booklets, etc.) produced by a particular educational unit for the use of the learners of that unit and geared to a system of externally-set examinations.

The Open Programmed System.

The logical extension of programmed learning in the direction I have just indicated is to a system which allows the learner to be freed from the class room, and makes use of many existing facilities such as books, laboratories and so on, by their inclusion in one or several vast open programmes. I think it will become apparent as we progress through my later pages that such a system is adaptable to meet almost any requirement that may be made of an educational system. I propose to call this system the Open Programmed System.

The preparation of the Open Programmed System.

Let us consider the feasibility of instituting a programmed system of the sort just described in a typical school or technical college. Even if convinced of the desirability of such a system the staff would, with considerable justification, protest that they were already too hard pressed, and that the development or preparation time was not available. However, if one considers this objection it is seen to be far from being insuperable. Firstly, the system does not have to be launched in a completed form. Indeed this would be a very mistaken policy. Rather it should be developed over a period and function, in the initial developmental stages, side by side in conjunction with the established system rather than in opposition to it. Furthermore, although each of the modules or sub-units of the system might take longer to prepare than the equivalent material of the existing system, it has the advantages that it can be used by more learners than a single teacher could handle, and that it can be used by subsequent waves (e.g. years) of learners.

Another important advantage of a properly designed programmed system is that it is stimulating to use. This derives largely from the fact that it is essentially a system which rewards the learner at frequent intervals. The nature of the reward is a sense of achievement since data is presented and demands are made which do not overtax the learner. If the learner does not assimilate given data or respond to a demand the program is designed to provide him with remedial treatment and retest him in such a way that he is successful and hence rewarded. Such a system thus goes a long way to remedy damage done to the libido sciendi (see my p. 8) and to promote a healthier form of motivation in keeping with the recommendations of the report (see my p. 8).

The role of the teacher in the Open Programmed System.

The teacher will have two main areas of responsibility. One will be the maintainance, extension and modification of the program. The other will be the counselling of the learners. I would maintain that the teacher in a programmed system could be in a better position to contribute to the welfare of his students in both the cognitive and affective domains.

As educationalists our main concern is for the learners, but it would be narrow and inhumane to ignore the teacher. At present teachers are not highly regarded amongst the professions, and two of the reasons for this are that with some justification they are regarded as talking chalking instruction machines, and (that as a result of this) do not have the opportunity to develop as people to the extent that they might were they not constrained to this role for a large part of their working time. The programmed system would release them from this stunting role and allow their development to proceed unhampered.

There is support for this modification of the teachers role from the commissioners (p.136) in the following, "In general, the teacher's role is changing, in that the authoritative delivery of knowledge is being supplemented by spending more time diagnosing the learner's needs, motivating and encouraging study, and checking the knowledge acquired. Teaching teams, set up in the pattern of hospital teams, are beginning to appear and there are more supplementary teachers and assistants, mainly responsible for non-teaching duties, such as supervising and evaluating pupils, and administrative tasks." My position with regard to the setting up of teaching teams is that this should not be done in institutions where there is an existing course structure, since this might /...

might disrupt the system to the educational disadvantage of the learners. However, that is not to say that I am against teaching teams; in fact the contrary is the case. However, I maintain that the teaching team will evolve naturally under the system of gradual evolution of programmed teaching which I have advocated especially in the case of institutions large enough to have several specialists in a particular subject. Typical examples might be a department in a large comprehensive school or technical college.

It is true that some teachers would find the new role far from their liking, and one of the reasons for this might well be the reduction of their opportunity to display their histrionic talents to a captive audience, but the anti-participatoriness and authoritarianism implicit in this indulgence is inappropriate to current educational theory and mood.

The realisation of equal opportunity through the Open Programmed System.

"Equal opportunity", is a modern campaign slogan and emblazoned upon many a subconsciously cherished battle-flag. However, as with many a popularised principle, it is misinterpreted and poorly understood. This is put nicely by the commissioners (p.75), "Equal opportunity for all does not mean nominal equality, the same treatment for everyone, as many still believe today; it means making certain that each individual receives a suitable education at a pace and through methods adapted to his particular person." Thus we see that the programmed-learning system is in keeping with the movement for equality of opportunity and also with its anti-elitist sister movement of comprehensivisation. Furthermore, many of the criticisms of the comprehensive system of education are seen to be less applicable or even inapplicable to a comprehensive system which makes wide use of programmed teaching of the sort which I have advocated.

The Open Programmed System relative to self-learning and to life-long education.

Two of the most commendable movements in the educational sphere of social theory are those of life-long education and self-learning. I maintain that the programmed system which I have advocated is in keeping with these movements and is a desirable transition stage towards later more advanced systems that are not immediately practicable. Let us regard this assertion in the light of the report. "Self-learning" is a contraction of "self-directed learning" and it is observed that it is distinct from, but not excluded from, individualised learning as exemplified by the programmed system. This appears in the report (p.210) as "Self-directed learning is not the same as individualized learning; sometimes the learner chooses to enrol in a class or group for part of the process. But the learner himself initiates, selects the experiences and the persons who assist him in learning and evaluates the process." Thus we see that subject to the constraints of a compulsory, diploma-oriented educational system, as is our own, we are attempting to act in the spirit of self-directed learning and trying to prepare the pupil for a self-learning life. It is recommended that in some of those spheres of school or college activity which are not examination-oriented that the student will be encouraged to adopt a self-directed learning orientation. The philosophical rationale of self-learning is summed up in the report (p.209) as, "The new educational ethos makes the individual the master and creator of his own cultural progress. Self-learning, especially assisted self-learning, has irreplaceable value in any educational system." On a more practical note they continue, "The effectiveness of solitary study is greatly enhanced by acquiring techniques /...

techniques for self-instruction and having many auxiliary aids available." Whilst on the subject of the practical it must not be thought that the commissioners disregard this form of activity or that it is excluded from the programmed system or individualised instruction. Indeed they advocate the use of boothes, laboratories or workshops where individualised work of this nature can be carried out. In the school or college situation such facilities could be in continuous use possibly on a booking system and under the shared supervision of teachers and technicians. The commissioners make some reference to this (p.134) in, "each student is assigned a programme of studies comprising data to be assimilated and research and practical work to be carried out, sometimes in a group, sometimes alone. He is also given the means of checking his own work." In further recommendation, on the subject of basic education, the report stresses a positive attitude to self-learning in a life-long context, whereas basic "education" in our society more often has the effect of developing an antipathy to education that makes it virtually impossible from psychological considerations for many learners to face the thought of education once they have left school. In particular the commissioners say (p.184), "It must endeavour to instil, especially in children, a taste for self-learning that will last a life-time; to arouse their desire to know, to ask questions and to question themselves, while developing the faculties of observation and judgement and the critical spirit." If any doubt be left as to the commissioners recommendations on this topic, it can be dispelled by (p.234), "Education should be individualised and personalised to the utmost and constitute a preparation for self-learning." It appears to me that the Open Programmed System is a miniature of the Learning Society that will be invaluable whilst we await the coming of the all-embracing macroscopic model.

The Open Programmed System and the timetabling problem.

There has in recent years been a tendency for a greater number of subjects to be available to pupils and college and university students. Ideally, with certain constraints to ensure balance, this permits a desirable freedom of choice. In practice, however, this freedom of choice is drastically reduced because of the difficulty of timetabling. In the Times Educational Supplement Nos.392, 393 and 394 (of 1973) there has been some discussion on the timetabling situation. In the last of these issues on page 31 the timetabler is told, "He should not begin by collecting up every requirement and putting them all down on a huge sheet of paper. He should begin by making a structural analysis of this year's timetable or, better still, last year's. If the timetable has been made by a fiendishly clever master of jigsaws who has begun at one corner and worked his way across until he has been left with a remnant of impossibles, it may be very difficult to find the inner structure, but it is there even in the cleverest hotch potch ever created." After some good advice on the logical application of the scientific method to timetabling, the author makes this very significant statement: "In my own school we would like to offer a combination of A level maths, English and biology, but this is impossible." It would seem that the virtual impossibility of timetabling certain combinations of subjects is acting to the considerable detriment of education in many educational establishments. The situation is put in a nutshell Dr. D.A. Walker, the former director of the Scottish Council for Research in Education in his article Research in Education on page 116 of Scottish Education Looks Ahead (1969), "Free choice of subject leads to complexity of time-tabling. /...

tabling. In some of the larger schools the time-table is so complicated, with hundreds of different courses being offered that members of the staff spend weeks during the summer vacation preparing time-tables for the following session. The obvious solution is to use the electronic computer to speed the work, but the construction of appropriate programmes is no easy matter. Investigators from Strathclyde University Department of Administration have been collaborating with headmasters of large secondary schools in an effort to solve these problems and some progress has been made, although complete solutions are not yet in sight." The programmed system which I have advocated has in its most complete form no timetabling at all and even in partial applications there are great benefits to the timetabler. The residue of timetabling which is likely to remain is more of the nature of the rationing of booking rights to equipment, laboratory space or any other facility which is in short supply in a particular institution.

The accommodation problem in the Open Programmed System.

One might refer to the shortage of classrooms, lecture theatres or laboratories in an institution as an accommodation problem. Would the adoption of a programmed system of learning tend to aggravate an existing accommodation shortage or to create one where it did not previously exist? The straight forward answer to this question is, I feel, no. This is because a learner, whether he be doing literary or practical work, needs essentiallythe same amount of working space whether he be in a large group, a small group or working as an individual. However, it is possible that the seminal nature of the programmed system if it has strong inbuilt feedback and there is provision for modification will stimulate increased demand for certain facilities and thus bring to light accommodation deficiencies that had not been appreciated in the previous system.

Another aspect of the accommodation problem is concerned with the spasmodic nature of demand for special facilities such as laboratories or scarce equipment. In economic terms it is necessary to ensure that scarce facilities be used as much as possible. For this reason it will be necessary for a booking system to be an accessory facility which might even have flexible powers of rationing use of certain rooms or equipment.

Recommendation

That individualized learning be adopted where this is feasible and that a combination of programming and counselling be adopted that facilitates learning under existing constraints and where possible initiates the learner into the system of self-directed learning.

The Open Programmed System and primary education.

Could the programmed system be applied at the primary level? When answering that question it is essential to bear in mind that education at this level is in a very much healthier state than is generally the case at subsequent levels. There is a very considerable risk that if in an excess of enthusiasm wholesale attempts were made to apply this system to primary education that considerable damage could be done. Certainly the O.P.S. relies to a considerable extent upon learners' ability to read fluently and this is obviously not the case in the initial stages (and sadly sometimes the later stages) of primary schooling. Indeed, class teaching is now practised only in special cases at the primary level and an individualised approach already is the most usual method of teaching (see for example Joan Low's article Primary Schools in Scottish Education Looks Ahead p.12). It would seem that the Open Programmed System is the logical extension of certain primary methods to secondary and subsequent educational levels. This is largely true, but let us not dismiss the programmed system too hastily in the context of this rosy area of the educational spectrum. Joan M. Low (the Supervisor of Primary Schools in Edinburgh) in the article to which I have just referred indicates an area in which I feel the philosophy of the Open Programmed System may be able to make valuable contributions. Methods for teaching the traditional three R's appear to be excellent, however, a good method of teaching a foreign language at the primary level has not yet been discovered. Perhaps this field would be a fruitful one to investigate. Joan Low (p.26 of Scottish Education Looks Ahead) says, "There is no doubt that an /...

an early start with a foreign language and an oral approach would be advantageous. The problem of how to achieve this in a manner appropriate to individual children with inadequately trained teachers has not yet been solved, but many experiments are being carried out in search of better answers." The most common system at present is for the children, as a class, to listen to recordings of a native speaker of French whilst simultaneously watching a synchronised film strip showing the actions upon which the speaker is commenting. The children copy the sounds made by the speaker. The process is then repeated. The teacher later tries to converse with the class. Is it any wonder that the method has not been very successful. Joan Low observes that this is class teaching in an extremely passive situation. This is sufficient indictment, quite apart from its inefficiency. Passive class teaching is liable to undo much of the good done by the bulk of primary education, although it is, sadly, a foretaste of what most can expect in secondary education.

One of the criticisms of the tape-recorder and film strip method was that it was not individualised. Could it be individualised? At present this would not appear to be feasible because of the cost of any form of video playback e.g. a small film projector or a video-casette player. This may not be so in the near future, but in this treatise I am concerned with the present. What is true of video playback is no longer true of audio playback. Robust cheap miniature audio-casette players are already in common use by the Open University. But we are dealing with an essentially audio-visual method of language teaching, so how can we incorporate the visual element? This can be done quite simply by using a picture book, with a separate picture on each page. The native speaker's voice would comment on each page in turn.

Initially /...

Initially the speaker might use a combination of say French and English, although of course there must be no element of translation in what is said in English. English would be used merely to give instructions such as 'Now turn to the next page' or in the very first stages 'Whenever Henri says something in French repeat it after him'. If a record and immediate playback system could be cheaply devised so that the child could hear his own voice, through the earphones necessary to further individualize the process, the feedback element would greatly enhance the method. The method still is deficient in the conversational element which is essential and if language teaching is worthwhile we must endeavour to make this a part of the system even if it does require a good deal of organisation in the early stages. What I advocate is only practicable if there is a good supply of the speakers of the language available locally. I shall only consider French since as far as I know this is the only foreign language which is being attempted at the primary level at present. There are several sources of French speakers:

(i) French students studying in Britain for longer or shorter periods.

(ii) French school teachers here on exchange visits.

(iii) Members of the various Franco-Scottish societies of the cities and major towns.

Groups (i) and (iii) could be asked to help on a voluntary basis or be paid a small amount on a non-contractual basis, this would be especially welcome by the student community. French school (primary) teachers should be encouraged to make exchange visits with Scottish teachers which /...

which would serve the dual purpose of allowing our own teachers to improve their French and giving us a supply of French teachers. To whichever group of French speakers the speaker belongs it is essential that he speak only French whilst playing the role of conversationalist to the pupil. We are perhaps fortunate that the French are so proud of their culture that they are very glad to assist foreigners to learn to speak their language.

An interesting side-issue arises from the suggestion of exchange visits by French and Scottish teachers. The same educational philosophy and teaching methods do not exist in both countries and besides it would appear to be disruptive to the children's education if they were to lose their class teacher. This I think brings to light a weakness of the existing primary system. And furthermore, I suspect that it is an unnecessary weakness. Attention has already been drawn to the fact that primary education uses individualised and small group teaching rather than class teaching and yet each group of, say, thirty children has a class teacher who is virtually their only teacher. There would seem to be a case for group teaching at the primary level. The important familiar child - familiar teacher relationship would hardly be lessened if there were four familiar teachers rather than one and the supervision problem is essentially unchanged although the architecture of some of the older schools might present difficulties to a system best suited to open-plan designs. Such a system would greatly facilate the coming of incomers such as native French speakers, and the going of teachers on exchange visits. Also it would mitigate the effects of inevitable teacher absences due to illness.

Recommendations /...

Recommendations

(i) That, on an experimental basis, primary French should be taught using an individualised audio-visual process involving the play-back of audio-casettes linked to picture books, and periodic conversation with native (or possibly merely fluent) speakers.

(ii) That primary teacher exchange between France and Scotland be encouraged in the interest of the teaching of primary French.

(iii) That provision for the non-contractual remuneration of non-teacher native speakers be made.

(iv) That group teaching, using a class group of four teachers, be tried at primary level on an experimental basis.

Supervision in the Open Programmed System.

The initial reaction of a teacher from a secondary school with severe discipline problems, to the Open Programmed System, might well be one of horror if it were suggested for his own school. It would perhaps be suitable for higher education, he might concede, but certainly not secondary education and from his experience of the local technical college probably not further education. I would conjecture that his grave doubts of the system lay in its very openness which would seem at first sight to unfetter anarchy and release chaos. At first sight the system would seem to have no provision for supervision. This is not the case. If there were fear of abuse of the system, especially in the initial or development stages, then it would be a simple matter to use a restricted permitted working area which could easily be kept under unobtrusive surveillance by, for example, a technician or a teacher working in the same area in his capacity as a counsellor, consultant or advisor. I would expect the need for both surveillance and supervision to lessen considerably as the learner became used to the system, since I suspect that many of the behavioral problems in schools and colleges either originate directly from the passive class teaching methods or, although these delinquencies originate outside the school or college, the passive class teaching aggravates rather than ameliorates them. But there is still another aspect of the supervision question which is at least as important as the discipline or self-discipline problem. One cannot reasonably, at least at present, expect the programming of the system to ensure that a learner gets sufficient or proper relative quantities of each of the essential components of his education. For example, I might illustrate this state of affairs with

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a rather absurd instance. Might not a learner become so passionately absorbed in, say, the study of ants that he devotes all his time to this and neglects to learn anything at all of his fellow men, or even to satisfy the university requirements of a basic education suitable for his further study of ants? I have said that, at present, it is not reasonable to expect the program itself to exert such constraints as might result in imbalance, and furthermore I suspect that it would be undesirable for such constraints to be programmed directly into the system. However, there must be provision for these, at least, at the secondary level and perhaps even in all formal education. This is where the teacher in his role of educator and counsellor comes in. I would suggest that he approach the task equipped with two techniques which would be used in conjunction. The first of these is the activity schedule. The activity schedule is essentially a work-list for the learner to work to. It might be a day list and/or a week list and/or a term or even year list; this would depend upon the stage of development and the needs of the learner. How the learner allocates his time within the specified period, say a day or a term, is left to the learner. But what if the learner does not submit to the constraints of the schedule or, through lack of self discipline is unable to meet its requirements? And if he did not how would his director of studies know that he had not? I shall answer the first question first. If the learner does not work within his allocated schedule then his schedule can be modified; for example he may find that he can manage a two-day schedule but a week-long one is too much for him. Now in response to the second question of how is the supervisor to be aware of the learner's individual learning activities, especially with regard to his work schedule. /...

schedule. This I would suggest be done by a learner's activity log or work diary which the teacher and learner would discuss periodically. In this diary the student would record the time of starting and finishing different activities and give some details of these activities. This would be a basis not only for checking that schedules had been adhered to, but also there would be the opportunity for the learner to object to certain constraints of the schedule. The teacher would then have the opportunity of modifying the schedule to suit the learner or of explaining to him to what constraints he was subject and why he was subject to them. The drawing up of activity schedules would thus be by a process of negotiation between learner and teacher. Thus if the entire field of supervision is viewed at once it can be seen that far from there being an element of anarchy in the conventional sense, there is rather a large degree of autonomy and the system can be seen to be incidentally very well suited to educating the learner, not to mention the teacher, for taking his part in a participatory democracy.

Recommendations

(i) That activity schedules be provided, on an individual and negotiated basis, for each learner.

(ii) That each learner maintain and submit for periodic inspection, as a basis for counselling, an activity log book or diary.

The relevance of Scandinavian experience to the Open Programmed System.

The Swedes and Norwegians have for some years been conducting a vast experiment in the individualised teaching of mathematics, and it is probable that we shall be able to learn a great deal from them. In Sweden the experiment appears to be in the deep-assessment stage whilst in Norway it is still continuing and it is not likely to reach the stage at which the Swedes have arrived until about 1975.

A.C. Vaigo reports on this project in the Times Educational Supplement No.395 (April 1973) p.39. He states, "The Individualized Mathematics Project (I.M.U.) in Scandinavia is a massive operation which set out to organize teaching of mathematics in such a way that each pupil could develop his talent in the subject to the greatest possible extent." Sweden initiated the project almost ten years ago and has just recently completed a three-year research project involving 12,000 pupils in 80 schools. In 1968, five years after the Swedes started, the Norwegians came in on the project and their main investigation on a similarly massive scale is still in progress.

Swedish experts first devised self-instructive teaching material and tested it in an unstreamed environment (streaming is illegal in Sweden). They then produced a revised second edition in which shortcomings that were highlighted in the test situation had been rectified. This was revised yet again and it was this third edition which was used in the main experiment. To begin their own experiment the Norwegians borrowed and adjusted the Swedes' third edition. After a year with this adjusted Swedish material they prepared their own which they have been using ever since. In the Norwegian work exercises intended for the /...

the brighter pupils have been sharpened and fresh material has been inserted for group-teaching. In both Norway and Sweden easier versions of the programme modules using more sound and visual techniques were published for pupils with reading and writing difficulties.

The joint Nordic committee for the modernisation of mathematics (NKMM) was the source of the subject matter of the I.M.U. course. The range of topics is from set theory and the position system, at the earliest part of the course, to trigonometry and second-degree equations.

It is interesting to learn that the Swedish authorities had hopes of considerable savings in teachers' salaries if the project proved to be successful. To quote the National Board of Education, "In the long run it should be possible to reduce our total operational cost at the upper stage of the compulsory school by 13-15 million kronen a year, or by nearly 20 per cent of teachers' salaries. Against this background the overall outlay of 4-5 million kronen for research and development of the system seems to be an extremely good investment."

However, as I would have expected it was not feasible to reduce the number of teachers in the program even by using group-teaching, although this did have other advantages. The burden on teachers was greater in a single-staff arrangement as opposed to one employing a multiple-staff grouping. In the latter arrangement they could spare more time for planning and individual tuition. About 52 per cent of lesson time was used in advising and helping weaker pupils, 9 per cent for small-group instruction and 4 per cent for teaching the entire group. They found that the total number of staff employed could not be reduced except at the expense of educational standards.

The criticism that the I.M.U. system (in its present form) "gives youngsters a rather inferior training in the use of mathematical language",

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I see as being a characteristic of that particular rather inflexible system in its present form rather than of individually programmed systems as a whole. Indeed, the Malmo research team say, "We know where I.M.U. functioned and where it failed, and we are pretty sure how to correct its faults, if required." Another criticism, the responsibility for which I think can be laid at the feet of those who designed the project, is that, "As pupils work most of the time independently, they have less opportunities for cooperation among themselves." I also suspect that this particular criticism cannot really be justified in that the system basically is no more liable to this charge than any other system of teaching mathematics at the same level.

A gestaltist or integralist viewpoint.

It should already have become evident from my treatment of this report that although it may at times be convenient to consider some aspect of education in isolation and that this practice may seem natural to us it is not natural to the body of knowledge, concepts and practices which we regard as comprising education. For example to consider the schooling of a British secondary pupil in regard to his learning the French language may well be appropriate for that pupil's languages teacher. However, to an educationalist, or even to the pupil himself, education ideally should be seen as a whole, not merely even the whole of education, but the greater whole of which education itself is but a part. I am implying that a subject as complex as education is multidimensional and that a simple linear treatment is, although traditional, quite as inappropriate as is the atomistic approach. The very nature of a written report tends to constrain the author to a linear treatment. This applies almost as much to the reader, unless he makes judicious use of the index or table of contents. However, by so doing the reader may not have communicated to him the message which the author wished to convey. Some of my reasons for raising the matter of the integralist viewpoint are firstly that I intend as I proceed to adopt an increasingly gestaltist approach even though the medium I employ is traditionally linear and/or atomistic. This will take the form of at times plucking apparently irrelevant parts of the multidimensional educational matrix and relating these. Before leaving the subject of gestaltism I wish to assert that it is appropriate to the spirit of the report I am considering, and that it is a standpoint increasingly being adopted in intellectual, reflective or analytical fields. The parents

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of gestaltism would appear to be, on one hand, the reaction to the blunders of narrow specialists who have considered practical problems in an isolation that does not correspond to the interdependence of reality, and on the other, the popularisation of such subjects as ecology and sociology.

Practical education as a gestalt.

As a limited instance of the integralist approach I shall attempt to consider several problems which I suspect may be amenable to compound solution. Firstly let us briefly consider adult education. It is convenient at this juncture to treat it in the narrow sense that excludes the full- or part-time education of persons above the age of compulsory schooling. It is a persistent source of discontent amongst educationalists with an interest in this field that the lower income groups who would most greatly benefit from education avoid adult education. In the light of their past "educational" experiences and the present nature of the greater part of adult education I suspect they are taking the wise course. However, the problem remains how can we introduce the lower working class to a form of adult education which is acceptable to them?

As another facet of the gestalt I will take the education of pre-school-age children. The commissioners as one of their twenty one major principles state (p.190) "The education of pre-school-age children is an essential pre-condition to any educational and cultural policy." They then go on to recommend (p.191) "The development of education for pre-school-age children must become one of the major objectives for educational strategies in the 1970s." In isolation the implementation of these recommendations to our situation would appear to be relatively straight forward. The more so since funds have recently been made available for this very purpose by the minister for education who has herself strongly advocated the expansion of nursery and kindergarten education. Further elements of the gestalt can be aggregated as community participation and social education at the levels where it is most /...

most needed. We can roughly divide these levels as those of (a) basically delinquent adolescents, for example the spray-can slogan-writing gangs and head kickers, (b) that section of male workers whose leisure activity is limited to watching the poorer television programmes and to drinking, (c) those working-class women who are uninspired drudges with bingo as their major relaxation, (d) bored and impoverished old-age pensioners.

I propose that the kernel of the solution be the pre-school education. It should be structured so as not to have that institutional aspect to which the working class will immediately be antipathetic. The report only considers the case where funds for such education are not readily available. It states (p.191), "Education for pre-school-age children (from 2 to 3 years of age upwards) must be organized on a free flexible pattern, finding the best ways of getting families and local communities to work together and share expenses. (This implies training relatively few staff for the job of organizing informal pre-school education in their sector and educating the parents themselves in special schools and other organisations for that purpose.)" It can be seen that a good deal of what the commissioners have put in brackets above is not relevant to our situation - for example a large proportion of our target population of parents would be antipathetic to their being educated in "special schools" and could not be coaxed to within the figurative mile of them (at least initially). In view of the irrelevance to us of the above it is perhaps surprising that we can find a useful pointer in a cultural situation vastly different from ours. The report (p.191) cites, "There is extensive pre-school education in the People's Republic of China. Kindergartens are imaginatively organized /...

organized, some daily, some weekly, ... Assistance comes from many non-professional people, especially grandparents." Here lies the root of our solution. There,mothers will be glad to be relieved of the constant demands for attention of the children, and the older people such as the grandparents will be equally pleased to have the opportunity of working with the children. It is to be hoped that the mothers will over cups of tea meet other mothers and the professional supervisors and also the older non-professional helpers. It is also desirable that facilities be provided at the centres to enable the mothers to spend their time enjoyably but incidentally educationally. For example if nutritional education were combined with home economics as incidental aspects of learning to cook cheap nutritious dishes in a cookery club. They could take dishes home and the supervisor could unobtrusively assist them to educate themselves in these directions and to lead them further into education in a wider sense. Similarly the grandparents could be involved in various activities as informal students or even as assistants paid token wages as in the present case of crossing superintendents whose obvious relish in their duties inspired me to some extent to consider this general solution. It will be more difficult to involve the husbands and other working males. My plan of campaign would be for the mothers to be encouraged to enlist the assistance of their husbands and elder sons in making equipment for the centre in provided rooms or workshops. This activity could then be extended to making things for the home and perhaps activities involving both parents and also to possible activity of a more educative kind.

The only group we have not so far totally involved are the basically delinquent adolescents. This class of client can be sub-divided into two groups - those still at school and those no longer at school. These two /...

two groups are not completely isolated from each other in that they overlap considerably socially and we can expect some group interaction. Those no longer at school may be introduced to the centres (as may those still at school) in the same way that their fathers could have become involved. However, there is another avenue open to us for those still at school in that they can be introduced to the centres through the schools, but preferably on as informal andindividual a basis as possible.

Societal uses of school facilities.

I have already considered some aspects of the isolation of schools and colleges from the rest of the community. The aspect which I wish now to consider is the under-use of school premises and equipment. This topic is dealt with sympathetically, but with a different emphasis in the S.E.D. report entitled "Community of Interests", H.M.S.O. 1968. I shall assume for the purposes of these considerata that full use of school premises and equipment is being made by the schools themselves (this almost certainly is not entirely true, so in protection of the primacy of the schools' claims we must allow them to displace other users if the school's increased need arises).

Schools do make use of their premises after school hours, but to a far smaller extent than could be done. Are there existing needs in the community which could be satisfied to some extent by the use of these facilities. Two urgent needs at once spring to mind. Firstly there are many of the schools' own pupils who misuse their time in such activities as the spray-painting of slogans and acts of gang bravado such as the kicking in of shop windows and the stoning of vacant houses. These youths themselves maintain that their greatest problem is boredom. They suggest that the use of school playing fields, gymnasia and swimming pools which are to a large extent unused after four o'clock would largely solve their problem. I think they are right and this need be only the first step. Let us consider the objections to this proposal - many of them have been raised, and most of them are at least partly valid. Firstly the teachers are expected, by most proponents of the scheme (except the pupils who see no need for supervision), to be present in some capacity. The teachers cannot be obliged to do this job /...

job, and it is not reasonable to expect it of them. So one of the problems we must solve is that of supervision or sufficient surveillance to protect the facilities and ensure the safety of the pupils. Secondly, it is claimed that the facilities could not bear the excess wear and tear. This may be valid in some instances, but in most cases this type of objection is I suspect rationalised obstructionism. For example, the grass of sports fields, we are assured, would quickly be trampled into hard bare earth. Perhaps a way of overcoming this particular objection is the reinforcing of the turf with the open plastics "carpet" which has been so successful on a number of club football pitches. I have cited this isolated example to illustrate that if there is sufficient desire to put such a plan into operation then it may be possible to overcome these valid objections. However, why should the school be interested in other than its institutional needs? Neither cynical nor idealist replies to this question are appropriate in this context. Rather it is more realistic to admit that the school as an institution is a minor organism which functions only within its own bureaucratic environment. If we as masters, rather than as slaves, of this organism wish it to do our will in this respect then we must set up the administrative machinery which makes this not merely possible, but automatic. On the subject of the increased use of school premises and equipment I have considered enough objections to suggest that considerable additional use of these facilities is not practicable without extra staff and additional administrative machinery.

The second desperate need (see p. 41 here) is the occupation of the unemployed whilst they remain unemployed. To find a solution to this problem is far more difficult, but we may be able to go some of the way /...

way towards it. Schemes for the free use of sports centres and swimming pools by the unemployed at times when these facilities tend to be underused are being operated by some imaginative, socially conscious local authorities. Such schemes are greatly to be commended. However, they go only a part of the way towards the solution. Education and retraining are also desirable, but must not be presented as schooling, even though school buildings may well be used, since many of this group of clients will have a well justified antipathy to schools and even to education as provided by schools. Before continuing further I should like to make the point that there will be a number of activities in which the older pupils and some of the unemployed can participate equally during out-of-school hours. Nor is there any reason why pupils of other schools or other members of the community should not make use of these facilities.

Involvement of the social work department.

The problems of additional administrative machinery and extra staff could be solved by extending the social work department to administer this provision and by appointing a senior teacher in each educational establishment to liase for part of his time between the school and this new appendage. It would be necessary to have (joint) meetings and courses of a not too formal nature to overcome the mutual antipathies of the teachers and social workers which if not already extant would soon arise.

I am not suggesting that the social workers should supply all the supervisory and educational staff for this after-hours work. They are too highly trained to be wasted in merely supervisory work and not sufficiently trained to be capable of the subteties of informal adult education. However, they could form the coordinating skeleton and be responsible for the recruitment of staff in the educative, retraining and supervisory capacities. The supervisory function which requires little in the way of special abilities could usefully be done on a paid casual basis by suitable members of the unemployed group. Clearly this would contribute in many ways to the general aims of the scheme.

At this stage it is important to realise that a danger to which this system is susceptible is that of isolation, and that after the system is set up its educational and retraining roles must quickly be integrated with for example libraries, possibly museums, and local business and industry.

Recommendation

That school facilities form the basis for a socio-educational scheme partly administered by the social work department and operating mostly during out-of-school hours.

The position of religious education.

The report makes no explicit reference to religious education. In view of the international and hence intercultural nature of the report, and of the tolerance and humanity of U.N.E.S.C.O. this is hardly surprising. It might be argued that pages 7, 8 and 9 do refer explicitly to religious education. Indeed on page 8 we have the sub-headings "The Christian school", and "Islamic education". However, it transpires that these sections are part of a section dealing with the historic context of education "The heritage of the past" (p.3 et seq), and both discussions are centred on the Middle Ages. Furthermore these and subsequent consideration of "religion and education" are of education in the context of past religious cultures. Religious education, that is education or instruction in religious or spiritual matters is not dealt with. We find, for example, (p.8) "Mediaeval education was essentially a response to the conditions of feudal society as well as to religious ideas. Many Asian and Latin American societies, which long remained in a feudal stage of development, have had very similar systems that contributed to institutionalizing rigid social and cultural divisions." Still on page 8, we have, "Muslim education paid special attention to learning in the sciences, medicine, philosophy, mathematics and astronomy. However, through distrust of heresy and subversion, certain educational systems in the Muslim world finally retracted into a reticent attitude towards the innovative spirit." In the same vein (p.7) the report states, "The world's first universities were those of the Brahmins in India, where they presented a consummate example of education based on philosophy and religion while at the same time stressing the study of mathematics, history, astronomy and even the /...

the laws of economics. Subsequently, Buddhist education emerged as a reaction against the Brahminical doctrine of caste and their monopoly of education, yet it in turn became equally rigid." The commissioners make no comment upon these and other objective assessments which in view of the sensitive area in which they are working is certainly wise. However, I suspect that comment would be not only unwise, but also superfluous. The clarity and objectivity of this historical perspective is sufficient for us to draw our own conclusions.

What is the present situation with respect to religious education? As an example let us consider the Education (Scotland) Act, 1962. On page 6 of the H.M.S.O. 1972 reprint we have (Ch.47 Section 8) "Whereas it has been the custom in the public schools of Scotland ..... for instruction in religion to be given to pupils whose parents did not object ...., be it enacted that education authorities shall be at liberty to continue the said custom." This instruction in religion in practice refers to instruction in some sect of the Christian religion. For example there are sectarian schools run by Methodists, Episcopalians, Catholics and the Church of Scotland. Non-sectarian schools tend to instruct in the doctrines of the established church - the Church of Scotland. To consider this matter further I shall dichotomise. (It may be argued that trichotomy would be more appropriate in view of the special position of Catholic schools, but I decline to sub-divide further on the grounds that this would add little to my thesis). Firstly let us consider the group comprised of sectarian schools. As a result of the way in which we have applied the principle of religious freedom to the educational situation the sectarian schools are in a relatively isolated situation and likely to ignore suggestions of innovation in this field /...

field not originating from within the sect. (There is a rather reactionary S.E.D. report entitled "Moral and Religious Education in Scottish Schools" H.M.S.O. 1972, which gives some insight into the present situation.) However, it is probable in some instances that if the recommendations which I propose for the non-sectarian group are adopted and if the modified system is seen to be an improvement, then the sectarian schools will to a lesser extent also modify their own systems. Unfortunately, but inevitably, it seems that the time-lag will be of the order of several years. Now with regard to the non-sectarian schools we must ask ourselves how much the present situation is the product of historical inertia and how much it reflects the needs of our present society. I maintain that in general the parents of the pupils of a non-sectarian school will subscribe to a variety of sectarian doctrines including not only the more common Christian faiths, but also those of Islam, Hinduism, Buddhism, Judaism, Taoism and so on, and what probably comprises the majority, a number of legally acceptable non-sectarian moralities of various complexity and merit. It is clearly inappropriate that the children of these parents should not be instructed by the school only in the doctrines of the established church. It is also true that the "Conscience clause" (Sect.9 Ch.47) of the Education (Scotland) Act 1962 [p.6 of the H.M.S.O. 1972 reprint] permits a parent without penalty to the child to withdraw a pupil"from any instruction in religious subjects." However, advantage of this clause is taken by only a small proportion of the parents to whom it applies. Two factors contribute to this; one is parental ignorance of the clause and the other is apathy. The ignorance is far more easily overcome than the apathy, but the solution is not at this stage to be found through the parents. Rather it lies in providing the pupils with not /...

not merely an acceptable alternative, but one which can very significantly contribute to their education in this sphere.

Before we can arrive at a solution it is necessary for us to clarify some of the concepts with which we are dealing. What is religion? Certainly it is not exclusively to do with a divine being, God; one of the examples I quoted, Hinduism, involves the acceptance of a multitude of divinities, and another, Buddhism, has no god (although it is true that some peasants have virtually deified the teacher Buddha himself). Linguistic analysis of the word itself provides no solution. The derivation of the word religion we learn is etymologically dubious, and that perhaps it derives from religare (to bind), possibly in the monastic sense. However, the word is common enough, we know it has to do with the spirit and with morality. But let us in turn examine these two terms. It is now conceded that a religious experience need not involve the concept of a god - it is a spiritual experience, an experience relating to or deriving from the spirit. Spirit, (Concise Oxford dictionary, 4th edition, p.1215) Intelligent or immaterial part of man, soul. Chamber's dictionary (New Edition 1972) also gives us (p.1303) further: Spiritual - relating to the mind, the higher faculties, the soul. And what of morality? The word morality derives from moral which in turn derives from mores the plural of mos:- custom. So morality is merely that which is customary in a given culture.

The religion (that which is concerned with the spiritual and moral aspects of man) of our culture is far from uniform - in this respect it is not fully in phase (step) with our culture. Furthermore, formal religion is even further culturally out of phase because of the unavoidable rigidity which has accompanied the institutionalisation of religion. This /...

This phasic disparity would not have been so great were it not that we are in a period of accelerated cultural change, and no doubt formal religion will evolve to a condition which does cater for its clients. But, there is no reason why the pupils in our schools should await the slow and painful internal reforms that will not take place in time to cater for their needs.

A remedy

What then can be substituted for the present inappropriate religious education in our non-sectarian schools? An obvious suggestion is the study of comparative religion, although this in itself would be insufficient. Of what would comparative religion consist? I could entail the comparison of the different religions to discover what they had in common; this I suspect might contribute to greater tolerance and mutual respect. Also analysis might reveal what was particular to certain religions or groups of religions, and this could perhaps be viewed in a cultural context to ascertain how much the culture was a product of the religion and vice versa.

If comparative religion alone is an inadequate replacement for the present system, then with what must we supplement it? I would suggest some study of philosophy, logic and psychology to counter the biases of presentation, which are inevitable to some extent, by the teachers. In addition the study of morality from a humanistic viewpoint would be valuable (see p.6 here which gives further references to the report's view of humanism). Humanism is claimed to be central in most of the major religions as well as to various agnostic and atheist philosophers, and is thus an appropriate area of study. The whole of this field of study /...

study could valuably be brought to bear on the subject of a morality appropriate to our own society. I would consider it essential that this form of education should not be too formal since the dangers of authoritarianism and unwitting indoctrination are immense. For the same reason a number of teachers should be involved with any particular child or group of children. Furthermore the teachers involved should not merely be the so-called authorities in the field. It is likely that the teachers would benefit almost as much as the pupils from the stimulation and human interaction involved. In this context a quote from the commissioners is almost appropriate (p.219) "in such a way that they teach themselves while instructing others".

Recommendations

(i) That formal religious instruction be replaced by the study of comparative religion, the interaction between culture and religion, philosophy, logic, psychology and the humanistic bases of morality.

(ii) That children should not receive religious education from merely one teacher, but from a group and that this group should include non-specialists.

Mass- and associated media.

In considering the subject of mass-media and media associated with these, it is not my intention to recommend sweeping immediate local innovation in this field. Indeed, although my interest in the context of this treatise is still immediate and local, I feel that under the circumstances which I shall shortly describe it is necessary for us to look first at the subject in a less immediate and a wider context. I assert that in the wider context, i.e. at the national level, the mass-media are being hugely ill-used with respect to education, even to education in the widest and least formal senses. At the local level we are hobbled by the paucity of provision at the national level, and although we can innovate and progress, it is small progress compared to that we shall make if and when the national provision is more enlightened. I intend to support my assertion not by close argument, but by displaying certain data in an edited form culled from the report. Before commencing it is necessary for me to state that the term 'mass media' will be used in the very narrow sense of radio and television. Examples of the associated media mentioned are recording and play-back devices.

On page xxxiv of the Preamble the commissioners introduce us to "The instruments of change". They begin "The 'age of change' has provided us with the instruments needed to meet the quantitative and qualitative demand for education which it has stimulated. It remains for us to recognize them for what they are and to be able to use them for that purpose". They leave us in no doubt that the mass media are included amongst the instruments of change; "the mass media (the transistor radio and television) ..... are linked to information, transmitting /...

transmitting it instantaneously, coding it, discovering and using it, and are in consequence adapted by their very nature to the activities of learning, education and training." If we now examine page 212 of the report, we have "Cheap and easily available means for disseminating information instantaneously, especially radio, should be used more widely for mass education, ... More sophisticated communications systems using a variety of auxiliary methods could, however, usefully be introduced into certain countries and at certain levels where they can be financed and integrated into their educational context".

My quotation ".... radio, should be used more widely for mass education", might be seen as excusing us for the inadequacy of provision in this field on the grounds that many other nations are equally or perhaps even worse provided for in this field. However, a country with our record in this field should not be comparing itself with the poorer examples, but with the very best. Let us consider at some length two such examples, firstly Canada and then the U.S.S.R. (pp.212, 213), "The general objective of the Tevec project in Quebec (Canada) was to bring the part of the adult population which had not completed nine years of schooling up to that level.

The training programme linked two components: first, so-called scholastic subjects (French, English, mathematics) and, second, a socio-economic-cultural theme chosen from a catalogue of topics: health, justice, participation, social welfare, government, etc. The aim was to develop understanding of living conditions, in a society undergoing rapid socio-economic change, and the skills needed to participate in it.

On the pedagogical level, the fundamental idea was to combine different ways of overcoming apathy among the people. So far, methods have included: 90-minute television programmes, five days a week; correspondence /...

correspondence courses (an everage of 15,000 reply cards per day); personal contact between participants and teachers (systematic house visits every three weeks); weekly tele-club meetings, with the central discussion topics arising from the programme viewed. Sampling surveys indicate that 35,000 persons viewed the programmes regularly, and 110,000 saw them more than once a week.

This experience seems innovative and exemplary; it covered an entire region, went further than exclusively scholastic training, combined several methods of transmitting and acting on subject-matter, and linked research to application."

The second example follows,

"In the U.S.S.R., special television programmes for pupils and teachers are broadcast daily for between five to eight hours. The broadcasts for teachers, the content of which is determined by the Soviet Academy of Pedagogic Sciences, bring eminent scientists to the television screen: pedagogues, psychologists, specialists in various problems arising out of school education. Pupils, for their part, have an opportunity to increase knowledge gained in school of the most difficult and important subjects in their school programme. Also worth mentioning are the many radio and television programmes for parents, intended to introduce them to the main principles of family education and to familiarise them with child and adolescent psychology."

I shall postpone direct comparison of the Canadian and Soviet programmes with our own. First let us look in greater detail at what the report says of the uses and misuses of the mass media. On page 140, "One of the great merits inherent in mass media is that they relieve the teacher of exclusive concern with the transmission of knowledge /...

knowledge and thereby enable him to pay greater attention to his mission as educator. Because of this, the media help considerably to develop the qualitative and quantitative possibilities for learning available to individuals and societies." It is useful at this point to consider the nature and properties of the mass media. The commissioners (p.121) say, "They are divided essentially into inertia and non-inertia networks." The metaphorical extension of the physical concept of inertia to communications technology is used to promote the idea that some systems once set up resist modification and thus do not readily evolve (i.e. inertia systems), whilst other systems having been set up are readily amenable to modification and evolution can take place (i.e. non-inertia systems). The report gives examples (p.121), "Inertia methods include films and video tapes and channel production into widely distributed, lasting programmes which potentially may be incorporated into modules. Non-inertia networks include radio and television and help develop better integrated, more diversified programmes, easily evolving and renewing themselves." We gain further insight into these rather McLuhanesque concepts as we proceed, "Inertia networks, slides, cassettes and other equipment - affording educators maximum freedom in their choice of programmes and the way they are used - have interesting applications as pedagogical instruments in audio-visual language and science teaching, closed-circuit teacher training, etc."

Direct-wire television.

To provide an informed basis for the further discussion of this topic let us consider direct-wire television, with which many of us are familiar in the hybridised commercial form employed by Rediffusion Ltd. in /...

in which B.B.C. and Independent television broadcasts are received under ideal conditions by the firm and then retransmitted by screened low-noise ground-lines to their subscribers. The report introduces this topic on page 121, "Development of communications technologies is currently moving in two opposite directions: towards the individualization and towards the mass distribution of educational messages. One of the most interesting communications techniques promoting individualization is 'wired' or 'piped' television, which makes it possible to relay more than twenty programmes simultaneously to the entire subscriber network, or to serve one subscriber with a single programme selected from a range of several dozen. The wire-transmission system means that educational programmes may be delivered to groups with specific needs, particularly for professional training." The report cites (p.121) some instances of direct-wire use, "In the United States, private wire television went out over 2,400 subscriber networks in 1970, delivering programmes to some 5 million receivers, or one-tenth of the total in the country; the growth rate was 25 per cent per annum. Subscriber television by wire also exists in Belgium, Canada, Japan, Switzerland and the United Kingdom."

What other reference to accessory media does the report make? On page 122 we have, "Other aids to selective, individual education include video-tape cassettes and cartridges which may be plugged into a television receiver, and the video disc, which is used in conjunction with a video player. <u>These comparatively low-priced aids</u> offer rapid random access and possibility of programme repetition, factors which promise a wealth of didactic possibilities for the future."

These considerata - the possible extent and diversity of mass- and associated media and their uses - make it evident that we are underusing these /...

these facilities available to use for educational purposes, and that for no good reason. Certainly we use radio and television enough, but not for educational purposes. Indeed the bulk of programme material is I suspect not merely uneducative, but anti-educative. Religion might have been the opiate of the people at the time that Marx made this assertion, but its place has, I suspect, been usurped by the mass media. The commissioners only make brief reference to non-educative uses of the media (p.xxxiv of the preamble), "Apart from exceptional cases, radio and television are put to use outside and parallel to education strictly speaking."

Do we really need these new approaches involving the mass media etc? Before answering this question it might be salutory to see what the commissions have to say on the subject (p.212), "Educational technology should first be applied in sectors such as out-of-school activities and long-distance teaching, which are the least hide-bound by archaic structures that risk provoking its abrupt rejection." I do not believe that our educational structure is so inflexible at the local level that we cannot introduce valuable innovations involving the mass- and associated media directly, albeit gradually, into the schools and colleges.

And now as a contribution to dispelling a reactionary myth concerning the use of these media the commissioners state (preamble p.xxxiv), "There is a widespread belief that radio can only be used to advantage to excite interest and that it can play only a negligible part in properly educating and training people. And we find authorities merely inserting television into existing educational procedures, instead of thoroughly reorganizing these so that they benefit from this modern technological aid."

Educational broadcasts.

It would appear that at the national level we have had an educational blind-spot with regard to broadcasting. Just how bad is the situation regarding transmissions of an educational nature? For a country with our excellent Open University system surely we must congratulate ourselves. If we were to do so then the congratulations would be very premature, since even this excellent institution exists in a dreadful isolation from the rest of broadcasting. In the Radio Times and most newspaper programme lists the only information we get about an Open University transmission is the time at which it occurs, not even a title - let alone an indication as to its content. To obtain the programme schedule for the Open University it is necessary to write to their information department for a four-page list of programmes for the year, but how many people know that? Furthermore, this is certainly not going to pull in viewers or listeners who upon casual reading of newspaper programme lists or the Radio Times might have seen a reference to something in which they were interested.

One way of making an estimate of national broadcasting provisions is to take the Radio Times (for B.B.C. transmissions) and the T.V. Times (for independent transmissions) and analyse the programmes in these for details of timing and educational content. This has been done for a week on which schools were on holiday (31st March to the 6th April 1973), but during which the Open University was in session. Weeks have been selected in which broadcasts were made specifically for schools (23rd - 29th Sept. 1972 for B.B.C. and 28th April - 4th May 1973 for S.T.V.). A partial analysis of broadcasts for these weeks may be seen in appendix A.

I have interpreted 'educational' in a very wide sense, but have excluded news broadcasts and music programmes which do not attempt an interpretation /...

interpretation or an analysis. This is for convenience, and I do not deny that such programmes may have educational content. The allocation of programmes to the educational or non-educational categories is to some extent both arbitrary and subjective, but I consider this treatment to be adequate for my purposes.

Radios 1 and 2 have very little educational content. The only programme of an educational nature was found to be 'Woman's Hour', which is broadcast between 2 and 3 p.m. on Radio 2 each weekday. It can be seen from the partial analysis of the first week (p.ii of Appendix A) that this is typically 1 hour in 42 hours and is less than 2% of the week's broadcasting on these wavebands. (The radios 1 and 2 analysis for the second week is identical to the first, and it is therefore considered that it would be redundant to display this information on p.iii of Appendix A). Radio 3 typically transmits programmes of an educational nature for about 20% of the time, less than half of this being Open University material, and none being specifically for schools. Radio 4 typically devotes 3 hours per day to schools broadcasting and only rarely transmits Open University material. Again, about 20% of Radio 4 time is devoted to programmes of an educational nature. Typically 15% of Radio 4 time is for schools. B.B.C.1 typically devotes 20% of its time to broadcasts of an educational nature when schools are not in session and does not transmit Open University material. When schools are in session B.B.C.1 typically transmits educational material for 40% of the time, of which two thirds is for schools (and colleges). B.B.C.2 does not broadcast specifically for schools, and typically 45% of its programme time is for material of an educational nature: about half of this time is devoted to the Open University.

It /...

It is also interesting to note (Appendix A p.i) that between 9 a.m. and 7.30 p.m. B.B.C.1 is off the air for 11½ hours per week during the school session and for 20½ hours per week during a school holiday. Remembering that B.B.C.2 does not transmit programmes specifically for schools, it is even more interesting to note that on school days (between the same times) the station is off the air for about 7½ hours; wasted time indeed!

The educational content of S.T.V. broadcasts can be seen to be about 14% during term and 9% during non-term time. Although this is only between a third and a quarter of the percentage broadcast by the B.B.C. it should not be discounted since some of the programmes are of a very high standard.

It is my opinion that although the television and radio provisions for education at a national level are far less than is desirable, the provisions that exist are very worthwhile both in quantity (transmission hours) and in quality. It is tempting to make recommendations for the improvement of the national provision, but it is not consistent with the aims of this report. It will suffice to observe that in the present educational climate it is likely that these provisions will be extended in the next few years.

My recommendations (of a local and immediate nature) apply mainly to schools. Actual broadcasts should be used more often both "live" and recorded by either audio or video tape-recorders. Where and whenever possible suitable live or recorded network programmes should be incorporated into the Open Programmed System already recommended (pp. 14 et seq here). In keeping with the compound principle of the life-long learning society, learners should be introduced to the value and /...

and pleasure of educational broadcasts on television and more especially radio (since in the present social climate it is easier to miss the opportunity of an introduction to Radios 3 and 4. My final suggestion on this topic is that all schools, colleges and libraries should take at least one copy of each of the Radio Times and the T.V. Times. This may at first sight appear to be a totally unnecessary recommendation. However, this is far from being the case. To illustrate my point let us consider the situation in the capital city, Edinburgh. I was amazed to discover that the branch libraries of the public library system do not include the Radio Times amongst their numerous periodicals. The music department of the central library appears to be the part of the Edinburgh public library system which takes the Radio Times. Furthermore the library of the city's college of science and technology does not subscribe to the Radio Times - in spite of having good receiving and ancillary facilities.

Recommendations

(i) That actual broadcasts should be used more often both 'live' and recorded by either audio or video tape-recorders.

(ii) That where and whenever feasible, suitable 'live' and recorded network programmes should be incorporated into the Open Programmed System.

(iii) That learners should be introduced to educational broadcasts on television and, more especially, radio.

(iv) That every school and college take at least one copy of each of the Radio Times and the T.V. Times.

A "piped" local educational transmitting network.

Closed-circuit television is already in wide use in universities, colleges of education, banks, chain stores, supermarkets, teaching hospitals and industrial premises. Also nearly all hospitals use a direct-wire or 'piped' audio system for the entertainment (if not education) of their patients. In this application received B.B.C. transmissions are relayed to the patients, but in addition to this there is very often a locally operated disc-jockey scheme which is linked directly to the system. In such a scheme request records and "get-well" messages for individual patients are transmitted by a team of local volunteers. Furthermore it is frequently the case that all the hospitals in the area are linked into this direct-wire network. Direct-wire television has already been considered at some length (pp.54 et seq here). I suggest that it would be educationally desirable to set up a local direct-wire educational audio and video transmitting network. On what grounds would such a network be desirable for educational purposes? One of its major advantages is that one aspect of the isolation of the school (see p.10 et seq here) could be considerably reduced.

A substitute for some out-of-school trips.

School trips to local factories, banks, refuse-disposal works, laboratories, mines, offices, universities, colleges and so on are obviously desirable from an educational viewpoint. However, the repeated disruptive visits of large numbers of learners would not be tolerated by many organisations. Also, the individual in such a group is not able to observe as well as if he were in a smaller group. Another /...

Another disadvantage of frequent outside visits is the time wasted by the teachers and learners (typically a whole afternoon or even day is required in travelling just for half an hour's useful observation). This time can be ill-afforded by learners upon whom examination demands are being made. Furthermore, the expense involved in these frequent visits tends to be prohibitive. However, small camera and recording crews including a few learners would not be liable to any of the above disadvantages and the edited films could be shown over the direct-wire network.

Another advantage of the system is that special lectures or demonstrations could be available to everyone on the net. Also the maximum economical use could be made of expensive films hired from the various central film libraries. The active involvement of the learners in the production and organisational part of the network would also be of value as an educational experience. Finally, not just schools, but all local organisations of an educational nature (e.g. F.E. colleges, universities, colleges of education, libraries and museums) might mutually benefit from inclusion in the system. In this last context it should be remembered that a single cable can carry a great many distinct programmes simultaneously.

A potential bonus from a piped distribution system that does not appear to be feasible with an aetheric distribution system is that feed-back of consumer use could be inherent in the system. This is based on the principle that the receiver could also act as a transmitter and could, for example, send a signal back along the wire which would indicate that the set was in use and receiving a particular program. Sophisticated systems could store and computerise such information on

a /...

a continuous and automatic basis. For a non-inertia system, such as the piped system is, it is necessary to have good feed-back so that the system can be continuously modified so as best to satisfy the consumers' needs. Such data is not only in many cases expensive and time consuming to obtain, but wastes the consumers' time. The system I advocate does not suffer from these disadvantages once set up.

Recommendation

That a feasibility study be made of the setting up of a local 'piped' audio and video educational transmitting network.

A system very similar to the one I have advocated has existed in Glasgow for several years and it is a significant world first in many respects. Some details of this system are given in Appendix B.

Democracy and education.

I have already explicitly referred to democracy (p.5 here) when considering the relevance of the report to our own situation. It was observed that the commissioners regarded formal democracy as being obsolete in that it involved almost total delegation of responsibility to (ideally) elected representatives, whereas greater personal participation is now seen as being more in keeping with the more evolved concept of democracy which we now have.

Before considering some more of the commissioners' explicit references to democracy I would like to clarify my basic ideas on the interrelations of democracy and education. The word democracy derives from demos - the people, and kratos - strength. It is (Chambers dictionary 1972 edition) a form of government in which the supreme power is vested in the people collectively, and is administered by them or by officers appointed by them. Alternatively it is (the same reference) a state of society characterised by recognition of equality of rights and privileges. It is important to refer back to these basic definitions since democracy is in the process of evolution both at the practical and the philosophical levels, and any more developed definitions cannot be valid for long in a climate of such rapid and heterogeneous change. To further complicate the situation the term democracy is frequently abused (usually politically), this abuse being facilitated by the complexity of the practice of democracy and the ignorance of the masses. As for the relationship of democracy and education, this can be seen in two ways. Firstly, what should be the nature of education if it is to be in keeping with the democratic principle? Or, how should education be in a democracy. Secondly, what /...

what should be the nature of education if it is to further democracy and its evolution? Or, how should education be in order to promote democracy? From an integralist viewpoint it is important to view these two questions as part of a larger question. However, I think it will also be valuable to bear the dichotomised question in mind in the rest of this discussion.

On page 79 of the report we have, "Forseeing the advent of democracy to the world of education is not an illusion. It may not be a perfect democracy, but when has this ever existed?" This implies that the commissioners see both democracy and its advent in education as being inevitable and that the movement is already underway. The reference to its imperfection when it makes its appearance, I see as an appreciation, based on intuition rather than profound consideration, of the fact to which I have already referred that democracy is something that we yearn for but are only beginning to discover even at the philosophical and theoretical levels let alone its practical aspects.

In introducing us to "The path to democracy" (p.70) the report begins, "For several years critics have accused schools of being hives of injustice, authoritarianism and discrimination." The objections to injustice and discrimination are easily understood in this context in that they are injustice to, and discrimination against, the people of a society and it is these very people from whom the term democracy derives its name - in other words injustice and discrimination are, by extended definition, undemocratic. But what is the objection to authoritarianism? I do not believe that this objection to authority is on the grounds that no one may have authority over the people in a democracy, for in our present state of democracy it is acceptable for the people to place certain of their number in positions of limited authority /...

authority to facilitate the workings of the social machine. Nor is the objection in this context on the grounds that authoritarianism is educationally inefficient. The objection to authority here is that it denies the learner's democratic right to actively participate in a societal function, namely his own education, this implies that he is being manipulated by society and that he is there for society rather than vice versa. Such an attitude to education is oligarchic rather than democratic. Furthermore, under such a system the learner is not receiving the affective education necessary for his democratic participation in society beyond the confines of the school (learning situation). What then is required of one of the people that he may govern his society (as one of the total of the members of that society)? In the cognitive domain he must be able to appreciate the complexity of society, and all the questions of policy and values that the society must answer in coming to any decision. In the affective domain he must be educated in such a way that he desires to participate in policy-making decisions in a cooperative and humanistic manner and has a background of experience in such participation. But although we are already moving in this direction, the present state is far from being ideal and there will be considerable affective obstacles to be overcome. For example, the report continues (still p.70), "This vehement criticism .... is also sparked by what many people regard as hypocrisy, namely the use of a smoke screen of pseudo-democratic phrases to cloak real injustice." Perhaps whilst considering the present far from noble situation it might be well to look at some of the reasons why education is being democratised - we shall see that the driving force is far from being solely humane philosophy. Why is education being made more democratic? Here is part of the report's answer (p.70) "Economic requirements in some countries /...

countries, ideological goals in others, the struggle for national liberation in many parts of the world and even, in some cases, the fear of social unrest, all contribute to the pressing need to make education more democratic."

If education is in the inevitable process of democratisation then why should we bother to assist the process, since it must happen of its own accord? It may even be that a naturally evolved democracy that is achieved more slowly may be superior to the forced democracy that we are trying to achieve. However, we have not only some generation in the distant future to consider but our own generation and all the intermediate generations. Furthermore, and this may well be far more important, the present state of the world is probably critical in that we are faced with the possibility of the self-annihilation of our species or its multidecimation and regression to savagery. Under such circumstances the most rapid evolution to a sufficiently civilized state of world society to avert these cataclysms is imperative.

How can we move towards democracy in education? Clearly if the people are to rule that means all the people and in view of my earlier observations that means that all must be educated. However, that surely is not an immediate local concern for us. It may well be that in Chile or India a substantial proportion of the population receive no education, but in this country we have compulsory education and virtually every citizen spends many years at school. But the commissioners warn us (p.75), "Equal opportunity does not mean nominal equality, the same treatment for everyone, as many still believe today; it means making certain that each individual receives a suitable education at a pace and through methods adapted to his particular person." In a similar vein we /...

we have the commissioners' advice (p.79), "that we cease confusing .... broad access to education with democracy in education." In other words it is not enough that everyone go to school. What is more important is that whilst there they receive an education which both conforms to and seeks to further the democratic ideal. How can we set about this? To answer that we can first turn to the question of authority, where I was somewhat destructive, and constructively attempt to find alternatives to authoritarianism. We receive a partial answer explicitly to this question from pages 79 and 80 of the report, "authoritarian forms of teaching must give way to relationships marked by ..... mutual responsibility and dialogue; pedagogical training must be geared to knowing and respecting the multiple aspects of human personality; guidance must replace selection." Mutual responsibility is clearly in the line of democratic thought which obliges every member of a democracy to be responsible for the governing of the people in the total situation, and also in the limited situation, as exemplified in this instance by a partial responsibility of the learner for his own learning. To facilitate the development of this responsibility and to practise the learner in participation we have the notion of genuine dialogue between the teacher and the learner. The pupil is not at school to be manipulated, that is acted upon, but rather to interact with the educational environment. Of "knowing and respecting the ..... human personality" I will postpone comment until we have looked at another related comment in the report (p.78), "Unless relations between teachers and learners evolve accordingly, there can be no authentic democracy in education." To me this is simply a matter of having respect for the individual even if (especially if since he is at a formative stage) that individual is a child at a primary school. To gain /...

gain an insight into this aspect of a larger situation see David Sturgess' short article (pp.91-97) in Education for Democracy entitled Happenings in a Primary School. The nature of the article is such that it attempts to paint a picture rather than develop an argument. In these circumstances a short quotation would be like taking a detail from a visual composition and quite pointless. Traditional humanism has tended to advocate love of one's fellow man (including the school child), but scientific (evolved) humanism maintains that this is not enough; in addition to love there must be respect. A child does not need to earn respect: it is his of right. It is by receiving respect that he will be more worthy of it.

The final part of my quotation from page 80 was that, "guidance must replace selection." Selection is manipulative and non-participatory and is thus by (extended) definition undemocratic, thus to be faithful to the democratic principle it is necessary for an informed (guided) choice to be made so as permit the diversification of individual development necessary in a complex society.

On the subject of co-management and self-management the commissioners ask (p.78), "First, who among participants, users and others concerned should share this right to guide and manage education, as a joint enterprise?" They go on to suggest some possibilities, "They could include teachers and parents, scientists, pedagogues, psychologists, paediatricians and others; students and pupils as from a certain age; administrative and other staff; employers - in certain branches of training - and representatives from various youth, labour, political and other organisations." In this context it is apposite to quote the document of the International Commission on the Development of Education published by Unesco in 1971. In Opinions Series 35 page 2 Stevan Bezdanov /...

Bezdanov asserts, "Democratizing education does not only mean giving more education to more people, but also involving more people in educational management." Bezdanov proceeds to draw attention to the need for educational reformation. He asks, "But who will recreate it? Not the administrators and the officials in education, but the people, all of them."

An immediate improvement that could be made in the management of education is for changes to be made in schools' and colleges' boards of governors and management. In many cases such boards are either merely decorative, in the sense that the distinction of their titles and qualifications is shared by the institution on whose board they sit. In these and other instances it is often the case that the boards are easily manipulated by the headmaster or principal and merely lend their authority to his decisions. In the interests of democracy it is obvious that, as the commissioners suggest, students, pupils and parents should sit on their boards of management or governors. However, this is seldom the case and the situation should be rectified at once. Rather less obvious suggestions (by the commissioners) for board membership are the various unbiased professionals such as pedagogues, psychologists and paediatricians. An especially valuable member of this category might be someone from the social science or educational departments of the universities or colleges of education who had both a passionate and a well-informed involvment in democratic processes. It is important that professionals whose allegiance is to their disciplines and to society as a whole should be included on governing and managing boards as a counterbalance to the merely decorative and the pocket man. It is desirable that reforms take place at the board level, but it must be remembered that the management of an educational institution can, and /...

and should, be distributed and consist of far more than this board.

However, it has been said that a benign dictatorship is the best form of government. Most of us would strenuously deny this, but I suspect that the reason for this frequently heard assertion is not the desire to abnegate responsibility but rather an appreciation of the complexity, inertia and potential ineffectiveness of a badly structured system of democratic participatory management. We are still learning how to marry democracy and efficiency. If we are blind to the potential dangers of the system we shall be overcome by them. I suspect that most of these pitfalls can be avoided by having a multiple-group system which would interact and make individual recommendations to the board on which the groups had representatives whose duties included presenting the recommendations and ensuring that they were given consideration, and then reporting back to their groups. Such groups might be class groups, department (student) groups, the staff body group, parent groups, department (staff) groups, the staff body group, student/parent groups, student/staff groups, and parent/staff groups.

All of these groups should be encouraged to procure the services of experts on matters that they are not well-informed upon and where their ignorance might be a barrier to the furtherance of the interests of that group. This point is made because I think I see the need for this around me and also the beginning of the public realisation of this need, which is an important step in the evolution of practical democracy. There is a Frankensteinian element in any organisation and for democracy to work efficiently it will be necessary for the people to control organisational institutions rather than to be controlled by them as can easily be the case.

Since /...

Since the school or college is primarily an educational institution and the primary subjects of this education are the pupils or students it is a duty of the institution both to affectively educate the learner for his democratic role and to actively encourage him in this role by, for example, allowing him to hold some of his multi-group meetings in school time.

Recommendations

(i) That the boards of governors and management of educational institutions should include learner, staff, and where appropriate (e.g. in schools) parent members, and that these members should be representatives of organised bodies such as student councils, staff associations, or parent associations.

(ii) That at least two members of each such association be members of the board, in order that their weight be more than merely nominal.

(iii) That such boards of management and governors have professionals, such as those well versed in sociology, pedagogy and democracy, amongst their numbers.

(iv) That all individual members of staff, including even headmasters and principals, be exposed to the notion that a learner (of any age) is entitled to respect.

Adult education.

The report makes only about a score of brief references and devotes a longer section of four pages (out of the total of over 300 pages) to the subject of adult education. However, this is not due to the commissioners' considering the subject as being undeserving of more space, but because they see it as part of a complete and integrated educational pattern. The observations and recommendations they make for education as a whole apply as much to adult education as to other areas of educational activity.

For example, the principle of life-long education obviously must embrace adult education. The report refers to this specifically (pp.142, 143), "At the outset, lifelong education was scarcely more than a new term applied to a relatively old practice: adult education, not to say evening courses. Then, progressively, the idea was applied to professional training, following which it came to cover the multiple aspects of personality - intellectual, emotional, aesthetic, social and political - within an integrated vision of educative activity. Now, finally the concept of life-long education covers the entire educational process from the point of view of the individual and of society." In discussing social commitment, adult education is again mentioned in the report (p.150), "While adult educational activity may have a less unifying effect (since it may be independent of and opposed to public education), it does contribute to awakening civic spirit and a sense of social commitment, to arousing interest in others and assisting people to escape isolation - whether chosen or imposed." These two quotations from the report serve the dual function of précising our own adult educational situation and making it clear that the commissioners are well aware of that situation.

Earlier /...

Earlier I may not have been convincing when explaining away the meagre ~~xxxxxxxx~~ space devoted by the commission specifically to adult education. Let the commissioners themselves make this point (p.205) as they propound one of their twenty one principles, "The normal culmination of the educational process is adult education."

I have already by way of précis quoted the commission on adult education, and to elaborate on this shall again quote the report (p.105), "There are many possible definitions of adult education. For a very large number of adults in the world today, it is a substitute for the basic education they missed. For the many individuals who received only a very incomplete education, it is the complement to elementary or professional education. For those whom it helps respond to new demands which their environment makes on them, it is the prolongation of education. It offers further education to those who have already high-level training. And it is a means of individual development for everyone." However, it is important not to look at adult education in isolation since adults (particularly parents) form an important part of the educational environment of children, so that the education of an adult does not merely develop the adult but enhances the education of the child. As the report puts it, "Adult education assumes especial importance to the extent that it may be decisive in the success of non-adults' school activities. For children's primary education - a primordial objective - cannot be dissociated from their parents' educational levels. The rising generations cannot be properly trained in an illiterate environment. Since the development of education depends upon using to the full the capacities of all people able to teach or help train others, the number of professional people engaged in working towards educational objectives can only be increased by intensifying /...

fying adult education. We should never set adult education against the education of children and young people: the concept of global or over-all education goes beyond the semblance of contradiction." This proposition is reinforced (again p.105) with, "It follows that adult education can no longer be a fringe sector of activity in any society and must be given its own proper place in educational policies and budgets." The commissioners make the recommendation (p.206) that, "Educational strategies in the coming decade should have rapid development of adult education, in school and out of school, as one of their priority objectives." Furthermore they say that action must be taken to (still p.206) (i) "Utilize all existing scholastic establishments (primary, secondary, technical schools) for adult-education activities, and to increase the number of adults admitted to higher education institutions," and (ii) "Create special adult-education institutions or integrate out of school activities to assist adults to function better as citizens, producers, consumers and parents."

Adult education, as it exists at present in the local and largely informal situations which I wish to consider, is very far from integrated. For example courses are run by the local education authority, branches of the Workers Educational Association, and the extra-mural departments of the Universities and art colleges. These various courses are run in almost complete isolation from each other. Having distinct aims and objectives, it is not unreasonable that these various institutions should function to some extent independently. However, I would suggest that all such bodies be invited to send representatives selected from their staffs and adult students to discuss their joint and individual policies and provisions in the sphere of informal adult education. /...

education. (The D.E.S. report chaired by Lionel Russell and entitled "Adult Education: A Plan for Development" H.M.S.O. 1973, although specific to England and Wales, advocates greater cooperation and makes various recommendations that also would appear to be relevant to Scotland.) Furthermore I would suggest that mobility between the formal and informal educational activities of these institutions be encouraged and facilitated.

The commissioners suggested the utilization of "all existing scholastic establishments" for the purposes of adult education. At present most adult evening classes use school or college classrooms, so at first sight it would appear that the commissioners' suggestion is irrelevant. However, I do not think this is so since with the movement of the schools along new educational paths such as those of counselled, programmed and individual learning the very form of the school and college accommodation is changing. This is in some cases towards carrels, or cubicles for the individual learner. The reasons for these changes include a dissatisfaction with just classroom teaching. However, the reasons for this dissatisfaction are even more apparent in adult education than elsewhere and yet it seems that in many localities adult education will be the last stronghold of class teaching.

I would suggest that units designed for individual teaching in schools and colleges be eagerly sought after, and made use of for adult education. It is important in this context to remember that social contact is especially important to adult educatees and it might seem that individualised learning conflicts with the satisfaction of this need. If individualised learning is properly administered the very reverse is the case. At present it is not uncommon for some lonely person to enrol for an evening class in some subject in which they have no /...

no great interest and to regularly sit through two-hour long lectures week after week and have no human interaction of any sort with the rest of the class or the teacher. In a properly administered individualized learning situation counsellor/teachers regularly discuss the learner's interests with him and help him choose the directions in which he wishes to pursue his studies; the student will attend small and large group discussion groups and tutorial sessions and there will be a constantly available coffee lounge or area in which breaks from work can be taken at any time and for as long as the student wishes. However, there is a difficulty: as individualised learning becomes more popular there is a tendency for its material resources (e.g. cubicles) to be available to the intended users (e.g. school or college students) until maybe 10 or 10.30 p.m. This means that the school (or college) authorities may maintain that the facilities are not available for use by adult educatees since they are being used by their own students. This argument is only justified if the facilities are <u>fully</u> used at these times since there is no reason why the students and the adult educatees should not use these facilities simultaneously if they are partially available and if the adult educatees use them properly. If it were to happen that throughout the local area none of the existing cubicles were available this would indicate that the facilities were inadequate and would need to be expanded for the students or the adult educatees or both. It is even conceivable that adult educatees such as housewives might use surplus school facilities during the day, and that a booking system might facilitate this.

Another possible area of integration of adult education and other areas of integration is the integration of daytime adult education for housewives /...

housewives with nursery schools and kindergartens. The mothers of the small children thus relieved of some of the time in which they might be minding their children would then be able to engage in adult educational activities, preferably located close to the creche, playgroup, nursery school or kindergarten.

Recommendations

(i) That each locality set up a body to which all local institutions involved in adult education (e.g. the education authority, the W.E.A., university and art college extra-mural departments) be invited to send staff and student representatives to discuss their joint and individual policies and practices in the field of adult education.

(ii) That student-mobility between the formal and informal educational activities of institutions involved in adult education be encouraged and facilitated.

(iii) That where possible individual learning facilities be integrated into adult education, and that simultaneously the social isolation of the adult learner be eradicated by a properly structured learning situation.

(iv) That adult educatees have regular individual discussions with constantly available counsellors who could provide information on mobility within the educational system.

(v) That daytime adult educational facilities be made available to the mothers of children of ages appropriate to attendance at creches, playgroups, nursery schools and kindergartens, and that where possible the adult and children's facilities be adjacent.

Summary of recommendations

(i) That individualised learning be adopted where this is feasible and that a combination of programming and counselling be adopted that facilitates learning under existing constraints and where possible initiates the learner into the system of self-directed learning (p. 23 here)

(ii) That, on an experimental basis, primary French should be taught using an individualised audio-visual process involving the play-back of audio-casettes linked to picture books, and periodic conversation with native (or possibly merely fluent) speakers. (p. 28 here)

(iii) That primary teacher exchange between France and Scotland be encouraged in the interest of the teaching of primary French. (p. 28 here)

(iv) That provision for the non-contractual remuneration of non-teacher native speakers be made. (p. 28 here)

(v) That group teaching, using a class group of four teachers, be tried at primary level on an experimental basis. (p. 28 here)

(vi) That activity schedules be provided, on an individual and negotiated basis, for each learner. (p. 31 here)

(vii) That each learner maintain and submit for periodic inspection, as a basis for counselling, an activity log book or diary. (p. 31 here)

(viii) That school facilities form the basis for a socio-educational scheme partly administered by the social work department and operating mostly during out-of-school hours. (p. 44 here)

(ix) That formal religious instruction be replaced by the study of comparative religion, the interaction between culture and religion, philosophy, logic, psychology and the humanistic bases of morality. (p. 50 here).

(x) That children should not receive religious education from merely one teacher, but from a group and that this group should include non-specialists. (p. 50 here)

(xi) That actual broadcasts should be used more often both 'live' and recorded by either audio or video tape-recorders. (p.60 here)

(xii) That where and whenever feasible, suitable 'live' and recorded network programmes should be incorporated into the Open Programmed System (p.60 here)

(xiii) That learners should be introduced to educational broadcasts on television and, more especially, radio. (p.60 here)

(xiv) That every school and college take at least one copy of each of the Radio Times and the T.V. Times. (p.60 here)

(xv) That a feasibility study be made of the setting up of a local 'piped' audio and video educational transmitting network. (p. 63 here)

(xvi) That the boards of governors and management of educational institutions should include learner, staff, and where appropriate (e.g. in schools) parent members, and that these members should be representatives of organised bodies such as student councils, staff associations and parent associations. (p.72 here)

(xvii) That at least two members of each such association be members of the board, in order that their weight be more than merely nominal. (p.72 here).

(xviii) That such boards of management and governors have professionals such as those well versed in sociology, pedagogy and democracy, amongst their numbers. (p.72 here).

(xix) That all individual members of staff, including even headmasters and principals, be exposed to the notion that a learner (of any age) is entitled to respect. (p. 72 here).

(xx) That each locality set up a body to which all local institutions involved in adult education (e.g. the education authority, the W.E.A., university and art college extra-mural departments) be invited to send staff and student representatives to discuss their joint and individual policies and practices in the field of adult education. (p.78 here)

(xxi) That student-mobility between the formal and informal educational activities of institutions involved in adult education be encouraged and facilitated. (p.78 here)

(xxii) That where possible individual learning facilities be integrated into adult education, and that simultaneously the social isolation of the adult learner be eradicated by a properly structured learning situation. (p.78 here).

(xxiii) That adult educatees have regular individual discussions with constantly available counsellors who could provide information on mobility within the educational system. (p.78 here)

(xxiv) That daytime adult educational facilities be made available to the mothers of children of ages appropriate to attendance at creches, playgroups, nursery schools and kindergartens, and that where possible the adult and children's facilities be adjacent. (p.78 here)

Notes on bibliography.

Remembering that the treatment of the educational situation of central Scotland, in this treatise, was merely a device by way of example to illustrate the interaction of an international report and a local situation, I do not wish to stress unduly this local situation. For this reason (among others) I have restricted the bibliography of this aspect (i.e. the particular local situation) to some of the items to which reference has been made in this text.

In the case of the international report "Learning to be"; this is the prime and essential reference. However, I would also draw the reader's attention to Appendix 5 which is substituted for a bibliography in "Learning to be". This takes the form of a list of eighty one documents prepared specially for the U.N.E.S.C.O. commission by many of the world's leading educationalists. These are available with some difficulty through various institutes, but will be more readily available,as extracts, in a second volume of the commission's report which was not available at the time of writing.

(i) Learning to be - Edgar Faure (chairman), published by U.N.E.S.C.O., and by Harrap, 1972.

(ii) Community of Interests - Scottish Education Dept., published by H.M.S.O., 1968.

(iii) Moral and Religious Education in Scottish Schools - Scottish Education Dept., published by H.M.S.O., 1972.

(iv) Adult Education: A plan for development - Lionel Russell (Chairman), published by H.M.S.O., 1973.

APPENDIX A

A partial analysis of the educational aetheric broadcasts.

Key to the partial analyses on the following pages

All non-percentage figures are in hours to the nearest quarter.

Σ - the total broadcasting time on the specified band and day.

σ - the total educational time on the " " " "

U - the total Open Univ.^{y} time on the " " " "

S - the total school &/or college time on the specified band and day.

Non-broadcast times between 9AM and 7-30PM

	SAT	SUN	MON	TUES	WED	THUR	FRI	
B.B.C. 1	1	0	4	4	3½	4	4	31st March - 6th April '73
	3½	½	2	3	½	1	1	23rd - 29th September '72
B.B.C. 2	2	3¼	8	8½	8	6	8	31st March - 6th April '73
	3½	8½	6	7	6	7	6	23rd - 29th September '72

A Partial Analysis of Broadcasts from 31st March to 6th April

	Radio 1,2			Radio 3						Radio 4						B.B.C. 1			B.B.C. 2					
	Σ	σ	$\frac{\sigma}{\Sigma}$	Σ	σ	U	$(\sigma-U)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-U}{\Sigma}$	Σ	σ	U	$(\sigma-U)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-U}{\Sigma}$	Σ	σ	$\frac{\sigma}{\Sigma}$	Σ	σ	U	$(\sigma-U)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-U}{\Sigma}$
SAT	42	0	0	18½	3½	2½	1	19%	5%	17	¼	0	¼	15%	15%	14½	2	13%	14	3	1½	1½	21%	11%
SUN	38	0	0	17½	3¾	1¾	2	21%	11%	17	6½	3	3½	38%	21%	15	1¾	12%	12	7	4¼	2¾	58%	23%
MON	42	1	2%	17	3¼	1½	1¾	19%	10%	17	½	0	½	3%	3%	11	2¼	20%	7	2¾	1½	1¼	39%	18%
TUE	42	1	2%	17	3	1½	1½	18%	9%	17	1¼	0	1¼	7%	7%	11	3½	31%	6½	1¾	1¼	½	28%	8%
WED	42	1	2%	17	4	1¾	2¼	24%	13%	17	1½	0	1½	9%	9%	11½	2¼	20%	7	2½	1¾	1	36%	14%
THUR	42	1	2%	17	3¾	1¾	2	40%	12%	17	1⅝	0	1¾	10%	10%	10½	2	19%	7½	4½	1¼	3¼	60%	43%
FRI	42	1	2%	17	4	1¾	2¼	24%	13%	17	¼	0	¼	18%	18%	10½	2	19%	6½	3	1½	1½	46%	25%

A Partial Analysis of Broadcasts from 23rd to 29th Sept.

	Radio 3						Radio 4							B.B.C. 1						B.B.C. 2					
	Σ	σ	U	$(\sigma-U)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-U}{\Sigma}$	Σ	σ	S	U	$(\sigma-S-U)$	$\frac{S}{\Sigma}$	$\frac{U}{\Sigma}$	Σ	σ	S	$(\sigma-S)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-S}{\Sigma}$	Σ	σ	U	$(\sigma-U)$	$\frac{\sigma}{\Sigma}$	$\frac{\sigma-U}{\Sigma}$
SAT	16	1	0	1	6%	6%	$16\frac{3}{4}$	$2\frac{1}{4}$	0	0	$2\frac{1}{4}$	0	0	$11\frac{1}{2}$	0	0	0	0	0	$8\frac{1}{2}$	$4\frac{1}{4}$	0	$4\frac{1}{4}$	50%	50%
SUN	16	$1\frac{1}{2}$	0	$1\frac{1}{2}$	9%	9%	$15\frac{3}{4}$	$1\frac{1}{4}$	0	0	$1\frac{1}{4}$	0	0	14	$1\frac{3}{4}$	0	$1\frac{3}{4}$	12%	12%	$6\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	0	6%	0
MON	17	$3\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	45%	58%	17	$2\frac{3}{4}$	$2\frac{3}{4}$	0	0	8%	0	$12\frac{3}{4}$	$5\frac{3}{4}$	4	$1\frac{3}{4}$	46%	14%	$6\frac{1}{2}$	$2\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{4}$	44%	20%
TUE	17	3	$1\frac{1}{2}$	$1\frac{1}{2}$	18%	9%	17	$3\frac{1}{2}$	$2\frac{1}{2}$	0	1	15%	0	$12\frac{1}{4}$	$5\frac{1}{4}$	$3\frac{3}{4}$	$1\frac{1}{2}$	42%	12%	6	1	1	0	17%	0
WED	17	$3\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	19%	10%	17	$4\frac{1}{4}$	$3\frac{1}{4}$	0	1	19%	0	15	$5\frac{3}{4}$	$3\frac{1}{4}$	$2\frac{1}{2}$	41%	17%	$6\frac{3}{4}$	$3\frac{1}{4}$	2	$1\frac{1}{4}$	47%	18%
THUR	17	3	$1\frac{1}{2}$	$1\frac{1}{2}$	18%	9%	17	$3\frac{1}{4}$	$2\frac{1}{2}$	0	$\frac{3}{4}$	15%	0	15	$5\frac{3}{4}$	$3\frac{1}{4}$	$2\frac{1}{4}$	38%	15%	$8\frac{1}{2}$	1	$\frac{1}{2}$	$\frac{1}{2}$	12%	6%
FRI	17	$3\frac{1}{4}$	$\frac{1}{2}$	$1\frac{3}{4}$	19%	10%	$17\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{3}{4}$	0	$\frac{3}{4}$	15%	0	$14\frac{3}{4}$	$3\frac{1}{4}$	2	$1\frac{1}{4}$	22%	9%	8	3	$1\frac{1}{2}$	$1\frac{1}{2}$	37%	19%

A Partial Analysis of S.T.V. Broadcasts.

	28th April – 4th May '73							31st March – 6th April '73						
	Σ	σ	S	$(\sigma-S)$	σ/Σ	S/Σ	$\frac{(\sigma-S)}{\Sigma}$	Σ	σ	S	$(\sigma-S)$	σ/Σ	S/Σ	$(\sigma-S)/\Sigma$
SAT	15¼	1½	0	1½	10%	0%	10%	15	1	0	1	7%	0%	7%
SUN	14½	½	0	½	3%	0%	3%	15¼	3	0	3	20%	0%	20%
MON	14	4	2	2	29%	14%	14%	14¼	½	0	½	3%	0%	3%
TUES	14½	2	2	0	14%	14%	0%	14¼	1½	0	1½	11%	0%	11%
WED	14½	2	2	0	14%	14%	0%	14¼	0	0	0	0%	0%	0%
THUR	14½	2½	2	½	17%	14%	3%	14¾	1	0	1	7%	0%	7%
FRI	14½	2	2	0	14%	14%	0%	14½	1½	0	1½	10%	0%	10%

SATURDAY 31ST MARCH 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7	O.U. (1-40)	ON YOUR FARM (30)		
8				
9				
10		W.W (15)	FRENCH (30)	O.U. (1-40)
11		O.U. V.H.F. (2-55)	ITALIAN (25)	
NOON 12				O.U. (2-30)
1				
2				
3		O.U. V.H.F (3-0)		
4		WOMAN'S H (1-0)		
5				
PM 6	MUSIC NOW (45)			CATACOMBS OF SAKKARA (45)
7	CANBERRA (20)			
8				
9				
10				
11		A WORD EDGEWAYS (40)		
NIGHT 12	O.U. (50)			
1				
2				
3				
4				
AM 5				

SUNDAY 1st APRIL 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7	O.U. (1-40)			
8				
9		U.S. (15)		
10		O.U. V.H.F. (1-25)	FRENCH (30) ITALIAN (25)	O.U. (3-45)
11				
NOON 12		GRASS ROOTS (30)		
1		WHAT YOU THINK (45)		O.U. (25)
2			THE RIVER (15)	
3		STUDY ON 4 (1-30)		
4				
5	ABOUT MUSIC (35)	NEW WORLDS (30)		MONEY AT WORK (1-0)
PM 6				
7	Q OF TREATMENT (15)	ASSASSINATIONS (45)	AYRSHIRE (30)	NEWS REVIEW (35) THE MOMENT (30)
8				THE WORLD ABOUT US (50)
9				
10				
11		WHERE ARE YOU TAKING US? (45)		
NIGHT 12				
1				
2				
3				
4				
AM 5				

MONDAY 2nd APRIL 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9				
10				
11				
NOON 12				
1				
2				
3			NIGHT SKY (20)	
4				
5				
PM 6			NATIONWIDE (45)	O.U. (1-30)
7	STUDY ON 3 (1·0) / O.U (1-25) V.H.F.			EUROPE (25)
8			SEARCH FOR THE NILE (50)	
9				
10	CHINA (30)			
11	DISEASE (20)	KALEIDOSCOPE (30)	NIGHT SKY (20)	
NIGHT 12				OPEN DOOR (45)
1				
2				
3				
4				
AM 5				

TUESDAY 3RD APRIL 1973

	RADIO 3		RADIO 4	B.B.C. 1	B.B.C. 2
AM 5					
6					
7					
8					
9					
10			PROBLEMS (40)		
11					
NOON 12					
1	WORLD ARTS (15)				
2					
3				SCHOOLS (20) ANIMALS (25)	
4					
5					
PM 6				NATIONWIDE (45)	O.U. (50)
7	STUDY ON 3 (1-0)	O.U. (1-25) VHF			EUROPE (25) O.U. (25)
8					
9	WORLD ARTS (20)				
10				HUSSEIN OF JORDAN (50)	
11			K.SCOPE (30)	MIDWEEK (45)	
NIGHT 12				MEDICINE (25)	
1					
2					
3					
4					
AM 5					

WEDNESDAY 4th APRIL 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9				
10				
11				
NOON 12				
1				
2				
3			WHERE IS GOD (35)	
4				
5				
PM 6				O.U. (1-40)
7	STUDY (1-0) / O.U. V.H.F. (1-45)		TOMORROWS WORLD (25)	EUROPE (25)
8				
9		LATIN AMER. (15)		
10	POETRY NOW (35)	THE WORLD (45)		
11	R. HUGHES (45)	K. SCOPE (30)	MIDWEEK (45)	EDITION (30)
NIGHT 12			MAN AT WORK (25)	
1				
2				
3				
4				
AM 5				

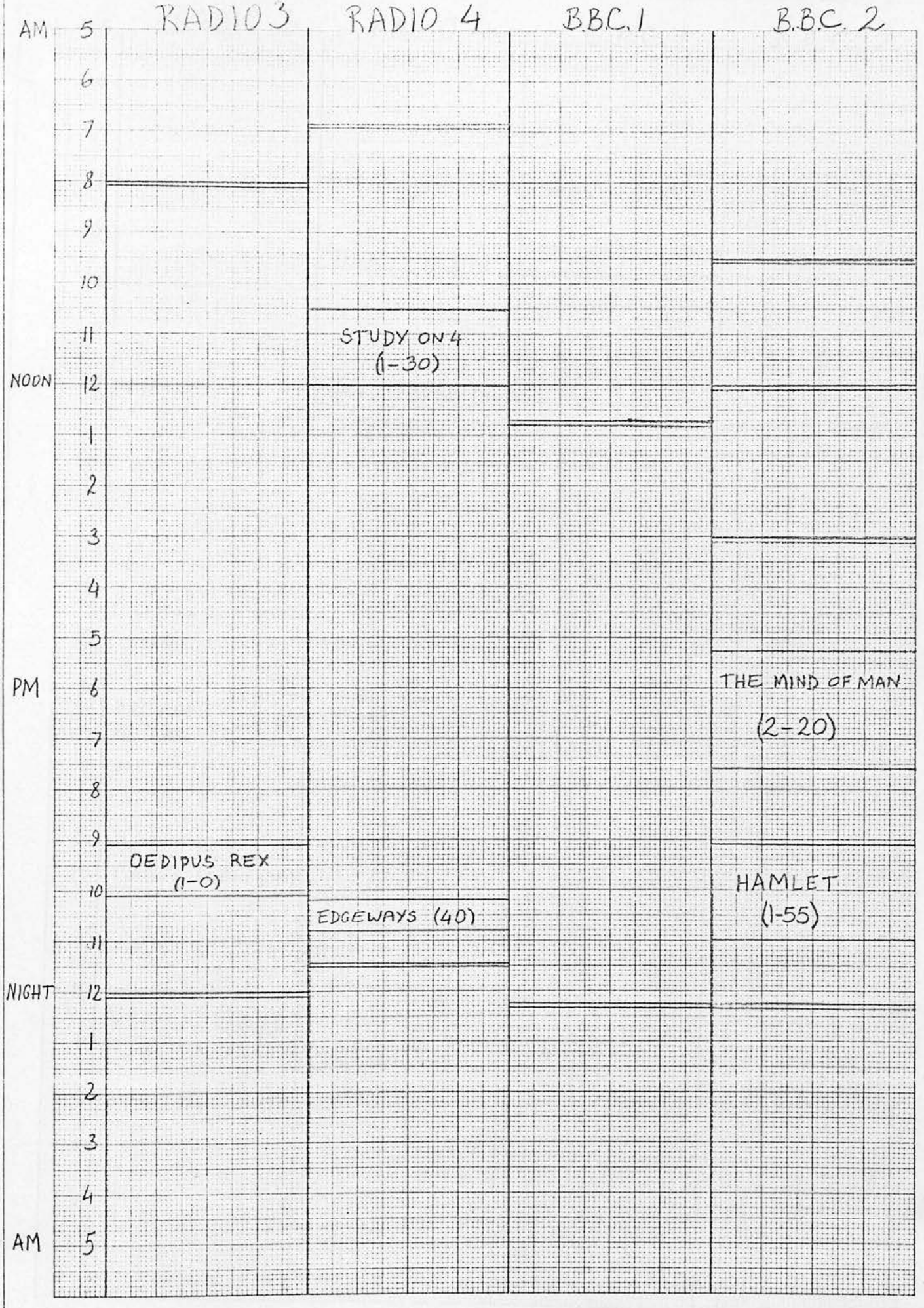
THURSDAY 5th APRIL 1973

	RADIO 3	RADIO 4	BBC.1	B.B.C.2
AM 5				
6				
7				
8				
9				
10				
	MUSIC IN JAVA (30)			
11				
NOON 12				
1				
2				
3			PARENTS (25)	
4				
5				
PM 6			NATIONWIDE (45)	O.U. (1-15)
7	STUDY ON 3 (1-0) / O.U. VHF (1-45)	GUSH (30)		EUROPE (25) / O.U. (25)
				THEIR WORLD (25)
8				EUROPA (30)
9	CHINA (30)	WORK (45)		
10				HORIZON (50)
11		K. SCOPE (30)	CURRENT ACCOUNT (45)	
NIGHT 12				REAL TIME (45)
1				
2				
3				
4				
AM 5				

FRIDAY 6th APRIL 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9				
10	CROSSTHREAD (30)			
11				
NOON 12				
1				
2			LOOK STRANGER (40)	
3				
4				
5				
PM 6	O.U. (1-45)		NATIONWIDE (40)	O.U. (1-30)
7	STUDY ON 3 (1-0)			EUROPE (25)
8				MONEY AT WORK (1-0)
9				
10		K. SCOPE (15)	TALK-IN (45)	
11	THE ARTS (40)			
NIGHT 12				
1				
2				
3				
4				
AM 5				

SATURDAY 23RD SEPT 1972



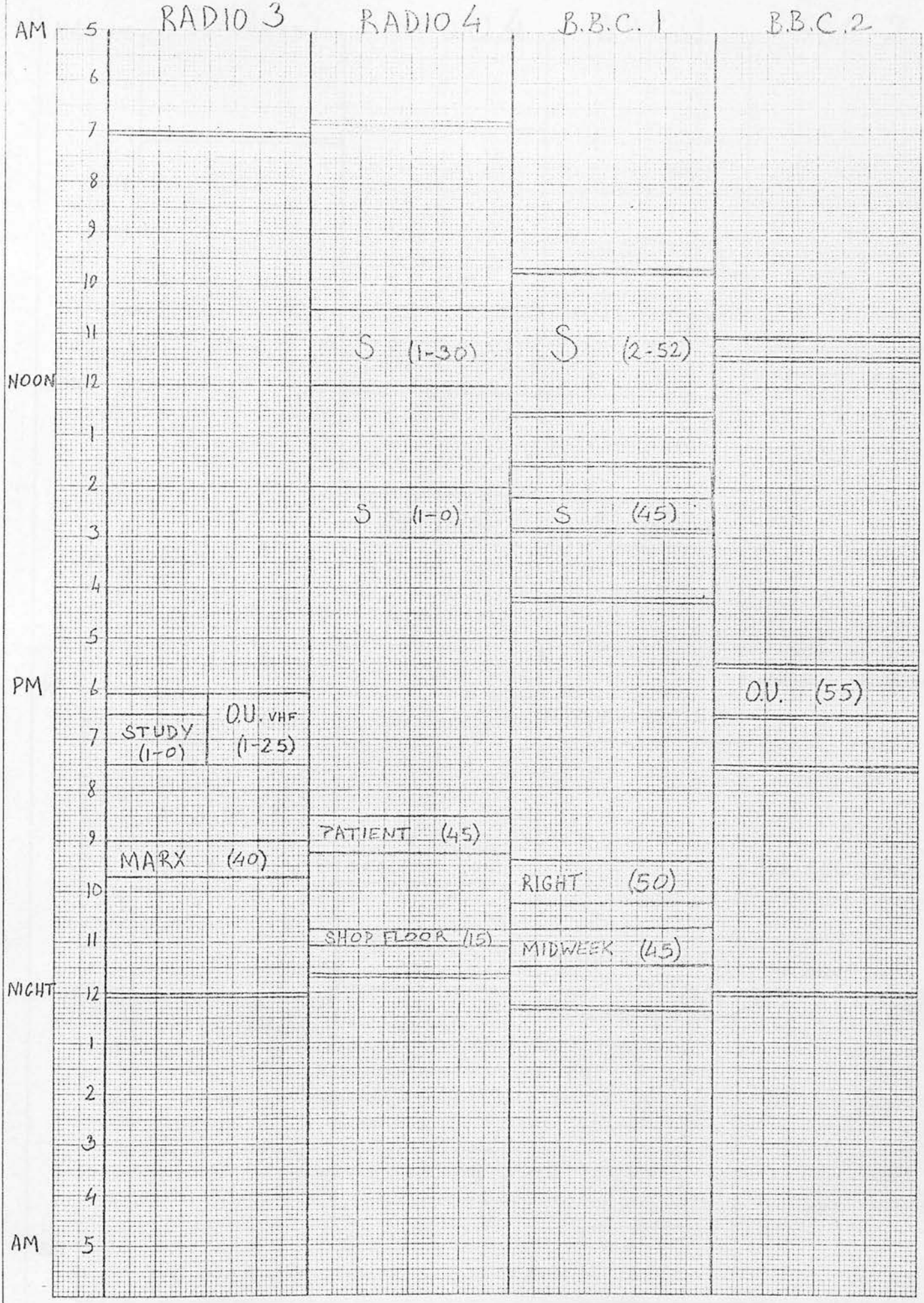
SUNDAY 24th SEPT 1972

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9		U.S.A. (15)		
10				
11				
NOON 12		GRASSROOTS (30)	VAT (35)	O.U. (1-25)
1			FARMING (25)	
			MADE IN UK. (15)	
2			PREVIEW (35)	
3				
4		NEW WORLDS (30)		
5				
PM 6	PROKOFIEV AND BALLET (1-0)			
7				
8				
9				
10	CHAOS, FORM (35)			
11				
NIGHT 12				
1				
2				
3				
4				
AM 5				

MONDAY 25th SEPT 1972

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9				
10		S (20)		
11		S (1-30)	S (2-12)	
NOON 12				
1				
2		S (1-0)	S (1-50)	
3				
4				
5				
PM 6			NATIONWIDE (45)	O.U. (1-25)
7	STUDY (1-0) / O.U. (VHF) (1-25)			
8			PANORAMA (1-0)	
9				
10				CONTROVERSY (1-15)
11	VICO (50)			
NIGHT 12				
1				
2				
3				
4				
AM 5				

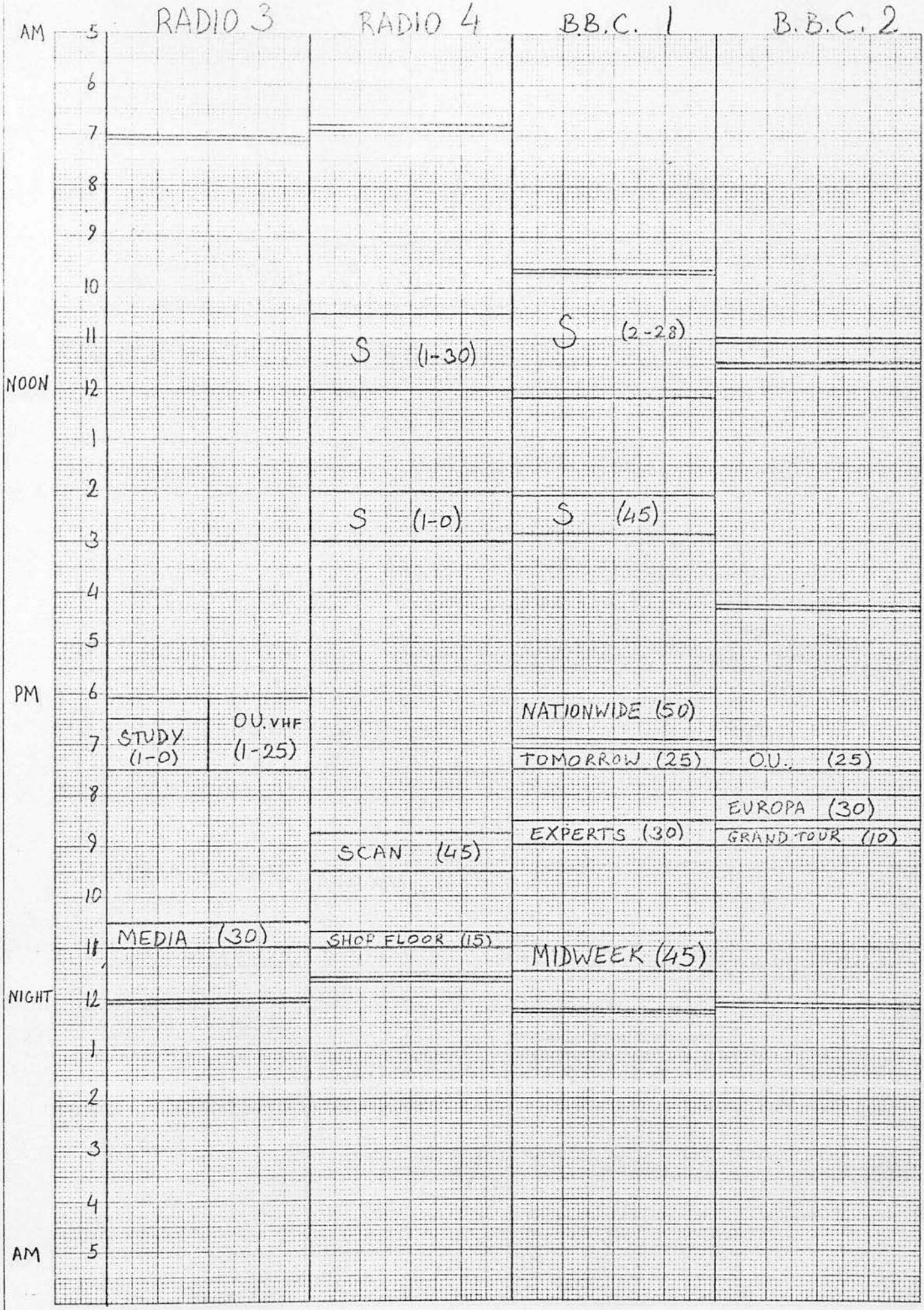
TUESDAY 26th SEPT 1972



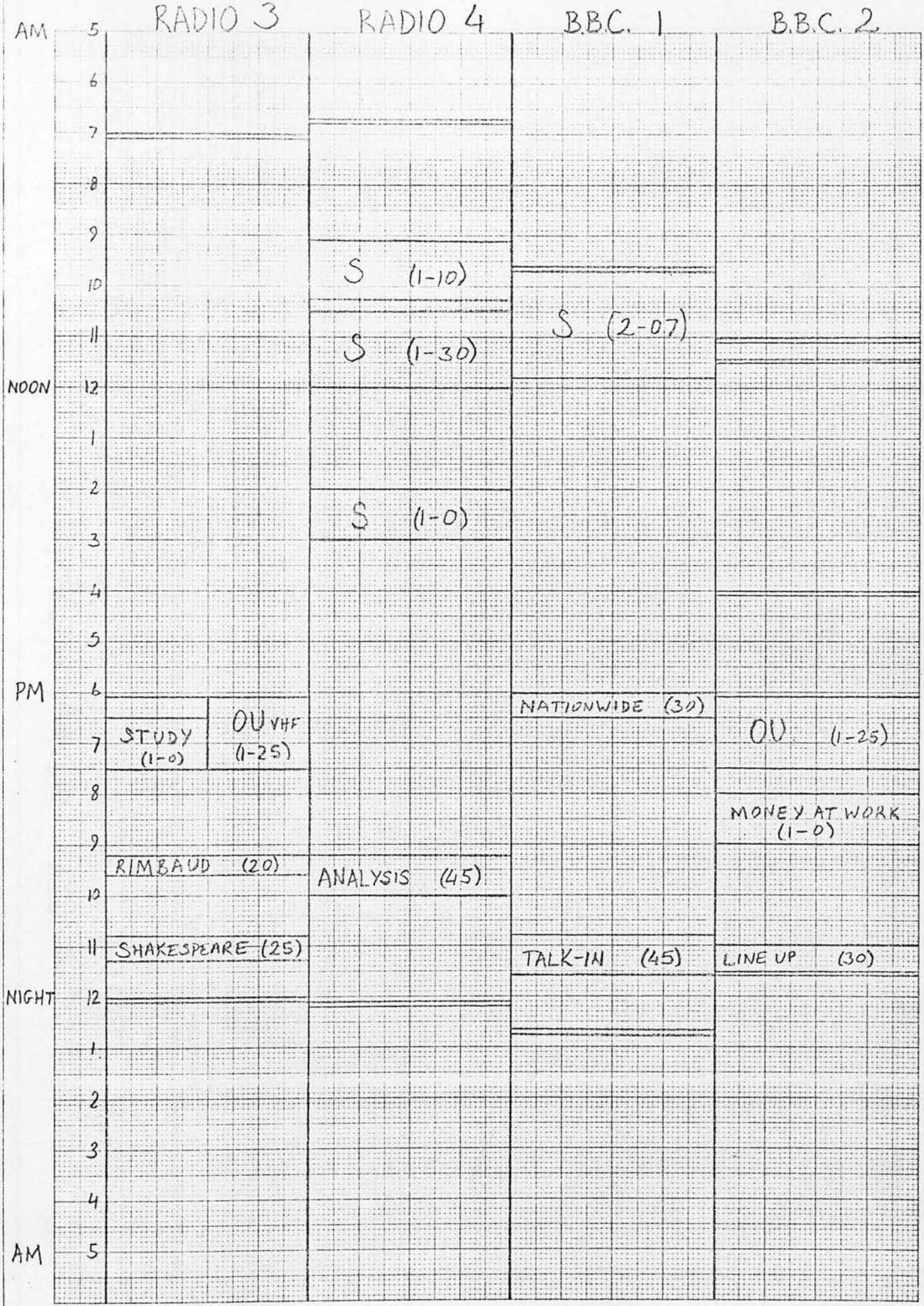
WEDNESDAY 27th SEPT 1973

	RADIO 3	RADIO 4	B.B.C. 1	B.B.C. 2
AM 5				
6				
7				
8				
9				
10		S (45)	S (2-20)	
11		S (1-30)		
NOON 12				
1				
2		S (1-0)	S (55)	
3				
4				
5				
PM 6			NATIONWIDE (50)	O.U. (1-55)
7	STUDY (1-0) / O.U. VHF (1-25)			
8	A BOARD (20)			
9	HISTORY (30)	READ ON (40)		AUSTRALIA (25)
10				
11		SHOP FLOOR (15)	MIDWEEK (45)	MAN ALIVE (50)
NIGHT 12			DONT JUST… (35)	
1				
2				
3				
4				
AM 5				

THURSDAY 28th SEPT 1973



FRIDAY 29th SEPT 1973



S.T.V. 31st March – 6th April 1973

	MON (2ND)	TUES (3RD)	WED (4TH)	THURS (5TH)	FRI (6TH)	SAT (31ST)	SUN (1ST)
9							VAT 73 (30)
10						HOUSE JOBS (25)	BK OF KELLS (30)
AM 11		BUCKETS & SPADES (45)			NO EASY ANSWER (45)	FOREIGN FLAVOUR (30)	WAR 1 (30)
12				COSTA DEL COAL (30)	BRITANNIA (45)		WOMEN ONLY (30)
1							YOU PAYS YOUR MONEY (30)
PM 2	AT YOUR SERVICE (30)						WEEKEND WORLD (30)
3							
4							
5		MAGPIE (45)					
6							
7							
8							
9							
10							
11				EUROPEAN JOURNEY (30)			
12							
1							

S.T.V. 28th April – 4th May 1973

	MON (30th)	TUES (1st)	WED (2nd)	THURS (3rd)	FRI (4th)	SAT (28th)	SUN (29th)
9						GALILEO (25)	
10 AM	S	S	S	S	S	PHOTOGRAPHY (30)	
11							WOMEN ONLY (30)
12	S	S	S	S	S		
1 PM							
2	AT YOUR SERVICE (30)						
3							
4							
5							
6							
7							
8							
9	WORLD IN ACTION (1-0)						
10							
11	YOU PAYS YOUR MONEY (30)			GARDENING (30)		THE SCIENTISTS (40)	
12							
1							

APPENDIX B

The Glasgow Educational Television closed-circuit network.

The reasons for choosing the Glaswegian network as a paradigm, are (i) because it was the first of its type in Europe and (ii) because my interest in this field is immediate and local. The element of localness of Glasgow's network means that we can benefit very directly from their experience since their requirements will in many ways be similar to our own. The element of immediacy is relevant in that since Glasgow was, ten years ago, in the position of a locality that might now be considering the pros and cons of a closed circuit television system, their rapid development makes it possible for our own case to be so many times more rapid.

Quite how the germ of the idea of the Glasgow E.T.V. network originated is difficult for an outsider to determine. However, it seems to have developed early in 1963 at a time when Glasgow was short of 1,300 teachers. This must have meant that classes were too large by the education authority's own standards. Furthermore, such an overall shortage usually indicates an imbalance in the specialist fields. For example, if there is a national shortage of mathematics teachers then an education authority with an overall teacher shortage of 20% may well have a mathematics teacher shortage of 35%. In such a climate of scarcity one immediately suspects that television teaching might have been seen as a method of mitigating the effects of the shortage. I suspect that directly or indirectly the teacher shortage was a major factor in the early initiation of the Glasgow network. The topic is a touchy one and even if the paucity of teachers did not give rise to the network directly it /...

it is quite likely, as Roderick Maclean of Glasgow University pointed out in 1968, that the "juxtaposition of an unwished for economy" (namely the salaries that would have been paid to 1,300 teachers had they been available) "on the one hand and a relatively small but adventurous outlay on the other is something that cannot have escaped the City Fathers." However, the education authority did not see the network as a solution to their problems. As Dr. H. Stewart Mackintosh (the Director of Education for Glasgow at that time) put it, "The E.T.V. Service will not solve our staffing shortage, but we are confident that it is adding considerably to the effectiveness of those teachers we have. A substitute for teachers it never can be; indeed, like all teaching aids, it will call for increased ingenuity and resource on the part of the teachers if it is to be used to the best advantage. Here, as everywhere else in education, we come back to the teachers and find them, as always, at the centre of things." That was to some extent perhaps a political statement. It is also interesting to see how W.G. Beaton (the first director of the network) saw the aims of the initiators when he looked back on them some years later in 1969, "First we sought to complement the basic, day-to-day work of the schools through direct-teaching programmes deliberately geared in content and pacing to school syllabuses. Secondly , it was our intention that the Service should provide a continuing in-service training of teachers in the rapidly changing content and methods of many curricular subjects. Finally, we hoped that in the field of adult education the service might ultimately become a central agency for networking programmes produced by other educational institutions in the city planning closed-circuit installations of their own - Glasgow University, Strathclyde University, Jordanhill College of Education and Notre Dame College of Education."

Before /...

Before continuing with the history of the Glasgow network it may be valuable to look at the broader picture so as not to overstress the uniqueness of the excellent example that has been set by Glasgow. Although Glasgow lead the way, there are now a number of established local closed circuit educational or community television networks in Britain. Notable amongst these are those of Plymouth and London. In excellence and complexity London now probably leads the way in Britain, but it is such a special case that Glasgow (and to a lesser extent, Plymouth) is probably a better paradigm for most of our purposes. But even London's system is outstripped by Japan's Nippon Hoso Kyokai, which has 370 educational television stations (120 of which use colour). It operates through 1,000 local committees, and 17,000 teachers attend the annual conference in Tokyo.

The first practical step towards the setting up of the Glasgow network seems to have been a demonstration of closed-circuit television which was held in the local education offices in January 1963. This aimed to show how a relatively cheap system consisting of two cameras and the minimum of auxiliary equipment could transmit a lesson, by cable, from one room to another. This modest step led to the consideration of a service which would embrace every school and college in the city. To investigate the feasability of this, the Education Committee with the aid of Pye Ltd. and S.T.V. set up an experiment, in April 1963, in which three live one and a quarter hour programmes were beamed by microwave from the Central College of Commerce to the City Chambers and to a school in the outskirts of the city. Immediately after this experiment the drawing up of plans for a city-wide schools television system was begun.

The /...

The Glasgow network began its operations in August 1965. Programmes were prepared in the small Television Centre which had been set up with only one studio (although there was space for another to be set up at a later date). The studio was 42 feet by 26 feet. The model used was the Pye Cambridge Station which was modified somewhat. It included a complex of cameras, telecine equipment, videotape recorders and ancillary studio equipment. The studio was sixteen feet high, air-conditioned and carried a studio lighting grip with a maximum output of 35 kw. Audio equipment included two transcription units and a Reflectograph tape recorder.

Programmes from this centre were distributed by a two-channel distribution system to which two additional channels could easily be added when required. British Relay designed the system in which a 100 miles of underground cable and 18 repeater kiosks linked the studio to 315 schools and further-education colleges. The schools received the "piped" programmes on 27-inch receivers which had been modified to receive the direct-wire E.T.V. programmes but could also still receive the B.B.C. and I.T.V. broadcasts. Most of the 315 schools had a single receiver, but each of the 50 senior secondary schools had two receivers. Besides the Corporation schools included in the network, Glasgow University, Jordanhill College of Education, and three non-Corporation schools were linked with the network. By May 1973 as well as the extra channels had been brought into operation and the number of schools linked by the network was 352 and the number of receivers in each school had been increased to three in every primary school and between four and eight in each secondary school. To ease the time-tabling problems of using television the Corporation are now experimenting with providing schools with video-recorders.

Studio /...

Studio equipment and the first two video-tape recorders were rented from Pye Ltd. on a 7-year maintenance basis. The cable installations, the line-transmission unit, and the 18 repeater kiosks were rented from British Relay on a similar basis but for a 15-year period. The school receivers are now maintained by a large, well-organised expert Maintenance Section of the Corporation's Audio-Visual Aids Department. Setting up the system cost the Corporation about £65,000 (although they converted premises already owned by them into a television centre), and recurrent expenditure rose from about £80,000 p.a. initially to about £108,000 p.a. in the second year. Since at that time the annual educational bill in Glasgow was about £31,000,000, it can be seen that E.T.V. accounts for the order of $\frac{1}{3}\%$ of the educational budget.

I feel that it is very important to note that great care was taken to involve all of the class-room teachers in the E.T.V. project so that they did not have a feeling of being displaced by television rather than assisted. To facilitate this the Television Centre was provided with a lounge and library each of which could seat forty people in comfortable chairs for use by working parties of various kinds. As W.G. Beaton has said, "it has encouraged a to-ing and fro-ing between school and studio; and has given point to the axiom that educational television is essentially a producer-consumer co-operative exercise."

In conclusion it is interesting to note that Glasgow's education authority is not resting on its laurels. It has been said that they are cautiously optimistic in the fields of in-service teacher training and in adult education, and think that in association with the local colleges and universities E.T.V. may lead to Britain's first local Open University.