AULA DO PROFESSOR KENNETH LOVELL

NO

CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS

DADA

EM 18/8/58

Before we begin our work on the teaching of retarded children we must examine carefully the meaning of the word retarded itself. In England and in the United States we divide up our mentally retarded children into 3 main groups:

First group - Totally dependent retarded children

These are individuals who, because of their severe mental retardation, cannot be trained to look after themselves. They do not learn to live as socialized persons, and they need continual help in taking care of their personal needs, since they cannot survive without help. These children require our help in dressing, toileting and eating throughout their lives. They require protection from dangers such as fire and water. They are incapable of learning to communicate very much with others and their speech is limited to a few words or phrases. Their mental age, as an adult, if they live long enough, is anything up to three years.

Second group - Trainable mentally retarded children

These children are capable of eventually learning to dress themselves, to feed themselves and to go to the toilet alone. They also learn how to keep themselves clean and learn other skills which make them independent of their parents in the regular routine of living. They are also able to learn how to get along with their families and neighbours. They learn to share, to respect property rights, and to cooperate to a considerable extent with other people. They can learn to assist in everyday household work and learn to do some work in a sheltered occupation. Here they are under some kind of supervision, and they are not expected to maintain the same standard of work as normal persons. As adolescents and adults they can then be trained for tasks in sheltered workshops when the stages are broken down into clear simple steps. In general they are not capable of learning academic work, such as reading, and number work beyond the routine learning of a few words or numbers, say up to five. Their speech and language abilities are distinctly limited. They can eventually learn to protect themselves against common dangers, such as fire and water, and learn to do simple shopping and cross the road. But they require some care and supervision and economic support throughout their lives. In England and in the United States an effort has been made to provide sheltered occupation for trainable adolescents and adults. The mental age of these people as adults is usually in the 3 to 7 years range. Mongol children are frequently found in this group, although some mongol children are school educable.

Third group - Educable mentally retarded children

Because of their slow mental development these children do not profit sufficiently from the teaching program in the regular

primary school. But they can learn many things in special schools or special classes. Many are able to acquire the elements of reading and number work. Indeed, some read sufficiently well for all their practical purposes and enjoyment. When these educable retarded children leave our special school and classes in England at 15 to 16 years of age, they have reading ages of between 8 to 10 years. A few read as well as a normal 12 year old child. Experience in the U.S.A. is practically the same. American school leavers from special classes at 16 reach academic standards equal to those children in the 2nd. and 4th. grade.

These children learn to work and in both cases become self-supporting at adult level. But they often do not begin to read and understand formal arithmetic until between 9 and 12 years of age. Although their vocabulary will be limited, their speech and language is adequate for almost all ordinary occasions. They can usually, although not always, get on with other people. As adults they generally support themselves by doing unskilled or semi-skilled work. In my country, probably some 90% can support themselves as ordinary adults in conditions of full employment; but of course conditions become more difficult for them if there was unemployment.

They marry, have children and behave as other people, and 5 years after leaving school we very often can distinguish those who have been in special school and classes from those who have not been doing very well in the regular school.

Later on in this course we shall see that intelligence quotient must be interpreted very cautiously. But for what intelligence quotients are worth, we can say that group 1 have intelligence quotients below about 25. Trainable children have intelligence quotients in the range 25 to 50. School educable children have quotients ranging from about 50 up to about 70 to 75. But please note that the decision as to whether a child is trainable or school educable should never be taken on the result of intelligence tests alone. The history of the child must be considered, his clinical condition assessed, and his personal and social adjustment estimated. Note too that in England we use only the 1937 Terman Merrill revision of the Binet test or the Wechsler Intelligence Scale for Children to make an assessment of a child regarding school educability. We would never use for this purpose, say, the Goodenough "Draw-a-Man" test or some other test like that.

In England school educable retarded children generally go to special school or special classes in ordinary school, and both these kinds of school are under the Ministry of Education. In England, too, all teachers of exceptional children get paid more money than teachers of normal children. But trainable children go to occupational centres which are run by our Ministry of Health. Attendance at school is compulsory; attendance at an occupational center is voluntary at present, but is likely to become compulsory in the future. At present we have nearly 300 special schools for school educable retarded children, and about 270 occupational centres for trainable children. Most of this course will be devoted to the matters of teaching school educable retarded children and only a small amount of time will be given over to the work of British and American occupational centres.

I was saying that most of the time will be given over to the education of the school educable retarded children. A little

time certainly will be given to the work of the occupational centres. A little time too will be given to discussing the nature of intelligence and the validity of intelligence tests. But essentially this course will deal with the practical teaching problems of school educable retarded children. These are the clear directions which I have received from the responsible for this course.

Now, school educable retarded children should not be looked upon as patients or ill people but rather as individuals with low intellectual capacity. In everyday life and school life they frequently suffer discouragement and contempt and are neglected from an early age. This is very likely in turn to affect their emotional and social growth. Indeed, we all know how frequently we find these children not only retarded, but also maladjusted. Again, since they cannot respond as adequately to the environment as can normal children, they are likely to appear isolated and excluded from social activities at an early age. Those who come from good homes with understanding and sympathetic parents are fortunate. Those coming from homes where one or both parents are of a low intelligence are particularly unfortunate. The mother of low intelligence frequently has a large family, neglects the children, gives them inadequate food and overlooks early infections. But I must stress that the majority of school educable retarded children have parents who themselves are dull or of average ability. Sometimes the parents are even bright. To put it in other way, the parents of school educable retarded children are not themselves generally mentally defective.

In England we find that trainable and completely dependable children are found in equal numbers in all socio-economic sections of the community. We find this condition in four to five children per 1.000 children. School educable retarded children, however, are found more frequently in the lower socio-economic groups. This suggests that in some cases the environment might have something to do with retardation. The majority of our school educable retarded children come from our slum districts and here, I am sure, from your "favelas". Of every 1.000 children in my country, we find roughly 30 are school educable retarded, if we take the upper intelligence level to be 70 to 75. One thing I have observed in your school which agrees with our findings, it is that the number of school educable retarded boys greatly exceeds the number of school educable retarded girls. We do not properly understand why this is so, although we can make up many theories. At the other end we find here as in England, that your girls in "ginásio" are falling behind the boys in mathematics and physical sciences after 13 years of age. In my country school educable retarded children are not looked upon as mentally defective children; only trainable and totally dependent children are so regarded. And, although I am here primarily to talk about teaching methods in relation to number, reading and so on, please do not think that these are the most important things in the education of school educable retarded children. I suggest that helping the child to acquire all-round occupational adequacy, social adequacy and personal adequacy is even more important than teaching him to read and write. It is of course our plain duty to make a child literate if we can, but these other things must come first.

Please do not think of occupational adequacy in terms of vocational training. Later on, this school educable retarded child will take on some unskilled or semi-skilled work. Success on the job will depend upon being punctual for work, personal appearance and good manners. The young person needs to be able to

look after his personal health and his safety on the job, and he must be able to handle money wisely. He needs to be responsible in following directions and in carrying out a task. These and other characteristics are partially developed in school. The school should attempt to develop, from the very begining, habits and attitudes which develop a responsible and efficient worker, regardless of how unskilled the task is. Reading, writing and number work are all part of occupational adequacy. A child will need a minimum of academic skill in order to read signs, simple directions and to communicate with other people at a simple level.

Next, there is social adequacy. When they become adults they will have to get along with men and women other than those with whom they work. A school educable retarded child will belong to a family in many instances, and later on he may be responsible for one. That is why we must try to help him to develop personal habits which will enable him to get along with those in his home and with his neighbours, and so become an acceptable part of the community. Thus the school must emphasize social relationship, working with others, getting along with others and having consideration for the rights and desires of others.

Then we come to personal adequacy. The individual also lives with himself, so mental health is important. School educable retarded children have many frustrations in the home and school environment which interfere with their normal emotional development. Inability to do the work of the regular school has been one source of frustration to them, and sometimes we get unhealthy compensatory behaviour as a result. Other children fail in the work in the regular school because of their maladjustance, and the maladjustment is not the result of school failure. Of course, school failure is likely to make the maladjustment worse.

Each individual appears to need a sense of security and a sense of adequacy in relation to those around him. If he or she does not acquire this, then emotional difficulties are likely to arise. Thus a child needs to feel that he is wanted by his fellows, his parents and his teachers. And so a child must feel that he belongs to his class and is acceptable to it whatever his handicap is. Thus, the environment for school educable retarded children should be such that they feel secure with their teacher, and that the work is suited to the individual needs of each child. I shall, therefore, be putting great emphasis upon individual and group work, and not very much upon teaching the class as a whole. Please remember, too, that teaching children to read and write and to do number work fills up their own self esteem enormously. Others think more highly of them, too, for reading and writing. Indeed, it is very sad to see the adolescent boys and girls unable to read and they find themselves in personal difficulties very quickly.

I have pointed out to you that in England we make a rather clear distinction between school educable and trainable children. But please do not think that our system is rigid. If a child is attending an occupational centre and his intellectual development is greater than what we had expected, then he is transferred to a special school; and if he is in a special school and he shows himself unable to profit from the life and work there, he can be transferred to an occupational centre. We are now in a position to see the general outline of the course more clearly. My next lectures will be on the importance of free choice activities periods for both normal and retarded children. This will be followed by a considerable number of lectures on methods of teaching reading and number work. There will also be talks on the teaching

of everyday simple scientific concepts which are very important for children in the world today. Then I hope to give a few talks on the work of the occupational centres in England for trainable children, so that you can see the kind of thing that we are doing there. Finally, there will be a few lectures on modern views regarding intelligence and intelligence testing; on possible causes of backwardness in reading; and on problems related to the education of parents of handicapped children.

Thus, most of the work in our course will be concerned with children whose intelligence quotients lie between, say, 50 to 75. But I must point out very clearly that there are many children of normal or even superior intelligence who are failing in school. It is not easy to say why this is so. But the methods that I will suggest you, are equally applicable to the more able children who are failing in their work, providing that you adapt them intelligently. I would also like to say before we finish this section that in England we also have what we call home teacher. If a child has many handicaps and it is impossible to send him to school, then teachers visit his home, say, about once a fortnight. Let me give you an example: The county of Cheshire in England has a school population of about 70.000 children; there are 124 children in that county who have home teachers. Now, before we begin our work on free choice activities, would you like to ask me any question on the sectioned work up to this point. I am now finishing this section and going on to free choice activities, but you may like to ask some questions here.

Now, I am going to talk to you about the active life of young children. Much of what I say we see everyday-in the life of normal children, but I want to impress upon you that retarded children must go through these stages as well. Young children must make noise, they must run, climb and jump. They must pretend to be people who behave dramatically, or objects which move easily. Only by such activity does the child learn to manage his own affairs. He learns how to balance, how to control his movements to suit his purposes of the moment. From his experiences he knows how to act on future occasions. In a good kindergarden, children scramble, jump, slide, push wheelbarrow full of bricks, or drag wooden horses. They perform all kinds of things on ladders and climbing frames, and they beg the teacher not to hold them. They gain confidence and a power to move easily, and it weans the child away from dependence upon adults.

The child who is kept quiet and still, will find life more difficult. He is more likely to be frightened and afraid of making a false move. When a four year old in a kindergarden carries milk for the first time, he might well break the bottle. Do not blame him. Let him clean up the mess and encourage him to do better next time. Success does not come to children unless they have been allowed to do things for themselves. The discovery that knowledge comes through doing is very important. The child touches, puts his finger into everything, and pulls things to pieces. This behaviour is inconvenient for adults but necessary to children. Everyday the child meets new things; he investigates before he understands. He sees in his home cooking, bed making, washing and all kinds of happenings. He sees water coming out of the tap by magic and then disappear down the drain. Postman and milkman arrive at the door. Who told them to come? Where are they going? Have they got mothers? In the streets there are wonders and dangers. There are cars and busses and drains and letter

boxes. There are builders at work and policemen. At home and school there are drawers, boxes and cupboards. The day of a young child is full of wonders. If the child is with a sympathetic adult he will ask questions. But these questions cannot reflect the complex nature of his thoughts because his vocabulary is slight and his experience of words very little. He cannot understand our wordy explanations. It is quite true that they may repeat what we say, but the words are often not understood. The solution is to let children do things for themselves. There are many experiences they cannot investigate as the adult does, but they have their own way of reproducing them and this suits the level of their understanding. The children say: "Let's pretend". A four year old puts a couple of chairs together and calls them a car. He hoots and tries to push himself along. Little girls wash clothes and bake. Boys and girls impersonate animals.

These are examples of children trying to understand what they see and hear in real life. It is also the child's way of learning to think clearly. This doing is of the greatest importance in the development of thinking and understanding. The child's concentration is profound. Such concentration, such feeling, such thinking, are much needed later on both in and out of school. But these are difficult to acquire later on, unless the child has had experience of uninterrupted absorption in following his own activities. This doing, which brings so much satisfaction and understanding must be chosen by the child himself and not by an adult. The child alone knows the nature and extention of the problem, he alone can dictate the activity. We do not understand everything about the play of young children, and sometimes we are very puzzled, but all that they do independently of adults brings stability and leads to mental growth. By their independence, by making friends, and by arriving at a satisfactory solution to their problems, they gain a feeling of steadiness and confidence. So far I have been mentioning children's activities generally, now let's have a look at children's activities, more closely in school.

I expect you have all heard of the distinguished German educator Froebel. Froebel insisted on the wisdom of teaching children through toys and play. Froebel told his pupils to watch intelligent mothers as they encouraged their children in their play activities. You all heard out here, I am sure, about Montessori. She called our attention to the need for light, moveable furniture which will enable a child to re-arrange the room to suit his own activities. This child activity with which we are now concerned is the kind of activity in which the child wishes to engage, and is not dictated to him by adults. It means that the whole personality of the child is in action, his fingers and his mind. When the teacher arranges the activity of her children, it is she who is doing the thinking, the planning and the choosing. In the morning it is quite true, children may handle a good deal of apparatus and similarly, in the afternoon they can engage in handwork. But it is she who arranges what should be done, how it should be done, and it is she who gives a helping hand now and again. I am going to suggest that with retarded children from anything between, say, five to ten years of age, some part of the day you should have what we call free choice activities. And in my next talk to you I shall be describing the kind of thing I have in mind in greater detail. Of course, the teacher is necessary. Activities which the children commence themselves may be called undirected activities, or free choice activities. There will be other periods of the day in which the more mature experience and

knowledge of the teacher will be employed. These may be called directed activities; such activities will include reading and number work, drama, music and nature activities. But the kind of teaching young normal children and retarded children so often have consists of nothing but orders, blackboard work, talk and chalk. These may be called nothing but dictated activities. The degree of freedom and the possibilities of creative activities depend upon the art of the teacher and her understanding of children. One teacher dictates a play, she tells the children what words to use and what gestures to make. Another teacher lets the children suggest their own words and they improve upon their efforts until they create the right words and atmosphere. Real free choice activity involves children in talk. They argue, give orders and exchange opinions . They learn to wait their turn, to lead and follow, to make friends and avoid contention. Tomorrow I shall go on with this topic again, but would you now like to ask me any questions on what we have done on free choice activity so far?

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E.)

AULA DO PROFESSOR KENNETH LOVELL

NO

CURSO INTENSIVO SOBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS

DADA

EM 28/8/58

Do you remember that yesterday afternoo, at the end, I described to you a sharing exercise involving a sorting box.

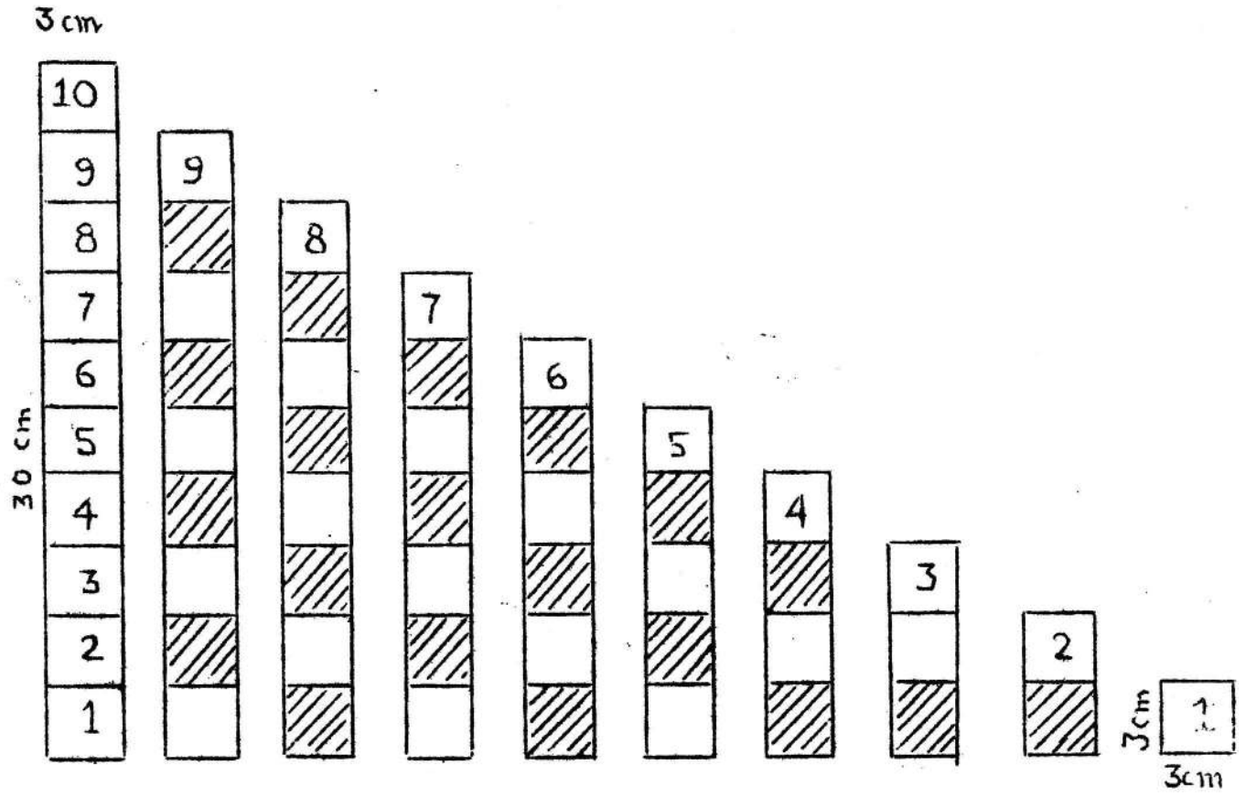
First - This is essentialy an exercise in which the sharing is done by units, one at a time.

Second - We come now to sharing in groups. Arrange for the children to work in a group. Let one of them be the leader. Give hin ten beans and a bag. Thses beans have to be shared equally between the two other children. The leader will do the sharing. Tell him to take the beans from the bag in twos. Thus, every time he takes two beans from the bag, each child fets one; and the number of times two shells are taken from the bag is also the number of shells that each child gets.

This gives the idea of sharing by grouping.

Third - A group of four children are given twelve flags..How many sand castles can be built if each one has three flags on it? Each child takes one flag and places it on a castle. Three sand castles can be built.

Fourth - The use of the number slide, or, if you like, you can use the number strip. Just as you like. - A child takes a two strip. He is asked how many times will this go to reach the eight strip. He tries, marking with his finger each time where the two strip ends, and counting up the number of times the two strips goes to make the eight strips.



Well, I am sure you can think of other activities as well to demonstrate the idea of sharing.

Later on, when the child has got the idea of division, we can introduce him to the idea of a reminder. This can be done:

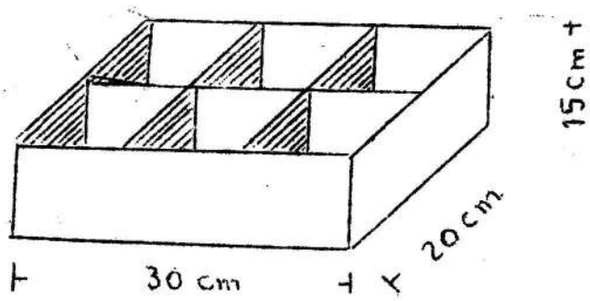
One - By arranging to have an odd number of shells. For example - sharing seven shells among two children. The last shell cannot be shared; it is left over.

Two - When using the number strip or the number slide, the child is asked how many times will the two strip go into the 9 strips, os how many times will the three strips go into the 10 strips.

In addition to these activities which the teacher creates, there are other everyday school activities which give children experience in division and in the vocabulary that goes with it. For example: - In dancing children are sometimes divides up into equal groups. There may be an odd child left over. Or again, in physical education the class is divided up into teams with equal number of children in each team. Or there may be a discussion on the best way to arrange a number of children in rows, or columns of desks, and then we encourage rhymes in English.

The next thing to consider is the recording of division activities. The children must now not only perform activities, but write down what they are doing in drawings, words, or symbols. The teacher can demonstrate on the blackboard or on paper what the children have been doing in their sharing activities.

First - The children are asked to share 12 beans equally among the 4 sections of a sorting box.



Let the children sort the beans first. Then let the children draw pictures of wath they have done underneath. Then the teacher writes on the blackboard 12 shells - 4 trays - 3 shells in each tray. The children finish off the example by writng 12 ÷ 4 = 3. You set down your division. (You use that right, don't you?) I shall discuss examples with you, but in division I am going to work any because we work them quite differently.

Second - Other activities can be performed, but they need not all be illustrated by drawing. Gradually, though, the children learn to write down the activities in arithmetic.

Next, share 8 coins among four children. The teacher discusses the problem, writes down the question and asks "How many times 4 in 8?" - The children write 8 ÷ 4, gives 2. After a number of examples have been worked, in which the number to be divided is not

greater than 24, the idea of a reminder is introduced. We can use 13 shells instead of 12; these have to be shared equally among 4 trays. I suggest 24 as some suitable upper limit, but we need not be exact about that number.

We are now ready for our work class. We have one kind of card in, while various questions are asked and the child writes down the answer. For example - 15 divided by 3 equal 5.

The number here to be divided would not generally, at this stage, be greater than about say 24. Then we can have another kind of work card in which there are the divisions, facts of division exercises at one side, and then the reverse - multiplication exercises. For example: 12 ÷ 2 = 6. When the card is reversed, the first exercise 6 x 2 = 12. The second one - On the front side - 9 ÷ 3. On the reverse side, 3 x 3. This is limking multiplication and division again.

Now, you must face it, that some retarded children will not grasp the idea of division. Indeed, many normal children do not understand division because of bad teaching.

But the scheme that I have suggested is sound and workable, but you must adapt it to your circunstances and materials as available.

There is no doubt that you can teach some children to do division as a trick. But they do not know what they are doing.

I intend to leave division just now, because later on I am coming back to do more work with addition, subraction, multiplication and division. At the moment I have been dealing with basic ideas.

I now como to discuss with you the topic of place value.

So far we have used the notation twelve for expressing the existence of twelve objects. We have said nothing about place value.

Up to this point, these symbols have represented the sound of twelve and the group twelve in exactly the way as that symbol has represented the sound four and the group four.

Children can be introduced quite naturally to place value through counting.

If the child has shells that he wishes to count up and keep, then we can encourage the child to count them out in groups of ten. He can be taught to put a ten number card agains each pile of 10. Let's suppose he has 24 shells. He will have two groups of ten and 4 over. This remainder needs a four card. His two ten cards can be exchanged for a twenty card. The child now has a twenty card and a four card. He can place the four card over the naught of the twenty card to get 24. (material Montesori).

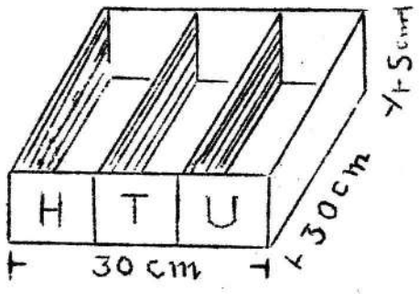
Here is an introduction to the number cards.

In general children should be encouraged to count up to at least fifty and preferably to a hundred, before the idea of place value is introduced. With retarded children the idea of place value is often very difficult to get...

Some retarded children can manage tenths and units. But thay cannot manage hundredths, Some can manage hundreths, tenths and units. Some can only manage units. Please, expect this great variation in performance. You will get great range among the normal and the retarded children.

After much experience in counting up objects, the child is more likely to be ready for operations which will teach him the notion of place value.

Here are three approaches that you will find helpful.



The first piece of apparatus that I introduce you to is a tray or box, which is divided into two compartments. Here is a box (or a tray) divided into two compartments. On the front of this compartment is the letter T, for the English word tenth. Here U, for the English word unit.

Now units can be expressed by means of single sticks.Use match stricks, they are quite suitable, but if you have nice long aticks about four inches and painted ones, well that's even better.

The tenths can be represented by a bundle of 10 math sticks, or 10 sticks placed together with a rubber band around then; or we can have counters with a hole in the middle.

Put 10 counters on a string, so that is a tenth - and that is a unit. Now the units are placed in the units compartment of the box, and the tenths are placed in the tenths compartment.

Suppose we take the number 23. Have two bundles of ten sticks in the tenths compartment, and three unit sticks in the units compartment. Is this clear?

Hold the box to the blackboard. Let the child write in English T and U about the tenths compartment and the units compartment. And let him write 23 on the blackboard underneath.

Reapeat this several times for each child, using different numbers, In English we never stop with numbers between 10 and 19, because for these numbers, the units come before the tenths. For example - eighteen. But in Portuguese this is not the case. So you can use eighteen. Now my translator tells me that in her view it is better, even in Portuguese, to start with the twenties 23 - 24 - 31 - 32, and so on.

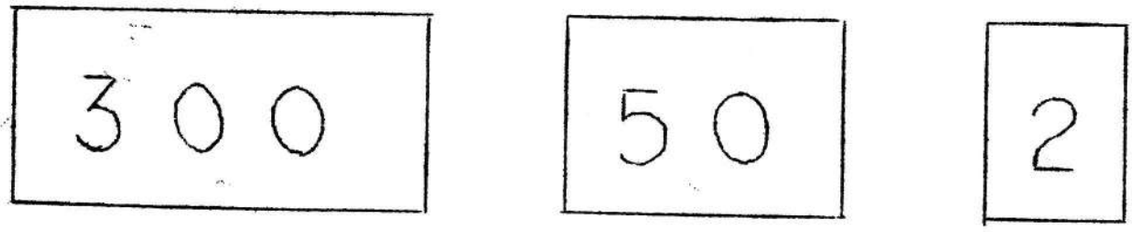
Later on, if you wish to introduce the hundredth place, have a box divided into three compartments; bundle ten groups of 10 into a large bundle. So we can express one hundred and fifty seven as one bundle of a hundred in the hundredth compartment, 5 bundles of 10 in the tenths compartment and 7 units in the units compartment.

Now, suppose we want to help our children to understand twenty, thirty, forty... Let's start with 23, let's suppose the child understand 23. - Take out one from the units compartment.Let the child bring out that figure and put in two. Repeat, and replace this figure by a one. Repeat once again and ask the child what number should replace...now. In other words, we place a naught to show that there are no units.

Tomorrow I hope to say a few words to you about wether

we should use naughts as place value only, or as a number.

The second piece of apparatus is the Montessori number cards - Numbers are written on the cards, as follows: - One to nine, English U for units. - Cards ten to nineteen, English T, for tenths. - Cards one hundred to nine hundred, English H for hundredths. Note the differing sizes of the cards.



Material Montessori

To build the number three hundred and sixty one, the child places 60 card over the two naught of the 300 card, so forming the number three hundred and sixty. He then puts a one card over the naught of the three hundred and sixty.

Here is an example - 296 - 9 goes on two hundred, and 6 on the naught of the 90. Do you understand?

In building a number like 209, only two parts are needed. We put the number 9 on top of the right hand naught of the 200. It is of course essential that in the case of both normal and retarded children, that the teacher start with the tenths and units card only. Some retarded children will never go beyond an understanding of the tenth place.

I am going to begin with a method which can be used equally well with normal and retarded children.

I am going to speak this afternoon about writing in relation to retarded children in particular.

You remember that we hope that they have plenty of preactivities for the children to engage in.

During these periods they will have used pencils, crayons, brushes, and there will be finger painting. There will, therefore, have been many opportunities for the child to draw, to describe and paint before there is any attempt at writing as such. With normal children these activities are generally sufficient. When the child has a mental age of six and is ready for reading, he is also for writing.

Here are some of the methods that we use.

First - The teacher orders him to write a word or a very short sentence, and the child traces it over with a crayon. This is quite a favourite method with our teachers. The children enjoy it as they colour the teacher's writing.

Second - The teacher writes a word or a short sentence and the child actually copies it.

I personally hope that you will use paper with lines drawn. I think it is best than to have paper with no lines on.

Third - The teacher writes out on the blackboard or in a notebook a short sentence given by the child. The child then

copies it from the blackboard or from the flip-book.

Fourth - I would like to introduce you to what in England we call workbooks. Here is a first introductory workbook. Let's read a few words from the preface.

This is the first of two introductory workbooks, preparing the way for later workbooks that may be started. Well, the pupil in still learning to read. Do the reading difficulties here correspond to the difficulties of the reading which are found in the first reader?

Although this book will help the pupil to read for meaning, it is intended to help the child overcome the first difficult stage of setting pen to paper.

Writing is a skill that develops side by side with reading. With normal children, writing comes right behind reading.

Normal children become concious of the look and the sound of the words before they can transfer them to paper. With the retarded children we find that this is not so. We find that retarded children can form the letters and copy words, but they cannot read.

We use these introductory workbooks with normal and retarded children. If the child cannot read the instructions, then you must tell him what to do. Throughout this book the work is so arranged that the children can help themselves.

On the first page we begin with some simple colouring exercises. - Colour these bricks green, red, blue, black. In this picture, make the sky blue. Make the field green. Make the house red. Make the horse black. Draw a red house here. Put the right word under each picture; the words to chose from are given here. Now colour the hen red; colour the goat black.

In this page we have the alphabet given in large letters and in scrpit. A number of words are given in large letterd. By copying the letters from the top, the child writes the words in script.

Here are some pictures. Under this picture there is a word only half written. The child looks at the word at the top and completes the word under the picture. At the bottom the child has to write cut all the words in the same order.

Similarly, on the next page the child has to write the word under the picture...

In this page the exercise is very much the same. This is an interesting exercises. - A number of words are given, like shoe, boys, school, policeman. On the top we have the numbers 1 to 9 written in word form. The child has to examine the words and write the number of letters that make up the word; write in not figures, but words.

Here are two pictures. Here are lists of words like cow, street, sheep, associated with either of the two pictures. the child has to write under each picture the word which applies to each picture.

Here is a nursery rhyme with some words missing; the missing words are to be found there. The child has to write the

missing words in the proper place.

Here are pictures of animals, fruits and milk cans. The child has to writes the names of the objects in the right places.

This is Book Two, and now exercises in writing are a little more difficult.

Well, I leave this here for you on the bench. I am sure that you will find there are many ideas on them.

These are the four principal methods that we use in teaching our normal children to write and these methods are also used for the retarded children,

Sometimes with retarded children other methods have to be used, such as tracing method, And I will describe these for you later on. Now, it is important that you keep reading and writing together, they help one another. The writing of the word helps the child in his left to right movement of the eyes.

Now, in my country we use script writind with children up to about 7 or 8 years of age. After about this age, we make the children turn over to join down the letters in what we call cursive writing.

Are these two terms <u>script</u> and <u>cursive</u> understood?

There is much discussion as to whether we should continue to ley older retarded children write script or whether we should change to cursive writing.

I want now to give you four short principles of the very distinguished American educator Arthur E. Gates.

His work on reading has had a great effect, a great influence in America as well as in other countries. He has sumarized very concisely the comprehensinn skills which normal children should have acquired by 12 years of age.

You will remember that I stress the value of reading for comprehension.

Here then are the four stages in comprehensibn skill suggested by Gates:

<u>First</u> - Reading to notice the details on a passage. This involves the accurate reading of every word. The passage may be the lenght of a sentence or a paragraph.

<u>Second</u> - Reading to understand precise directions;here the children have to carry out simple activities in connection with the sentences read.

<u>Third</u> - Reading for the general significance of a passage; this is developed in rapid silent reading. It is one which educated adults use a great deal.

<u>Fourth</u> - Reading to forecast the outcome of a given event. Here the children must have followed the logical organization of meaning in the passage.

It is by so doing that he can antecipate what is likely to happen in future paragraphs.

It is by so doing that he can antecipate what is likely to happen in future paragraphs.

Now stages one and two are learned by the child from the very beginning. But stage three occurs later, when word recognition is becoming easy and the reading of sentences is fluent. Many retarded children never get to this stage - or at the very most their power of comprehension seems only able to deal with three or four sentences at a time.

Well, now so far I have been dealing with methods of teaching reading which can be used with normal children and older retarded children. I am now going to talk more particularly about the methods that we use with children who are 9 or 10 years of age or so, and have not begun to read.

Let us remind ourselves of some of the things we have already learned about retarded children. Many of these children will have developed a wrong attitude to school and work. This is partly because of the attitude of the school and of other children to them in early years. Their speech is often very bad. Frequently their speech is slow with mispronunciation. This is the kind of speech they hear at home if the home is not a good one. Teachers sometimes do not appreciate how deprived of the language children are. Children who come from uneducated homes where the parents care little - there are no rhyme, no books, no stories told to the children. As I have so often atressed, you must give children a vocabulary before they can read. While it might be impossible to get a retarded nine year old to read, there is much we can do to aid his language development.

I hope you will read many, many stories to such children. I hope there will be daily conversation periods. I hope there will be namy books available in the corner of the room. Even if they cannot read the books, they will look at the pictures, and you build up an atmosphere in which books are important.

Now, the child when looking at words, he tends only to remember those he uses in everyday life. Words must have meaning and emotional appeal.

In many instance for the retarded child his one situation means mote to him than stories of books. Again the child is much more likely to remember words if he writes them down. But we are always on safe ground if we use the child's own vocabulary his own interests, his own writing.

A child's drawing may reflect what he has got out of the story, or the deawing of the picture might reflect an interest of the child. Encourage him to express himself inddrawing. And title underneath.

Retarded children may be quite able to copy from the blackboard. But they cannot write on their own sentences they want to write. But if the child cannot do it, the child can tell the teacher what word or sentence to write. If there are those who can write their own sub-title to the picture, then let them write it on a separate piece of paper first. The teacher can correct it, and the sub-title can them be copied underneath the picture by the child.

You will find retarded children differ freatly at this stage. Some can say only two or three words about a picture. Some can atempt to write a sub-title on rough paper. Some can write the sub-title at the first attempt.

Let each child read his previous efforts every day. Before long, each child will have his own little booklet. There is no limitation to this approach.

There is a size and shape to the booklets, and do not make them very thick. Again individual booklets can be made into a small group booklet.

Don't forget that the quality of these children's responses very enormously.

If a child's efforts at writing a sentence are not very good, let him write it on a rough paper first, the teacher corrects it and he copies it on his booklet. From his booklet, we can refer a child to a previous word to find how to spell it. He may also be able to find out the meaning of the word from his booklet.

Now, while this correction and copying by the child of the corrected sentences is important, there must be other occasiond on which the child writes freely, and his words are not corrected.

You will see an improvement in their free writing as their prepared work improves.

At the same time, build up a picture dictionary.

He has a fresh page of his book for every letter of the alphabet. He enters words in his word book as he comes across them.

Now another suggestion is that the child collect advertisements from magazines. And after studying the advertisement, he writes down the main theme of the advertisement. For example: Sweets - This is as excellent exercise in getting the retarded child to get the sense of the printed matter rather than a word by word approach.

Tha children should also be encouraged to observe street signs, short names, shop names and to write one down each day in their word-book.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audiovisuais do C.B.P.E.)

AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS

DADA EM 1/9/1958

Thus we have a notebook in which there is an alphabetic index and the child writes in the words under the appropriate letter. Second - the child draws a small picture opposite the word, if possible. Third - there is further drawing, or painting or coloring on separate pieces of paper involving pictures of Indians, etc. Fourth - if the child does not recognise a word that he is supposed to have learned, he asked for the first letter of the word and may consult a dictionary. He must be able to recognise the word in his reading book and in the dictionary. Fifth - in addition, pictures were obtained from magazines of Indians, wigwams, etc., and cards were prepared, one of which could contain the picture of, say, the Indian and the word underneath. The other card would contain the word only. The pupil learns the word through association with the picture and through matching exercises. Pupils look at the pictures and at the word. A number of these picture cards and word cards were then mixed up. The words at the bottom of these cards were cut off. The child then has to match the word with the card. The pictures were taken away and the children have to match the two cards with words on. The child has to read each word and as each word was known, it was put on a key ring. The words on the key ring were revised from time to time. Sixth - At the same time that the children read the word they trace it in the air with their fingers. Seventh - Next day three or four more words would be learned similarly. Eighth - When 20 or 30 words have been learned, sentences were compiled in a reading book. Now please understand that this reading material was built out of the child's own spoken words. When writing the sentences and making the reading book, Schonell suggests the following points:

1 - Have the words in large letters well spaced and the pages illustrated.
2 - Do not compile more than about four sentences a lesson.
3 - See there is ample repetition each time of old and new words.
4 - Make a duplicate page and cut it out into words. Make the children fit the words in their correct place on the whole page.

Now Schonell strongly recommends that we get children to read with comprehension right from the beginning. Allow the pupils to read silently as soon as possible; let them tell the stories they have read. Ask them frequent questions about the story but do not weary them; at this stage we want to get children interested in reading. After about a month's work of the kind that we have just been discussing, Schonell suggests some individual assistance with particular faults. But this remedial work with individual errors must never take the place of the main reading practice. Thus we shouldn't spend too much time in practicing against particular faults. Furthermore, any exercise we use with children to correct these individual faults, should have as much meaning as possible. In other words, revise material already read or material about to be read, and don't bring in words that they have no connection with at the moment.

Here are three main kinds of error for which Schonell gave special help:

1 - Lack of knowledge of the common phonic units. I'm not going to say anything about the exercise that Schonell gives at this point. There is no point in practising English phonic sounds. But, please, be sure that you know which phonic should be practised. You have many vowels diagraphs in Portuguese, although you only have three consonant diagraphs.

The second fault that Schonell draws attention to is an unsystematic attack on words, and the tendency to see words from right to left. Here is an example in English. You will follow this if you look at the board. English WAS read by the child SAW. EMA - AME, etc. This kind of error may not arise in your language as frequently, I don't know. Here are the exercises that Schonell suggests:

1-When the child is reading, let him follow the words closely with his finger. It helps to keep the child's eyes moving from left to right.
2 - Closely link spelling, reading and handwriting. Hearing to spell and write, encourages a close examination of words.
3-Schonell advocates the encouragement of cursive hand-writing. He argues that the continous flow while joins up letters and makes the complete pattern of the word, helps to give a strong impression; not everybody agrees.

Now the third main kind of error that Schonell helps the child with is this: it is weakness or carelessness in discriminating visual patterns of words. These children will omit, substitute visual patterns of words. These children will omit, substitute and add or transpose letters in their reading. Here is an example in English: waiter - water. The child will fail to discriminate between waiter and water. Schonell recommends matching words and sentence matching to help the child with these errors. We have found that Schonell general approach is very helpful with older retarded children who haven't learned to read.

I have suggested the following:

1 - The general methods arising out of the child's own interests. I'll gave you an example of this built around football. I mentioned the method of Fernald and Keller, the method of Gates and the method of Schonell.

I hope that there are some ideas here for you. I am now going to show you the first of the series of books which we have in English which are specially written for older retarded non readers. This particular series is called "Adventures in Reading". Adventures in Reading contains six books. This kind of stories was suggested to the author by her work in a child guidance clinic. She found that English children choose subjects with exciting possibilities. The stories they were interested in were: cowboys, indians, smugglers, trecking. You will find that many of these older retarded children, have been deprived of the exciting stories involving fantasy which normal children get at home or at school. Or at the most, they are dependent upon other people to read this stories to them. The first two sets of books each contains 6 books. Nº 1, Adventures in Reading. Nº 2, Picnic. Nº 3, The Farmer. Nº 4, A Holiday on a Farm. Nº 5, The circus. Nº 6, Green Island. Each of these books contains only 15 pages. Very few retarded children like large books. They like to get through a book quickly and pass on to another book. There is a light vocabulary load in these books.

Adventures in Reading This is the first book of Adventures in Reading: Red Indians. The first book contains 53 words. The second book introduces 40 new words. The third book, 60 new words. And so on. There is also a hand book teacher which describes these books and their use in detail. Here is the first book: The Red Indians. You show the child the first picture and ask the child "what is this?" He tells you usually, yes - "here is a Red Indian". "Here is another Red Indian". "Here is a canoe". "Here is a river". "The canoe is on the river". There are not many words and there is constant repetition. Guessing has quite a part to play in this series. On the next pages we have "The red indian in the canoe on river". Then you have the sentences again without the picture. "Here is a wood". "The canoe is floating down the river to the woods". "The Red Indians

are going to hunt". And then there are some sentences without the pictures. Do you get the idea? The reading material is simple and the topics are of interest to 9, 10 and 11 years old children. The "Janet and John" series are useful up to 9 years of age. Afterwards the series is too babyish. But this series is very suitable for other retarded children. The next book is called "The Picnic". "Here is Tom". "Tom is a boy". "Here is Molly". "Molly is a girl". And so on. Book 3 - "The Farmer". Farm animal. Farm scenes. A holiday on the farm. "Jim lives in a town". If you live in the back streets of London or Birmingham it's a great thing to go on in a farm for a holiday. The children are at the station getting ready to go. They are met at the country station. "The Circus". Children love that. All the fun of the fair. Then a story of adventures by the sea side. The words used are simple but the material is interesting for the age range.

Now the number of different words used in these books increases throughout the books. But much practice is given by continual rereading of past words and phrases. With the exception of book 3, the number of verbs is high. This ensures action and movment. We have found that book 3 is rather more descriptive and somewhat less interesting.

Last time I examine with you various ways of teaching children to understand. I showed last time some of the ways by which we can help retarded children to understand carrying. But if they still do not understand, let them do some exercises in a mechanical fashion. We do find it mathematics that sometimes understanding comes, the light shines, after the child has worked some examples mechanically. There is a wonderful example of this, when one teaches logarithms. If you start first with children in gymnasium, say, and do the therory of indices first and then follow on to show how logarithms tables are constructed, they often do not understand; but if you teach them how to use tables in a mechanical fashion, they will often go back to the theory of indices and understand the theory. I'm not recommending that you should always do mechanical work before understanding. It is our duty always to understand before mechanical exercises are worked, if possible. But sometimes mechanical exercises can be worked first and understanding comes afterwards.

We now pass on them to the problem of graded exercises in the addition of number. The example that now I am going to show illustrate one of the types of example that children find difficult. And some example of each of these types must be worked by children. It is not good enough to assume that because the child can work a certain type of exercise in tens and units that he is ready for all kinds of snags or difficulties in tens and units. This is a point that he has been overlooked in the past and you will find that the older arithmetic books are badly graded. They do not take their pupils carefully through the different levels of difficulty.

The first kind of example would be one of the 100 basic addition facts that we have been talking about in recent lectures. Then we come on to our first example on tens and units. 21 + 15. No carrying is required from units to tens. It is an easy example. Next example I suggest is tens and units add tens and units with carrying from units to tens. We now come to tens and units in the top line and say only units in the bottom line. In other words, there is a gap in the top or bottom line. Then we come to tens and units added to units with carrying from units to tens, for example 16 + 9. Next tens and units added to tens and units. This example might be 34 + 17.

T	U
2	1
+ 1	5

T	U
3	0
+ 1	6

T	U
3	2
+	6

T	U
1	6
+	9

T	U
3	4
+ 1	7

T	U
1	4
+ 2	6

T	U
1	4
2	3
+ 1	6

T	U
1	8
2	7
+ 3	5

T	U
1	6
	5
+ 1	9

T	U
1	9
3	0
+ 2	2

H	T	U
4	1	5
+ 2	6	3

H	T	U
3	1	7
+ 4	0	9

H	T	U
2	6	7
+ 1	5	8

H	T	U
3	1	9
		6
+ 5	5	

H	T	U
1	4	8
	5	7
+ 4	1	0

Another kind of example closely allied to this is tens and units added to tens and units, but the units add up to ten. We must also give our pupils 3 rows of figures to add but I would not suggest that we go above 3 rows. In this example we have tens and units, tens and units and tens and units with carrying from units to tens. In the next example we have tens and units with the units column adding up to 20. The next example, 3 rows, with a gap in one of them. Next, tens and units again with a zero in the units column.

Now, if you are going on to hundreds tens and units it is worth looking at these examples. But remember with some retarded children you will not get beyond tens and units. This you must understand clearly. But it is worth looking at these examples while we are at this point. First - hundreds, tens and units, will no carrying from units to tens or from tens to hundreds. The next example - hundreds, tens and units with carrying from the units to tens. I also made this one more difficult, by putting in a nought. And in the next example we have carrying from the units to tens and tens to hundreds. Now in the next example we have hundreds, tens and units with gaps, and in the last example there are hundreds, tens and units with one or more columns adding to 20 or 10, in other words, giving a zero in the answer and carrying figure. Now those are some of the steps that should always be covered in addition of number. And in Great Britain when arithmetic books for Juniors are published, the teachers are very careful now to examine the books to see if these types of examples are included. If your books here do not do this for you, then make up your own work cards. You will find a great improvement in a mechanical arithmetic if you have the systematic attack on all difficulties. We have abundant evidence now that mechanical arithmetic practice in a systematic fashion brings more progress than examples given to children in a random sort of way.

Well, what are some of the common mistakes the children make in addition of number. The first one and it is by far the most common is that the children have an incomplete knowledge of basic facts.

Secondly - faulty setting down. The tens figures placed under the units or vice-versa. Those of you who insist on having plain paper for young children or retarded children at first must carry the responsibility for these errors if they occur. You are not helping your pupils.

Third - carrying when carrying is unnecessary and forgetting to carrying when necessary.

Fourth - writing the carrying figure twice in the tens columns. Also when you are carrying using hundreds, tens and units, carrying two places to the left instead of one.

Now we come to discuss again the subtraction number. The child then, has now matered the basic subtraction facts and we are ready for the next steps.

The units figure in the bottom line is less than the units figure in the top line. You may care if you like, in a simple example like this, to establish a standard method of working. We can tell the child the following two ways of approaching the example.

Here is the first approach: first deal with the units: seven take away 5 is 2. Put 2 in the units column of the answer. Now deal with the tens - 3 take away 1 is 2. Put 2 in the tens column of the answer. Or you may prefer the second approach: first deal with the units - 5 from 7 leaves 2. Put 2 in the units column of the answer. Now deal with the tens - 1 from 3 is 2. Put 2 in the tens column of the answer.

Everything is all right until we come to an example of this type in which the units figure in the bottom line is greater than the units figure in the top line. There are two main methods employed in working this kind of example, and there are many variations of these two methods. I have seen at least nine different variations of these two. But I am going only to tell you about the two main methods.

First of all there is the method known as decomposition. In this the number 42 is broken up, into 3 tens and 12 units. Seven units can then be subtracted from 12 units, and then in our case we have 5 units left over which can be placed in the units column of the answer. We then deal with the tens column. I will show you in a minute how you can demonstrate this practically to children. If you are going on to hundreds this method can be equally well used but note when you get in the top line, it gets a bit difficult. Now how are we going to demonstrate this method to children? Let's go back to this example: 42 take away 27. Let's take 42 sticks and let us bundle them up into four bundles of 10 and 2 over. We put rubber bands around the bundles of 10. We do, of course, have 2 odd ones left over. Now let us try to take away 7 odd ones. We cannot do it; so we take one of the bundles of 10, take off the rubber band and find we have 3 bundles of 10 left and 12 units lef over. We have broken down four bundles of 10 and 2 units to three bundles of 10 and 12 units. The child can see that. He can actually do it. Now we <u>can</u> take 7 sticks away from 12 sticks. He can also now take away 2 bundles of ten and he is left with one bundle of ten. He finishes with one bundle of 10 and 5 odd sticks left over. One 10 and 5 units. Now this method can be extended if you want to hundred tens and units. You have a rubber band around a bundle of 10 sticks and a rubber band around 10 bundles of 10 sticks.

The other method is known as the method of equal addition. Let us consider the example - 42 take away 27 once again. Now in this method of equal addition we proceed thus: 10 units is added to the top line, and one group of 10 to the bottom line.

$$\begin{array}{r} {\scriptstyle (3)(12)} \\ 4\ 2 \\ -\ 2\ 7 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 3\ (1)2} \\ \not{4}\ \not{2} \\ -\ 2\ 7 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 3\ (10)} \\ \not{4}\ 2 \\ -\ 2\ 7 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle (12)} \\ 4\ \not{8} \\ -_{3}\not{2}\ 7 \\ \hline \end{array}$$

$$\begin{array}{r} {\scriptstyle 2} \\ 3\ 0\ 2 \\ -\ 1\ 6\ 5 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 5} \\ 5\ 0\ 0 \\ -\ 2\ 6\ 4 \\ \hline \end{array}$$

I can now take 7 units from 12 units and 3 tens from 4 tens but how can we explain this to children? Well, here are some suggestions: Here are two children, John and Mary. John is 8, Mary is 10 years of age. How old will John be in 10 years time? How old will Mary be in 10 years time?

Or again you may draw, or have the children to draw two lines. One five centimeters long and other of eight centimeters long. What is the difference in length? Now let us increase each line by three centimeters. Question the children as to the difference in length now. These simple examples demonstrate that if we add the same number to each of two different numbers, the difference between the numbers remains unchanged.

In our examples we added ten units to the top line and we add one ten to the bottom line. We add ten, of course, and not any other number, because in our number notations ten covers all possible cases.

Later you can work in hundred tenths and units. We must then add ten tens to the top line, and one hundred to the bottom line.

Now, there have been many arguments as to which is the better method to teach.

Research has not yet been able to decide which is the better method. Most teachers of England prefer the method of equal addition. Probably, there is no best method for all children.

What is important is that teachers in a school or group of schools, should agree on the method they are going to use. As the child then moves from class to class or school to school, he does not meet a new method. But, if a child comes to you, using a different method from the one you like, do not make the child change his method. What right have you to do so?

Now with retarded children there are two points to watch: if you have child and one of these methods proves unsuccessful, try the other. Seçondly, it is sometimes better to give these children the method by ruller at first. I am not saying that if you should do this all the time. But with some children it might be better to give the rule of working first and often they have gained some confidence try to explain the method to them.

Mostof the researches done in England and in the United States up to about 1948, showed that the method of equal additions was, generally, superior than the method of decomposition. But a big experiment done in 1948 in the United States throws some doubt on the view point that the method of equal additions it is always the metter one. I do not think that we should argue the point, any further; there is no doubt that the method of decomposition is easier to explain, but very often the method of equal additions is liked better by the children and they get more right answers by that method.

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AULA DO PROFESSOR KENETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 5/9/1958

Now a few words then about standardized tests of reading. We use them in England, and you know the Americans do as well. They are useful as long as you keep them as your servant and not as your master. In reading there are usually two, sometimes three aspects of reading that we measure. The first aspect is that of word-recognition or word accuracy. Here is one of our best known tests of word recognition, Schonell's Graded Word Vocabulary Test. We can use this from five to fifteen years of age. There are one hundred words there. Do you notice how the size of the print changes? The first words are in large print and then the print gets smaller. You know now why that is. The first words in the top line are words well within the child's vocabulary, and in English, they are easy words. I don't know about them in Portuguese. In English: tree, little, milk, etc.

The child reads along until he can no longer make a sensible pronunciation of the word. You count up the number of words that he has read, you divide by ten. Let us suppose he has read eighteen words. They need not, of course, necessary be consecutive words. Perhaps he has missed out one or two, and then he knew another one. But he has read eighteen altogether. We divide that by ten, one point eight, add on five years, and his readin age is 6.8 years. The scoring is quite easy.

Well, that is one good example of word recognition test and is a very popular one in England. The next aspect of reading that we are particularly interested in is comprehension. This is perhaps even more important than word recognition. In some children you will find that the reading age for word-recognition is close to the reading age for comprehension; but sometimes the reading comprehension age is below that of word recognition age. This is often the case with retarded children, because, you see, in comprehension you have to extract the gist of the argument.

Here's an example of a reading comprehension test in England. The child is given eighteen very short paragraphs. The child reads the paragraphs through slowly, and at the end of each paragraph there are some question to answer. I will read you just the first paragraph: "I have a cat. It is black and white. It is one year old. It sleeps in a box. It likes to play with the ball of wool." Here is the question: "Where does the cat sleep?"

The answer to that question is mixed up with a lot of other things - black and white, one year old, likes to play with the wool ball, and it sleeps in the box.

Here is another British test, the Neale Analysis of Reading Ability. This is one of our newer ones. It promises to be a very good one.

The child is given a number of short stories to read. Each word the child reads is noted and marked. At the end of each short story there are questions to be asked, and the teacher also takes the time that the child took to read through this story. By this means we can get the reading age for accuracy, reading age for comprehension, reading age for speed. The reading age for speed is not as important as the other two. Here is the form in which the teacher records the result. Down here are the lists of words in the story. For each words said correctly there is one mark. The child will make some mistakes, and the exact type of error is recorded in those columns to the right.

In the word accuracy, the teacher notes the following errors:

mistakes in pronunciation; substitution; child refuses or does not reply at all; the child adds something to the word, for example, the plural instead of the singular; omit the word or reverses the word. The Americans have tests as well. These are the Gates reading tests. They do much the same sort of thing. For example, on this page I see for word recognition, sentence reading, paragraph reading.

We also have in England standardized tests in arithmetic, and we can get an arithmetic age. These are quite popular tests in England. This is a standardized test of arithmetic, mechanical arithmetic, for children between 7 and 12. This is a standardized test of problem arithmetic. You can get an age for mechanical arithmetic and problem arithmetic. With your retarded child, the arithmetic age for problem work is usually below the arithmetic age for mechanical work.

Now you may ask, "Why do I tell you about these tests?" Well, I hope you will develop some standardized tests here. They are important because it does give the teacher the chance to check the performance of her children against other children. In reading, for example, teachers will over-estimate the reading ability of their pupils, if they do not give them a check occasionally on a standardized test. For example: supposing the children have been working on "Adventures in Reading". They get to the state where they can read these books nicely, but before they are really reading, their skill has to be transferred to other material. Now your word standardized test word-recognition,will help you here. I would suggest that you should not use this test more than twice a year.

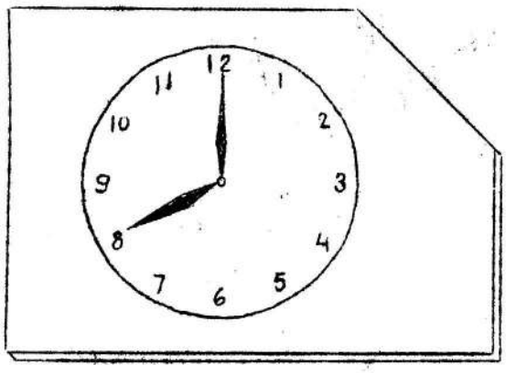
You cannot make these tests on your own. The construction of standardized tests involves much hard work and the use of quite complicated statistical techniques. There are many problems to be solved in the making of these tests. What I hope you will do is this. Make a campaign so that your Ministry of Education will construct some but do not attempt to devise any by yourself. Bear in mind this, too, that a test that is well standardized for Rio de Janeiro or São Paulo areas is most unlikely to be of any value in Amazonas, because you have wide differences in the way of life and teaching skill between these areas. But the experts who devise these tests would know all about these difficulties. One other thing. Do not ask, or expect to have special standardized test for retarded children. The experts who devise the tests will include in their standardizations procedure a certain proportion of retarded children. When you give a standardized test to a retarded child, you want to know how that child stands in relation to all children of the age group. If this reading age is 8 years 3 months, it is in relation to all children, not just retarded children. Standardized tests are not for pormotion purposes, they are for the purpose of showing how the child stands in relation to other children.

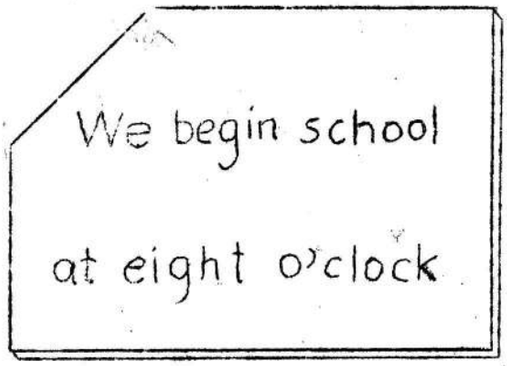
Yesterday afternoon we finished our work on fractions. The introduction of the child to the idea of a half and a quarter. We also use thirds if we wish. Now with retarded children we shall not go beyond this point. They certainly should know that a half is the equivalent of two quarters, but the general problem of the equivalent of fraction would not be done with them. There will be no attempt to work the four rules or to work any kind of problem involving fractions; so unless you wish to ask any questions about the concept of fractions, I propose to leave fractions now. I'm sure you realize that with normal children there is a great deal to do in the reaching of fractions, and skilful teaching is called for. For example: How do you explain to your children that in the division of fractions you turn the divisor upside down and multiply.

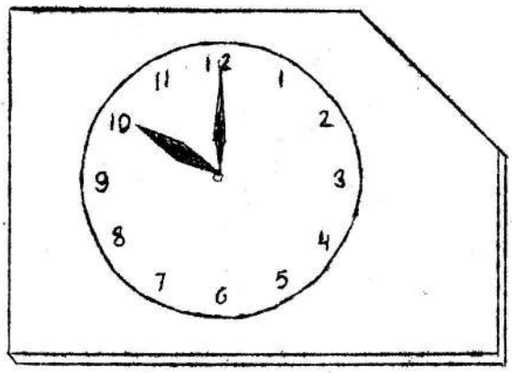
Now lets turn to the problem of teaching children to tell the time. It is important for most people to be able to tell the time. There are possibly a few people in the interior who

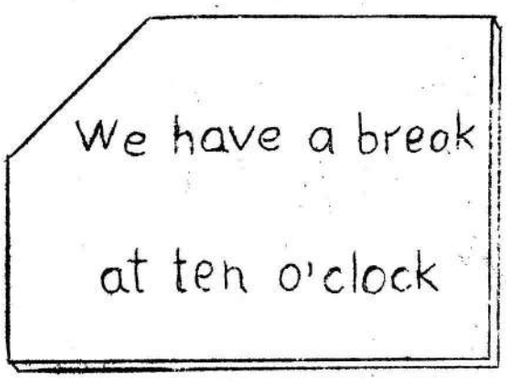
do not need to be able to tell the time but for almost everyone in Brazil as in England it is a great social asset to be able to tell the time quite apart from its great utility value.

In school, children should be made aware of the principal happenings of the day, and link these happenings with the time. For example, they come into school in the morning, at, say, eight o'clock. Have a piece of cardboard with the clock-face on it, the hand at eight o'clock and written underneath: "We begin school at eight o'clock". Let us pretend at ten o'clock we have a break. At ten o'clock have another piece of cardboard on view with the clock face on it. The hands indicate ten o'clock. Underneath: "We have a break at ten o'clock". etc.









Then there is a stop for lunch. Of course, in my country school we would be starting again, say at half past one, and finishing, say, half past three or something like that. So there would be five or six periods during the day in which the clock face would be on show. You are linking happenings of the day with clock time. This is a useful start. The next step can be something like this: have two large cardboard circles about say 60 or 70 centimetres diameter and mark in the hours on each of them. Have large hands, but make sure that one hand is clearly longer than the other. These hands, of course, can be moved around by the teacher. Now the first step is to get the children to tell the time to the nearest hour. The hands are moved around, and you explain clearly to the child that when the little hand points to the hour, the big hand is always at twelve o'clock. Now you can move around the hands to different hours, and question the members of your group as to the time. Or you can have one child calling out different hours, and another child setting the hands of the clock.

Next duplicate or mimiograph on paper a large number of small clock faces without the hands showing. The child is given a number of exercises in which he has to draw in the hour and

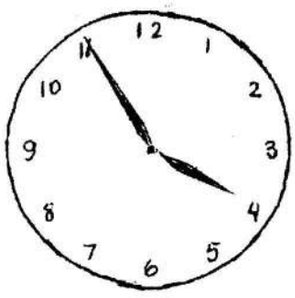
the minute hand corresponding to the different times given. Now I like to keep the second clock face separate from the first one. I keep the first face for hours only. In the second clock face the hours are shown and we also have the minute marks, ten minutes, fifteen minutes, etc. We also have the means of showing the words "Past" and "To" on the face.

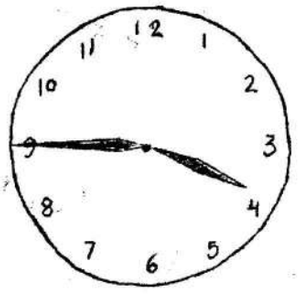
We are now going to teach the child to tell the time in half hours. When the large hand is at six, the small hand will be half way between two hours. If the child has a concept of a fraction, then he will understand that the large hand is half way around, and small hand is half way between the two numbers. In other words, it is half past the hour. Then teach the children to tell the time to half an hour. Have the mimiographed faces again. The child has to draw in the hands, saying the time "half past two", "half past ten", etc. Well, here are two stages: the full hour and the half hour. We do not generally practice this for more than 5 minutes or so a day.

We would not have a full period devoted to telling the time. We treat it more like learning our multiplication table. A short period each day.

The next step is to get the child to tell time a quarter of an hour. When the large hand is at three, the little hand will be just beyond one of the hours. It is a quarter past three. We hope before now that he has a concept of a fraction. If the has no concept of fraction, well, then the word "quarter" will be just a word the teacher tells him. Suppose now that we will to show the time as a quarter to two. Our large hand now will be at 9, and our little hand will be nearly up to 2.

On this clock face we have five minutes, ten minutes, fifteen minutes, etc., marked and the next step is to try to get him to estimate the position of the big arm.





This is not too different for school educable retarded children. We teach normal children just this way too. I can well remember, as a small boy, that my father wrote the minutes between the hour numbers on the face of the grandfather clock. We then point out to the child the nature of the intervals. Move the large hand around to five minutes past or ten minutes past the hour, etc., and give the child the opportunity to read the time now to five minutes. So we came to ten and twenty minutes past two, etc. In other words, we are now getting the child to read the time correct to a five-minute interval.

Once again use the mimiographed clock faces. The children will be given exercises in which they will have to draw the time correct to five-minutes. Next, on your clock face the child has to estimate that it is, say, twelve minutes past the hour. It is between ten minutes and fifteeen minutes past. Here the child comes in for a little estimation. It helps if you write in each individual minute on the second large clock face. You certainly can do that. But when the child comes to his watch or clock he has to drop this aid. Once again, the child, being able to read the time up to 12 minutes past three, is given his exercises on

paper. He has to draw in the hands as accurately as possible to the nearest minute.

I cannot estimate for you what proportion of children in our special schools can tell the time, but quite a few of them cannot tell the time; but at least they will tell you the time to an hour or half an hour perhaps. It is our duty, to get these children to tell time properly if they can.

Just before I left England, I was in one of the occupation centre is Leeds. There are 104 children in the centre, up to 12 years of age; and there is only one child who could tell the time correctly. Trainable children often do not tell the time until adolescence.

So far I have only been discussing the teaching of what one might call mechanical arithmetic. Now mechanical work is important because it is the tool with which we can attack real life problems; but in general, mechanical work is not an end in itself. It is a means to an end. Now I am going to give you some suggestions regarding "problem work". Although I have said very little about "problem work" until now, I want to take "problem arithmetic" very seriously. Of course we must face the fact that retarded children find problem arithmetic difficult, and many of them will not get very far with problem work at all. But you must do what you can. The ability to solve problems in mathematics is more dependant on general ability than is the ability to do mathematical arithmetic. For example, suppose we put down 37, and tell the child to multiply it by 6. That is a straightforward piece of mechanical arithmetic. But if we put it in this sentence: "A boy bought 37 things which cost £ 6,00 how much was the cost together?" That is a simple one-step problem, but it is more difficult than a mechanical exercise.

We must face the fact then, that problem arithmetic is more dependent on general ability than is mechanical arithmetic, and we find that the retarded children do relatively better mechanical work than they do at problem work.

Well, here are some suggestions regarding steps in problems. Problem work should be always kept tied to the mechanical work as far as possible. You see, the mechanical work is of the tools with which you attack the problem. The time to begin problem work with your normal children will be in the first grade. As soon, in fact, as they can handle totals, products and dividends, not exceeding say 30, and as soon as they can read. Now with retarded children roughly the same thing is true. If they can add in simple examples involving tens in units, and do simple examples involving sharing, or multiplying, and they can read, then problem work should begin.

In the early stages, and indeed, at any stage in school life where it is necessary, link your written statement with actual demonstration with apparatus. For example: Here's a problem: "Put 8 beans in one jar, and 4 beans in another. How many beans altogether?" Sit down with the child and get him to read the problem. Put two jars in from of him; put the beans there too. Make him actually do what the question tells him. He puts 8 beans in one jar, and he puts 4 beans in the other. How many altogether? The problem is done there in front of him. And when he has actually worked the problem with apparatus, he can write his answer on paper.

Here's another problem: "You have 18 beans, share them equally among three bottles. How many in each bottle?" Give the child three bottles and the beans. Make him share. He finds practically what the answer is. He writes the answer on paper. Now let me repeat the sentence that I made just now: At the beginning of problem work, and it does not matter whether it is retarded children

or normal children, see that the written statement is linked with the objective demonstrations using apparatus. Indeed, at any time in school life when some new rule or some new technique is used, and it is put in problem form, go back to your apparatus. Let him "see" the problem in front of him. Many teachers too, let the children draw a picture to illustrate the problem. This is a good idea, and certainly can be used in addition to the actual apparatus demonstration. If only we could get our teachers to use the actual apparatus first, we should have less fear of problems than we have so often now. The next suggestion is this. To begin with, the child should not have to decide if adding, subtracting, multiplying or dividing is needed. Keep your different kinds of problem separate at first. Later on introduce problems that call for any one of the four rules.

Another most important point is that you must start with one-step problem. "John has 5 marbles and Tom has 9, how many have they altogether?" That is a one-step problem: That's fairly easy. But if we add to that: "How many more do they need to make 30?" That's a 2-step problem, and that is much more difficult. Start then with one-step problems. It is later that you can go to two-steps problems. You see, good grading is needed over and over again. Look at the text books of 30 & 40 years ago, and see what the problems looked like. Before you knew where you were one was working in millions.

The next suggestion is this: A problem, like the reading material, should be concerned with activities that are of interest and importance to the children. Again the language used in problems must be very simple.

(Serviços de Gravação e Mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E.
Datilografado em estencil, em inglês, pelo C.O.J. do D.N.Cr.,M.S.)

AULA DO PROFESSOR KENNETH. LOVELL
no
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
dada
EM 8/9/1958

You have been doing craft work this morning and I thought I'd just show you this material that I brought from England. Here are a series of large enveloppes, and instructions are given on the back of each. We are assuming, of course, that the child can now read. In each enveloppe there is an appropriate card, showing a line diagram of a ball, sea-side toys, a rabbit, etc.

The child is given instructions to cut this out of the cardboard. The child then lays the shape on the appropriate coloured paper. The shape is then cut out of the coloured paper and pasted on hardboard. Here are twelve little books that we find very useful when children can read. The child has to read the instructions and make the models without the help of the teacher.

Book One - "I can make a windmill" - On the right hand page there are the instructions. On the left hand page, the pieces that have to be cut. Listen how easy the reading material is. "A square piece of paper, a pin, a stick, some crayons or paints, a pencil, a ruler, a pair of scissors."

I fold the piece of paper like A. I fold it again like C. I open the paper" and so on.

These booklets are for the children to read and work from. Once the child can read, he can get a lot of fun from these booklets. Here are some other titles: I can make a spinning top. I can make a pipe. I can make a box of soldiers. I can make a sentry box. I can make a doll's pinafore. I can make a doll's dress. I can make a doll's coat. Obviously this is for the girls. I can make a doll's bonnet - Doll's petticoat - Doll's knickers. I can make a Indian headdress. These titles will give you some ideas.

I have been putting great stress on reading for meaning; I want now to stress reading for information. This is most important too.

We have many sets of books which are simply written but give good detailed information.

In this series there are twelve little books but I have only brought one. I thought it would be suitable for you here in Rio as it is about ships. It is obviously of no use for Central Brazil, but you can make up something for yourself in these parts. It starts with a short description of a canoe. The reading is easy. "A canoe is pushed through water by paddles. A sailing ship needs the wind. Steamers have engines which are worked by steam. Coal or oil is used to heat the boilers, and so on. Liners are large ships which carry passengers. The passengers' bedrooms are called cabins. Cargo ships carry goods. The goods carried are called cargo. A tanker is a ship that carries oil." - Each picture has a short description. The sentences are simple in which each word tells you something. With retarded children it is important that you write something like this for them, if you haven't got anything available here.

If retarded children are going to live in the world as independent human beings, they must be able to read for information.

Here is a series which we find very popular with normal and

retarded children - Cross-word, puzzles.

Here is Book One, for normal seven-year olds, but we are using them at nine or ten with retarded children.

The child does not work the cross-words in the book, but has his own note-book in which these cross-words are copied down on the left hand page, and the vocabulary of new words the child needs, on the right hand page.

Books 2 and 3 follow on.

Now a few words about speech. The speech of many school educable retarded children is bad. If it is due to some physical defect in the speech organs, the child should be referred to the speech therapist, but usually slovenly speech is due to laziness.

The child does not use lips, tongue and jaw, and if the speech is to be improved, the child had to be made to use these parts of the body. Now our view is that you do not need formal lessons or any speech therapist for this. Emphasis should be on attractive rhymes and simple poems that have a marked rhythm. The saying of this provides the incentive which provides the opportunity for the child to practice.

The individual vowel and consonant sounds must be watched. It is important to remember that that it is the rhythm and rhyme that makes the speech interesting. And we can get in all the sounds we want.

In addition to rhythm and rhyme we can make use of class singing, choral verse speaking, drama, puppets and what we call in English "tongue-twisters".

For example, when a drunk man is fround by the police, in England, he may be asked to say the following, which is very difficult in English: - "The Leith police dismisseth us."

It is obviously a complete waste of time going through with you the kind of exercises that we use in English. You have got to use your own. I hope I give you sufficient here to show you the kind of approach to speech training I can't really do any more for you, because with English students, the next step is to show them the actual exercises we use and these are of no use to you.

The next point to discuss is the question of spelling. The school educable child, needs to learn the words he is using in everyday life, or those he will need in adult life. Now spelling is primarily a visual-perceptual function. Learning to spell usually requires that the child must remember how the word looked. Generally he will not spell until he can imagine the correct form of the word. But one must be careful here because not everybody needs imagery. Some people can spell without imagery while a child probably uses visual imagery mostly. Kinaesthetic and auditory imagery are also sometimes used by the child.

Auditory imagery is more likely to be used in a phonetic language than in English. Because if you recall the sound, you are more likely to recall the sequence of letters.

Here then are some suggestions: the words that we use to teach to spell must be those that have been used by the child in his everyday life.

A systematic method of learning to spell should be used. We must take families of words and related words. For example, words around a house - or words connected with a school, and these words must be written, spoken or employed in sentences. Please understand that we must have a systematic attack upon words. It is no good

having all kinds of hard words from here and there. It's no good having a look at some, and writing a few others, and so on.

The next suggestion is this: with retarded children, spelling should be taught by rules. This involves generalization. For example, in Portuguese you have rules for forming plurals. With retarded children, it is better to teach the singular and plural forms.

Next, see that the child can pronounce the word properly. In English, if the child says "one" for "run", then he is going to spell "one" wrongly. He will be confused between what he sees and what he hears.

Next - Supervise the child's spelling closely. In written work which has to be corrected, correct the mistakes gently and see that he writes out the corrections.

(Of course in free writing, that we value highly, we shall not correct the spelling.)

Next - Teach the spelling of words after the child can write them.

Next - keep the writing, the reading and the spelling material the same.

Now in your language you use a lot of dictation, I understand. Well, we use dictation too, but dictation isn't as helpful to us in teaching spelling, as it is to you, because your language is more phonetic than mine.

I am now going to go through Fernald's method of teaching spelling to those who have great difficulty in learning to spell. It is a method that is well adapted to school educable retarded children who find great difficulty in spelling, or find great difficult in particular words.

The word is written first on the blackboard or on the paper by the teacher. The teacher pronounces the word clearly and distinctly. The child pronounces the word. Then time is allowed for the child to study the word. The word is then erased and the child writes it from memory. The paper on which he has just written the word is then turned over and the word is written again.

Fernald then makes frequent use of the word in written work. Fernald's directions to the child include the following: - "Look at the word carefully and say it to yourself. See if the word can be written just as you say it". That's more helpful in Portuguese than in English. "Shut your eyes and see if you can get a picture of the word in your mind. If you cannpt get a picture of the word, try remembering the parts that were written the way you saw them, by pronouncing the word over to yourself and feeling the movements made by your hand in writing the word. When you are sure of every part of the word, cover the word and write the word correctly after you have looked at it and said it, and the teacher to write it for you in crayon on a piece of paper."

Continuing with Fernald's directions - "Trace the word with your finger, say each part of the word as you trace it. Trace the word carefully as many times as you need to, until you can write it correctly. Say each part of the word to yourself as you write it. If you find the word still difficult, turn the paper over and do it again. Later in the same day, do it again from memory."

We do not, of course, make such a systematic attack very often. Many words are spelt correctly by retarded children, without any such exhaustive attack. The method does not always work but it is worth

trying because it will help some children.

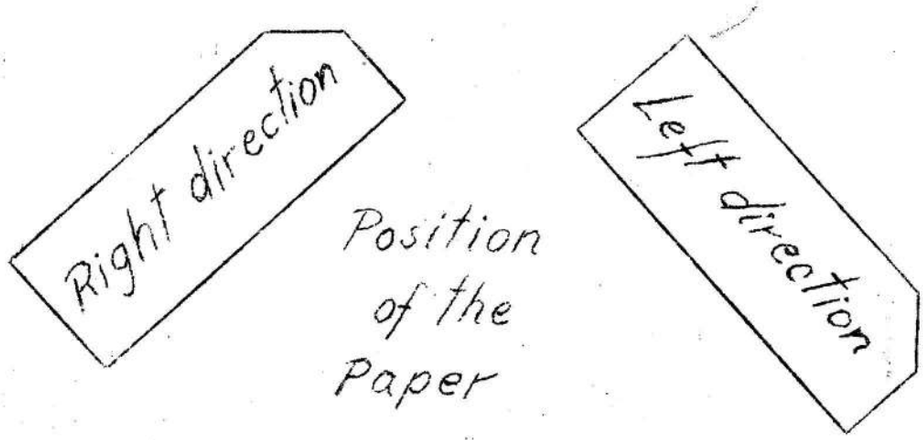
Handwriting - Teaching handwriting to retarded children, does not usually differ significantly in method from the teaching of writing to normal children. Although with some children there are significant differences.

When the school edacable retarded children is ready to read, he is perhaps 9, 10 or 11 years of age. The motor and general physical development of these retarded children is closer to that of normal children than in their intellectual development. Thus when they are ready for reading, their motor development is equal to their intellectual requirments.

Indeed, the school educable retarded child has generally had good experience in using pencils and drawing. He is thus less awkward than the normal six or seven year old, who learns to write at that age.

So, generally, the difficulties found with the mechanics of writing in younger normal children are not found with the elder retarded children.

Now I have already given you some suggestions earlier in the course about teaching writing to normal children. And they are equally applicable to retarded children. With retarded children emphasize accuracy and legibility. Speed of writing is of no consequence. Show them the correct procedure in writing, including the relationship of the body and the paper. See that the right-handed child has the paper oriented in one direction, and the left-handed child has the paper oriented in the other direction.



We already said that there is much argument as to whether we should have script writing with retarded children or joined up letters - cursive writing. Strauss and Lehtinen who are well known for their work on brain injured children, maintains you should have cursive writing.

With some school educable retarded children, more systematic methods have to be used.

In general we should use some form of kindesthetic approach, where there is some tracing of material.

The blackboard story is very popular with British teachers. It helps reading and spelling and writing. The teacher might do one of these once a week. The teacher writes the story on the blackboard first. Then she reads the story aloud and points to the words she is using. A small group of the children she is working with then reads the story aloud.

Individual children then read the story aloud, the other children in the group prompting if necessary. The children then copy the story from the blackboard into their books. The children illustrate the study by means/pictures or models.
of

The children are given words orally which are used in the story and they are asked to write these words down as the teacher calls them out. The teacher then asks questions about the blackboard story, which have to be answered in writing.

As I explained to you, by the time a child gets to 9 or 10 years at the latest, the classroom shop is too artificial. And with the older retarded children from about 9 years of age, more lifelike uses of money must be introduced.

If the child can read, then he should be made to work well graded problems involving the use of money.

I shall be telling you later about the method of introducing problems to normal and retarded children.

The child should also be set examples in mechanical arithmetic which involve money. But with these older retarded children the best example involving money arise from everyday activities.

For example, the cost of materials such as wood, paper, cardboard metal, etc. used in art craft work in simple plays.

Our special school often have their own stage in the assembly hall, and they put on plays which parents and friends come to see.

Now this kind of activity involves the buying and selling the tickets, with useful examples involving money for the older retarded children.

Then there is the cost of train or bus fares involved in visits and school journeys and the cost of food for the journeys. The cost of feeding stuff for animals that are kept in school, or on the school farm. There are the proceeds of the sale of school vegetables and from making various pieces of craft work and toys.

In the case of girls, there is the buying of food in the house craft lessons, the buying of materials for the needles work lessons, and the buying of the equipment in the house craft lessons.

The amount of gas used and electricity used in the gas and electric cookers and washing machines.

We find that these transactions born out of real life activities do interest our pupils and they will attempt money exercieses involved with these activities.

There is a school that I shall mention to you later this week which has an excellent school garden and farm. The whole of the mathmatics for the boys and the girls is built around the activities of the school, including the farm. In so far as the conditions allow, in our city schools the girls are taken to the shops and the teachers try to show them how to be wise in making purchases. They point out to them the cost of the house furnishing, and clothes and so on and through this kind of activity they try to bring out the great danger of having goods on hire purchase. When you have firls of fifteen or sixteen, this is very important.

I have given you some ideas regarding the kind of arithmetic built around real life activities from, say 11 years onwards. At the same time, we would have the children working some examples from test books.

If you are familiar with English pounds, shillings and pence, I would like to say that many of the most retarded children never get around to handling and understanding pounds. They can then understand shillings and pence, or they can work in shillings and pence but not in pounds, shillings and pence; other can work in pounds, sshillings and pence, and can work the accounts connected with these activities that I have been telling you about.

Next we discuss length. The child meets situations in which he slowly builds up an understanding of such terms as long, longer - short, shorter, etc. He may hear workingmen discussing the length of timber required. He may hear his parents saying the words "far" and "near" in connection with a town. Or he becomes interested in his own height. Remember too my suggestion about reversibility in connection with length. A certain complexity of mental organization is necessary, and certain experiences are necessary before the concept of length is established.

Up to now these children have no idea how much longer one thing is from another. Soon we must introduce them to measures. I reckon that a mental age of about 8 years is necessary before we can do this in any detail. Now I am sure you realise that we only use the metric system in England for scientific work. And I am quite as familiar with the metric system as I am with our own system. But we in England are not teaching the metric system to retarded children. Therefore, I am going carefully just at this point.

It seems to me that there are only two units of importance to retarded children - the centimeter and the meter.

To beging with, I strongly recommend that you have simplified rulers. Have a ruler 10 cm. long, marked up in whole centimetres and not showing you millimetres. I do not know if you can buy them but if you cannot, you can then make them of wood or hardboard. If this idea is new to you, I think it worth considering. With our retarded children in England we start with rulers that have whole inches only. Then we have rulers with inches and half inches; then we can come down to a quarter of an inch or an eighth of an inch and an ordinary ruler if possible.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais da C.B.P.E. - Datilografado em inglês pelo C.O.J. do D.N.Cr.)

AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM
9/9/1958.

We generally reckon that unless the child has a reading age of about 7 years he will not write a sentence. Now, all the writing that we ask a junior or retarded child to do should be of interest to him. Here is a graded scheme of work for retarded children. You will notice that one cannot expect a high standard from these very retarded children and their written work will have a strictly utilitarian value.

Here's the first exercise: adding one word to an incomplete sentence; for example, "Today the sky is ....". 2nd: adding a phrase to a sentence. 3rd: make a sentence in answer to a question. 4th: writing a sentence and illustrating it. 5th: adding two sentences to a piece of copied work. 6th: adding more than two sentences to a piece of copied work. 7th: writing a few sentences about some topic of interest to the child. 8th: writing a few sentences describing a simple sequence of events. A really good exercise is of the type: describe in 3 or 4 sentences the sequence of events in mending a puncture in a bicycle inner tube. Or, in the case of a girl, it might be 4 or 5 sentences on how to put a new washer on a tap, or five sentences describing the sequence of events in cooking some simple dish. 9th: writing a post card. Obviously you have to give guidance at first regarding the topic that they are going to write about. 10th: write a simple letter. I suggest that at least one piece of written work, formal written work, should be asked of each pupil each week.

Now a change of topic. I have given you two lists. First, look at the list on which there are names and reading ages. That list shows you names of pupils in one of our special schools for school-educable retarded children. The children in that school are from 8 to 16 years of age. It happens that they stay in the same school over the years. In other schools we have Junior School till 11; and then Secondary School, 11 to 16. About 50 of these pupils are girls. It makes the time-table problem very difficult when the sexes are so unequal in numbers.

You know that in England and in the United States of America, we use standardized reading tests. These are very useful, and they give the teacher an objective indication of the standard of reading of the pupil. As I have told you before, the teacher's job is first to teach, and not to test; but occasional check on the progress of the pupil is necessary. I suggest you should not use any reading test more than about twice a year. I do hope that somebody here in Brazil will take up this question, and make and standardize reading tests for you. Unless you take some standardized reading tests you tend to overestimate the reading ability of your pupil. The first list I have given you shows the reading age of all the pupils in that school in September 1957. Classes 1 and 2 contained the oldest children. It would have been possible for them to leave school in July, this past July, had they wanted to. At the time the test was taken those two top classes had another year in school. The mean reading age of Class 1 is somewhere round 8.8 years, and Class 2 has a mean reading age of about 7.7 years. So you see, at the time those children left in July, this past July, the pupils in Class 1 would have a reading age of between 9 and 10, with a few children reading as well as perhaps a normal 12 or 13 year old, and the mean reading age of the children in Class 2 would be between 8 and 9 years. In spite of all our textbooks, we know that the

going is hard. Now, I impress on you that, however good your books, however good your teacher, the teaching of these children is not easy. I wanted to give you that list to impress upon you the kind of standards we are getting in special schools for school-educable retarded children in England. Class 12, of course, is the youngest group.

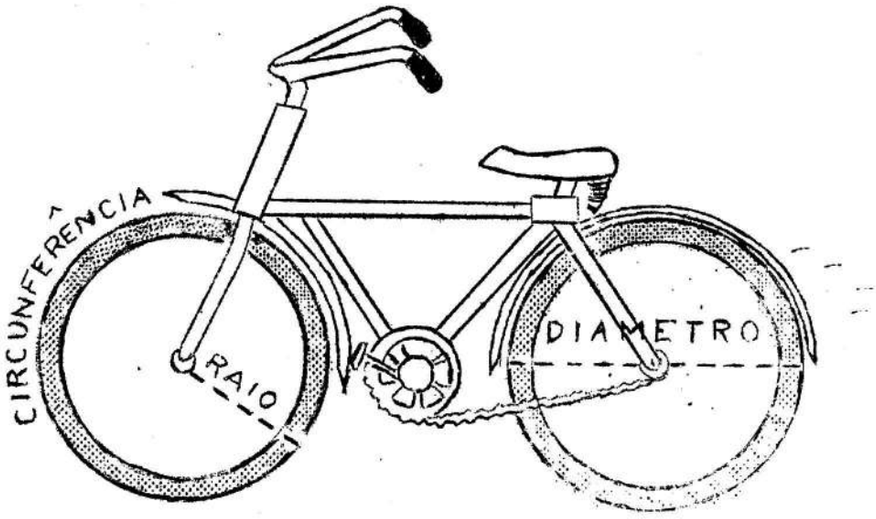
Our experience shows that there are two very difficult periods when you are teaching children to read. 1) When the child is just beginning to read - in other words, he is just passing from being a non-reader to just beginning to read. This, we find, it is between a reading age of 5 and 6-1/2 years. The second difficulty comes when you try to give the reading age the raise between 8 and 9 years. It seems then, that by that time, the vocabulary of the average 8-1/2 year old normal child is so outstripping the vocabulary of the retarded children. We also find that when the reading age has reached 9, the children seem to be able to go ahead on their own. Their reading age is sufficient for them to be able to tackle children's books and simple newspapers, and they can stimulate themselves. Now these reading ages on the sheet are "word-recognition" reading ages; they are not "reading comprehension" ages.

This is the time-table for that school. These time-tables are a great headache when the number of boys and girls are so uneven in numbers. Look at Monday's work.

Basic work means reading and writing, and number workbasic skills. What I want to impress upon you is this: the wide range of activities in which these boys and girls engage. It is our plain duty to teach them to read and write and do number work. It is even a greater duty to let them develop as boys and girls, as men and women. I want you, therefore, to pay attention to the amount of time which is given to such things as: music, swimming,woodwork, drawing, physical education, domestic science. You have there set out for you the time-table for each class every day of the week. You even have gardening.

Our special schools have about half and hour a day less than our normal ordinary schools. The normal schools usually start at 10 minutes to 9 o'clock, and the special schools usually half past 9 o'clock. In the lunch time, of course, they have some activities going on; craft club or stamp collecting, if the children are interested.

We finished yesterday at the point when I introduced you to the right angle. I showed you how to introduce the right andle to the child. This is the most important concept in our culture pattern which you must try to get over to retarded children. Remember, we are using our simple spatial work to help the children in craftwork, and to help them in life generally. I suggest the next step is to introduce the child to the set-square, because with the set-square he can draw a right angle. In England we have large set-squares that the teacher demonstrates with on the blackboard. If you have one, use it. If not, demonstrate on a piece of paper with the ordinary set-square. Now the child can draw a line so many centimetres long. He can draw a right angle with the set-square. Thus he can draw a square because a square has four sides all equal and all angles right angles; again, a most important figure in our culture. Then there is the rectangle. He can draw that too, because in a rectangle, opposite sides are equal and all angles are right angles. There is one or two other figures at least you should tell him about. The triangle; if he can draw that, let him draw some freely using a ruler. I should not attempt with retarded children to get them to draw triangles from given date, although they can certainly draw squares and rectangles of given dimensions. What about a circle?



Well, we can draw the child's attention to the bicycle wheel. What do we know about the distance between the rim and the hub? Is it the same all the way round? Or again, take a cow, and tie him to a stake. The cow walks around at the end of a chain. What kind of figure does it make? I gave you the problem about the wheel, I have given you the example of the cow chained to a stake. Can't we get something out of this to tell the child? Of course, every point on the circle is at the same distance from the centre.

If you feel that it is safe with these children, introduce them to the compass. Our experience tells us that these retarded children like using compasses, but you have got to be careful with some mal-adjusted children that they do not play around. Do not allow any misbehaviour with compasses. If you do not like the idea of compasses, make use of a cardboard strip. Here's a strip of cardboard, with a row of holes down the middle. You can put a pencil in there, put another one in any of these holes, and move it around. If the children are well-behaved and interested, I should let them use compasses. They thus come to know the square, the rectangle, the triangle and the circle, and they can draw a square and a rectangle to certain sizes. With the better of the retarded children, you can tell them the word "radius", and they can draw a circle to a given radius.

At this point, folding paper work is very useful. Give each child a square of paper, say side of 15 cms. Tell the child to fold it very carefully so that one edge lies along the opposite edge. Now tell the child to cut along the fold. The child now has two figures. The question is: what shapes have you now? Are they squares? Are they rectangles? Yes, they are rectangles. Now, take one of those rectangles, fold it along the longer side so that the short side there coincides exactly. Cut along the fold. What shapes have you now? Two squares. Smaller than the one you started with. Also by folding and cutting squares and rectangles we can show them how to make triangles. Now be sure to have in the classroom examples of squares, rectangles, triangles and circles, cut out of wood or hardboard.

At the same time, I'd suggest that you introduce the children to solid figures. These are very important in our culture, but you must have good models. You may be able to cut these out of timber yourselves, but you must get some good models from somewhere. At this stage, I should only have three: the cube, the rectangular block and the sphere. I should leave the cylinder and the pyramid until later. With some retarded children you will never that far. You can have lots of fun in asking questions about these solids. Take the cube. How many faces has it? How many edges has it? What is the length of the edge? What kind of angles do the faces have? How many of these angles are there in each face? This is an extremely good mental exercise for them; and they've got it there in front of them to help. They can touch it, finger it, point to it, and count. You can

do exacly the same with the rectangular block. But you can't do very much with the sphere except point out its name. Retarded children will not understand that a shepre is obtained by rotating a circle in three dimensional space. But, there are plenty of examples of cubes and rectangular blocks and spheres in every day life, and these are important shapes that must be introduced to retarded children in our culture pattern.

Another idea which we should try to get over the idea of symmetry. We can do this in two ways. It can be developped from folding paper work. Here is a simple rectangle which has been folded about its middle. We make a simple cut in it along the edge. Then we open it out again. We have two cuts now. You have introduced the idea of symmetry or balance, or evenness. This is important in our craftwork. Here's another way to introduce it: Take a sheet of paper. Throw some ink on it, or black paint. Fold it over. Open it out again. Having got the idea over, you can then study some simple shapes with children. Here are some shapes taken from my book on the teaching of arithmetic. The shapes are of interest to the children. By studying these simple figures you can easily bring out to a child which is balanced, which is symmetrical and which is not. Well, so far we have only been dealing with centimetres. The children have learned to draw and measure with them, and we have introduced ourselves to the very important figures that are used in our culture. Then we came to some solids.

The next measuring instrument, if you like, is the metre. Here I recommend that you make yourselves a simple metre stick. Make it from wood or hard board. Make yourselves a metre stick with centimetres only marked on it. Let the children measure and record the lengths and breadths of simples objects, like the desk top, table top, a width of door, the length and breadth of the classroom. If we have to lay down the metre stick several times, we simply put a chalk mark on the floor to show where the end of the metre stick came. Thus we get retarded children into the idea of taking dimensions - the measurement of the table, or the desk top, or the room. We can express - we can record it as so many metres and so many centimetres, or in all centimetres, which you wish to use. A most important thing here is to have a wall metre scale. Have the wall scale in whole centimetres only. This, of course, is for measuring the height of the children. There is no end of amusement in this. Let the child stand against the wall, and he can put a book on his head to mark the spot. If you wish, you can make an upright with centimetres marked on, and you can have some arrangements whereby a piece of wood slides up and down, and rests on his head to take the height that way. Thus children can measure their height to the nearest centimetre. Notice we are only using centimetres, because, as I told you yesterday, my guess is that with retarded children you will not measure to nearer than half a centimetre. They will not measure to a millimetre, whereas a normal child would work to a millimetre. Now, that is a forecast, because I have never used centimetres with retarded children. We teach the metric system only to normal children.

The next piece of work I want to introduce you to is the idea of drawing to scale. The child has to get this understanding that something drawn on paper stands for something much larger. Surely you tell retarded children something about the River Amazon or South America as a whole. But how can they understand a map unless they get the idea that something very large can be represented on a piece of paper? I am going to tell you how to introduce them to this idea. I hope you do not think I am trying to sell you something that is irrelevant, but if you are going to widen their horizons and give them some understanding, you've got to do it! Drawing to scale has a very wide application. Well, here are some suggestions: if the children have no idea at all of the value of a map, take them outside the school,

into the road or into the garden, and let them sketch on a piece of paper, their idea of the school and the grounds. It does not matter whether it is a good drawing. The important thing is that they get the idea that this little map, this little picture on paper, stands for something much larger. Here are some graded steps in the teaching of drawing to scale.

Bring into the classroom a stick exactly 15 cms. long. Tell them that you want them to draw a line to make a picture of that stick. The first thing you ask them is this: "Can you draw the stick in your book just as long as the stick is?" The answer is "yes, we can", because a notebook is more than 15 cms. long. Good. The child draws a line 15 cms. long, and underneath he writes: 1 cm. stands for 1 cm. Next, bring into the classroom a stick 30 cms. long. Have several such sticks. Pass them around to the small group of children you are working with. Get them to measure them. Let them satisfy themselves they are 30 cms. long. Here's the first question: "Can we draw this in our books just as long as it really is?" The answer is "No". The picture that we make of it in our books will have to be smaller. About how much smaller? Yes, about half as long would be very nice. So that child now draws a line in his book 15 cms. long, and underneath he writes: 1 cm. stands for 2 cms. Now bring to the attention of the children a rectangular pieces of hard board or wood 15 cms. by 10 cms. Let them measure to find the exact length of the size. The question now is: "Can we draw this to full size in our books?" The answer, of course, is "yes"; Let them draw a picture of the rectangular piece to full size and underneath each child writes: 1 cm. stands for 1 cm. The child can then place the piece of wood or hard board over his drawing to see that it fits properly. If you think the child can take the word, explain that this is called "making a plan"; but he may not be able to assimilate that word.

In the next step we bring to their attention a piece of hard-board or wood 30 cms. by 20 cms. The question now is: "Can we make a picture of this in our books as long as the real thing?" So the next thing is to get a suggestion as to what we can do. Eventually we find that we have to draw this to half scale. The child then draws in his book a rectangle 15 cms. by 10 cms. Underneath he writes, "1 cm. stands for 2 cms."

Now we can begin to make a start on drawing the teacher's table top, or a desk. Something, of course, which is rectangular or square in shape. The child measures the desk or table, and finds it length and breadth to the nearest centimetre. It might be better to measure it to the nearest 10 centimetres. However we must must select objects which give easy measurements, to begin with. Next we try to measure the classroom, and I propose now we turn over to metres instead of centimetres. We can use our metre stick. Indeed, we have already done that, and we shall get the dimensions of the classroom in metres measuring once again to the nearest metre. You can then draw your plan 1 cm. to 1 metre. You have one more step, and it is an important step, but you have got to be careful to select the right areas. You can measure part of the playground, or the school garden, in metres. It must, of course, be square or rectangular in shape. Once again, you can draw to scale, part of the playground or the school garden on a scale of 1 cm. standing for 1 metre. These are the kind of exercises to bring the children to an understanding of "drawing to scale".

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E. - Datilografado em inglês pelo C.O.J. do D. N.Cr. do M.da Saúde.)

AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS

DADA EM 10/9/1958

This afternoon I want to cover a number of odd points with you. Here is the report of work of one of our residential special schools. It is the headmaster's report of work for the year ending 31/7/57. I want just to tell you about a very few points out of this report to let you see the sort of things that happen to these boys and girls when they leave our special schools. There are 117 boys and girls in this school. Their ages range from 11 to 16. It is situated in the country. It has a farm attached to it. The building are not very nice; it is a bit cold there in winter, but the children are very happy, and a good standard of work is being reached. Remember, our special schools are catering for children whose intelligence quotients lie roughly between 50, 70 to 75.

In the year ending 31/7/57, eleven boys and six girls left the school because they have reached the age of 16. These are the jobs the boys went to:

- Employed on farms: 2
- Prospect of farm work: 2
- Employed in market gardens 2
- Employed in bakery: 1
- Employed in painter & decorator's business: 2
- Employed in mining: 1
- Prospects of employment doubtful: 2 (not able to earn a living)

Here are the girls:

- Domestic service of various kinds: 3
- Prospect of domestic service: 1
- Employed in a textile mill: 1
- Prospect of work in a textile mill: 1

Now I would like to tell you about the employment to which all leavers have gone since the school opened about six years ago.

Boys: -
- Working on the land: 14
- Prospect of working on the land: 2
- Working in industry: 11
- No immediate prospects of work: 2
- Unemployed: 3

Girls: -
- Domestic work of various kinds: 8
- Prospects of domestic work: 1
- Working in industry: 8
- Prospects of working in industry: 1
- Unemployed: 5
- No recent information: 1

The majority of these boys and girls are working already, but you will have a percentage, perhaps up to ten percent, who can't earn a living unless they are in sheltered employment. I thought these actual figures would give you a better understanding of our position than just telling you what would happen.

The headmaster writes here that he has been able to keep in touch with many former pupils through the Youth Employment Service. (Our Youth Employment Service is to help all young people

find employment, whether they are retarded or normal). He also says that he has been greatly encouraged by the efforts the children make to keep in contact with the school. Now remember, this is a residential school, and the children are coming from 20, 50, 100 kms. away. He says that most week-ends they have visits from children who have left the school. On one Saturday we had no less than 9 former pupils come to tea.

Now just a little about entertainment and recreative activities There is no closely defined boundary between educational and recreational activities. The planning and arrangement of expeditions, the arrangement for receiving and entertaining visitors, the arrangements in connection with concerts and dramatic activities, have provided hours of enjoyable and useful effort.

This summer a new venture has been started. Week-end camping has been started near the coast, and this is being useful in developing initiative and effort. I will have this report (headmaster's report) on the table during the break and those of you who can read English can read it.

I now want to tell you about a new activity that has been started by another of our special schools. Here is a map of England. There is London, there is Leeds. Here are the Pennine Mountains; here is a very nice place in the mountains. In Leeds there is a large special school which 2 years ago, acquired an old cottage here in the mountains. The cottage was not being lived in, and the teachers themselves and the pupils renovated it, and they have used this cottage as a place for serious work with the children. Here are some details.

Hunslet Lane Special Day Special School is for retarded boys and girls up to 16 years of age. It is situated in an industrial area of Leeds. The children come from very mixed backgrounds. A few come from good homes with sympathetic parents, but the general picture is that of a slum background, with a very poor cultural setting and little opportunities for experience. The parents themselves were often brought up in similar circumstances, and with their own outlook confirned to earning a living and simple pleasures, they are unlikely to stimulate wider interest in their children. These children are also often subjected to considerable emotional strain. There are large families, overcrowded homes, parental neglet, personal failures. Children over-protected by their mothers, are also perhaps an even greater problem. Typical of this are boys of 10 and 11 years of age, without physical defect, who are dressed and undressed by their mothers. Some of the 15-year old boys live in an orphanage, and they have been sent to bed regularly at 7 o'clock at night, and they have not been allowed out of the orphanage grounds except to go to the cinema on Saturdays, church on Sundays, and to school on week days. It is not surprising that with mental limitations, their lack of stimulus and their life record of failure, most of the children are rarely ready to show initiative. Now these are the aims of this cottage venture on the mountains. It is hoped to extend general and social backgrounds, to extend their experience and interests, to link such experiences with their school work, and by giving them opportunities for the use of initiative. The cottage is 65 kms. from the school. There is a river running alongside the cottage, and it is shallow enough to act as a playground for the children. There are woods within easy reach, caves, moorlands, disused lead mines, farms and a variety of plants and animals and birds which are new to the children. Children visit the cottage either for week-ends, from Friday to Sunday, or during the holidays, for a week at a time. There are four bedrooms, so they can have mixed parties of boys and girls. Sometimes they have all boys there, sometimes all girls, sometimes mixed. Each child is reponsible for his own bed, his own property, and his own cleanliness. The domestic routine jobs are all done by the children. These boys and girls give a lot and learn a lot - from

learning to light a fire to cleaning a room properly, to wash dishes properly, and to cook simple food, under supervision.

After breakfast the cottage is cleaned, and the children then go on a whole day's expedition into the country. A picnic lunch is taken, and a cooked meal is eaten in the evening. The walks are usually from 10 to 20 kms. Longer journeys are made by picked groups. At first the children walk with the teacher, gaining knowledge of the district on how to travel through it. They are taught to behave properly in the country, to keep to footpaths, to shut gates behind them, to face the traffic when on the roads, not to throw waste paper about; sketch maps are prepared beforehand. These expeditions stimulate the children's conversations for a long time afterwards, and they are a very important part of the routine of the cottage. When all the different parties have returned at the end of the day, they tell each other about their own travel and observations. This is usually done while eating the big meal. There is usually great rivalry about which group has seen most, been furthest, brought back the most interesting specimens. Motivation is the most extremely important factor in extending and enriching children's lives. The children are also allowed a certain amount of free time in which they can explore or play on the road. The river is usually their playground. They like building and sailing logs, they like swimming, fishing. They also, of course, take football equipment and cricket equipment there. There are art materials and indoor games for wet weather, and there is a billiard table which is very popular; but the children are encouraged to be out of doors if the weather is at all suitable; though there are always one or two children that always want to stay by the fire. It is the orphanage children we usually find like this. Maybe the institutional life has made them so docile, so lacking in initiative. Now this cottage is for some of the children their first experience of rural life. Coming from the big city, they are surprised at the friendliness of the stranger in the village. Many of the children come from homes or districts where there is a certain amount of stealing and shoplifting, and they are very surprised to find that in the country the people leave their property unprotected. For example, they found one day a boy had left his new bicycle together with the pump, by the church wall while he was at the service. Outside their homes in the big cities, in the slums, it would be necessary to lock the bicycle and the pump.

Knowledge of sheep and dairy farming is gained during the walks, and the lead mines provide plenty of opportunities for exploration. The share of meals can provide useful lessons. Food is put on the table, and children are told that they can take what they wish, providing others can take a similar quantity. We find though, that the food is limited the children share it; but when there is unlimited food, we often find the children from the orphanages tend to be greedy. These children are quite aware of the number of slices of bread and butter, or jam they will get one week from tonight in the orphanages, but when the food is completely unrationed, they simply take as much as they possibly can.

Standards of personal and communal hygiene are kept before the children. A boy called Charles was genuinely surprised to find people undressing to go to bed. When the matter was brought up during a walk after his first night at the cottage, he asked the teacher why people took off their day clothes to go to bed. In reply to the teacher's answer he said he thought it was silly. "When I wake up in the morning, all I do is put my shoes on."

Most of the pottery used at the cottage was made by the children in the school. Some of the furniture was also made in the school.

Now, just a few words about the development of initiative. The

children vary considerably in their degree of independence. The program has to be graded according to their needs. The activities at the cottage are designed to give maximum opportunity for the development of initiative.

Walking Expeditions - Now here is a graded series of walking expeditions:

1 - In a party with a teacher.
2 - In a group with experienced children leading them into the known countryside.
3 - In groups with experienced children leading them into the unknown countryside.
4 - In groups without recognized leaders in known countryside Leaving notes for other parties to collect.
5 - In groups without recognized leaders on unknown ground, and using sketch maps.

A few of our children in special schools can manage to read the ordinance survey map, which in English, is 1 inch to 1 mile.

Here's a scheme of work in camping that is done at the cottage:

1 - The erection of tents and the use of private stoves.
2 - The children erect the tents in the cottage gardens. They sleep out and cook their own meals. In the second stage they camp away from the cottage with the teacher, learning further camp routine.
3 - When they are proficiente in the camp routine, they go with an experienced leader to a known place on the mountains, but without a teacher.
4 - They camp at another known place on the mountains now, but with different leaders.
5 - They go without the teacher to a new and unknown place in the mountain. They camp, and come back next day with a report on the land that they stayed on, and the name of the farmer.

These are some of the exercises that these children get out of this cottage in the mountains.

In the first 8 months of 1957, 66 boys and 24 girls had stayed at the cottage. 9 members of the school staff had stayed at the cottage from time to time looking after them. I wanted to read that to you because one of my former students actually was responsible for starting this scheme.

Though we have put great stress here on reading and writing, and number work, I told you right from the very beginning that the first thing is to get these children to live as boys and girls; here's an experiment in which we have tried to pull these dull children out of the big cities and try and give them experiences which will increase their initiative in a new situation. You may say this is something like boy scouts and girl guides, but the boy scouts and girl guides are demanding higher intellectual standards in their work than these children could undertake. Somebody here might one day think of doing something like this. The group of teachers who started this started it without any support from the local authority. They persuaded the man who owned the cottage to let them have it rent free. Now the local authority understands what they are doing and it now allows them 1 shilling per night per child. If children go to the cottage for a week-end, they pay 10 shillings. If they stay a week, it's 30 shillings. The very poorest children can't always go. There is the drawback that the teachers would have to pay out of their own pockets if they took them. Though you know we have some very good special schools for educable retarded children in England, this is a very good example where something extra can be done, privately at first, and then helped by the local authority.

I brought out many case histories with me from England, but I shall only have time to tell you about one or two, because we are not going as quickly as I thought we were going to when I left London.

I willbegin by telling you about a boy who will be 11 years of age on the 20th of this month. There is nothing wrong with the boy physically. His I.Q. measured on the Terman Merrill Revision of the Binet test and on the Wechsler Intelligence Scale for Children, is about 73 to 75. The school medical officer makes it higher, but I disagree. This boy is in the special class in the regular school; in addition he has been coming to the Children's Center at the University of Leeds for 2 years. He works in a group of children in which there are no more than about 3 in the group. Our students are good teachers. The University insists that they have 5 years' teaching experience before they come to the University. We have tried very hard with this boy. We have tried everything we know, and we can't get him to read a single word. He can't even recognize his own name. Remember he is fit physically. He has a reasonable intelligence score, 73 - 75. He has had good teaching, but not a single word can we get him to read. I want you to know about these cases, because you are going to meet cases like that, and you are sometimes very discouraged. But have patience, other people are finding just the same. First of all, I will just show you this picture. Well, his name is Donald. He was born in Ireland. Here is the list of his I.Q.s; on three different occasions his I.Q. has varied between 73 and 75, except when the school medical officer does it, and then he makes it higher. On attainment tests, that is to say, reading or arithmetic, his attainments are nil. He was sent to the University of Leeds Children's Center as being extremely backward. He is physically sturdy, and has no obvious defects apart from speech, which will be mentioned in a minute. There is no known history of illness. The boy appears to be generally healthy. He is clean, and adequately dressed, but a bit untidy. His father is a bricklayer, and his mother is at work too. There are two younger sisters. The mother and father are rather elusive. Three visits to the house have not produced them. The headmaster of the school also says that the mother never comes to the school when he asks her to. If Donald goes for examination by the school officer, his parents never take any interest. The home appears to be disorganized. If outings are arranged at the centre, he always tells you that he is coming, but he never turns up. The overall picture of Donald's parents is one of no interest in his progress. Donald's early schooling took place in Ireland, where his schooling, of course, was in Gaelic. It is possible that this has had something to do with his inability to read English, but he could not have learned very much Gaelic, because however much you try you can't get him to say anything in Gaelic now. Donald appears to be a well-adjusted, lovable little boy. He is certainly very well-disposed to us at the University Centre. He is on good terms with the other children in his small group, but his particular friend is a boy called Joseph, who is a coloured boy. The headmaster of the school also says that Donald is not at all troublesome, and will not attack other children unless he himself is first attacked.

Donald has one defect , he has a speech defect. He is inclined to speak out of the side of his mouth. Now last February I had him examined by a speech therapeutist, and she confirmed what we knew, that the boy suffers from what is called "lateral sigmatism" - all it means in plain language is that he speaks from the side of his mouth. The important thing, of course, is why does he do it? Very rarely, a child does it because of faulty dentition but it is quite alright. The other theory, which is advanced by psychoanalysts, is that it is a symptom of repressed aggression (repressed resentment and aggression). I'm not going to take any sides on psycho-analytic theory. There is no doubt that the father of all psycho-analysts, Sigmund Freud, was a very great man, and we can say that he is a Copernicus of the mind. Some of the theories he

advanced, undoubtedly, are a help to us; but other theories which he has advanced are of unknown value. The theory of the ego development might prove helpful. It is the theory of psycho-sexual stages which has been most severely criticize. I'm going to take a strictly neutral line here. I am simply going to tell you what psycho-analytic theory says, because franly, I do not think there is enough experimental evidence to suggest that the theory is by any means fool-proof. I must say very clearly that there is the gravest danger in all the sciences connected with human beings, of making up theories. Well, of this I am definite, Donald speaks out of the side of his mouth, and it is said by psycho-analytic theory, that it reflects repressed resentment or aggression. Some of psycho-analysts will go as far as to say this: that if the child is speaking to a person on this side of him, speech will come out on this side. If the person is that side, speech will come out that side. It does not happen so with this boy. He always speaks on the same side. You see, psycho-analytic theory likens it to the "snarl of the wolf". Well, now, the treatment of this lateral sigmatism is extremely difficuld. It is probably the most difficult condition to tackle apart from stuttering, stammering. Now, you might ask, why have we not sent this child to a psychiatrist? Well, the department of psychiatry in the university is a department and I can get him there if necessary. But psychiatry can give that boy no help. If I thought there was the slightest chance of that boy being helped by psychiatry, I would have sent him. Again, there is the school medical officer who is employed by the Leeds prefeitura, and has nothing to do with the university, so he is independent of me. He also has not suggested that psychiatry could help the boy. Suppose we sent him along; well, they might make up some big story that he had suspected birth trauma. What good will it do? How will it help him? My guess is this, that they would send him back and say there was nothing they could do for him. I get immediate help for any child where I think it is necessary. But I want you to understand that I do not make up big theories to explain things I do not know. It does not get one anywhere.

Well, Donald has been working with good teachers. They tried all kinds of approaches - just about everything that I have told you. Donald is a boy with very few interests. His interests are so few that he is now hanging around the city. He has been reported as hanging around the market place, and soon he will be in trouble with the police. We did find just one interest of his - motorcars. Now, we gave Donald all kinds of books about motorcars. We put him in a motorcar - we even put him in a racing car. In the picture he is with his friend the coloured boy. That car will do over 200 kms. per hour. It is a real racer. There he is now at the wheel. We have played up to him in every way, but it is no good. He can't remember a single word. He can't even recognize his own name. It is quite possible that the early learning of Gaelic has done something which we do not understand. What are we going to do with a boy like this. That is the problem we have to face. Our view in England is this: that a child has not begun the elements of reading in a mechanical fashion by 10 or 10-1/2 years of age, the outlook is poor. They rarely get very far. I fear myself, that unless some kind of immediate help is given to Donald, there is every change of him getting into trouble with the police, because his interests are so few. Do those of us who can read realize how much of the world is shut away from those who can't? Up to now he has been in the special class of an ordinary school, and he has been coming to the remedial centre of the university. Both institutions have failed with him. I admit frankly, we have failed. We do not know why. What should happen now is this, he should go full time into a special school, and I'm trying to arrange this I'm sorry the outcome of this boy is not more happy. We have tried everything, and we just can't do anything with him. He is not violent; he is not aggressive; he is not

difficult. He will sit down with his books, and his writing materials, and he will amuse himself for hours. You could take him out in the playground and play cricket or football with him; he will play better than other retarded children. He is quite capable of running hard and playing fast games. He can put out six things and write six; he can put out 8 things and write eight. In other words, he has a slight beginning of number concept, but there is no attempt at all at his part to add, say, 5 + 3.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E. Datilografado em inglês pelo C.O.J. do D.N.Cr. do M. da S.)

AULA DO PROFESSOR KENNETH LOVELL
Nº
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 11/9/1958

I finished yesterday talking to you about "drawing to scale". We must now just mention the word "Area". This is an important concept, but very difficuld for retarded children, but we must try and get the idea over in some way. Now what is area? What do you understand by area? Well, here's a suggestion for you. The area of a body, the area of anything, is the amount of its surface; and you want to get down with your hands on the table and spread them out and show the child that all of this is the area of the table top. Here is a book. This is the area of the cover. This is a table. This is the area of the table. This is the floor. The cleaner sweeps here, here, here, all round it, all the surface. Now with retarded children you will not get much further than that. Of course, with normal children we have to go much further. We have to explain the need of a new unit, the square, the square centimetre, the square metre, and for normal children we can go further and say that the area of a body has its measurements in squares, and then we lead on to the measurement of the area of squares and rectangles. But not with retarded children. Certainly you could show with lengths of wood the area of a piece of timber, but only very few retarded children can be taught to calculate area. But you must try to get over the meaning of the term "area"itself.

Then there is the term "volume". A very important term; but very difficult to get retarded children to understand. The best approach is to have some boxes in the classroom of different sizes, and point out to them that volume is the amount of space. I do not know if your children are so interested in space and rockets as ours are, but the word "space" in England has a sort of romantic ring about it. Now volume is the amount of space, it is just this. With different size boxes you can move your hands about inside them and show them the different amount of spaces in them.

I doubt if normal children get the concept of volume until they have a mental age of about 10. So only few retarded children are going to get a concept of volume. Of course, with normal children you would go on much further than this. You would introduce them to the need of a new unit, the cubic centimetre, the cubic metre; the volume of a body then, is its measurement in cubes, whether it is in cubic centimetres or cubic metres, and with normal children we go on to show how to find the volume of a cube. But I think I have said all that is necessary about area and volume for retarded children.

Now to discuss "weight". In everyday experiences the child meets situations where the words "heavy"and "light", etc., are used, and slowly he gets to understand their meaning. In the Free Choice Activity periods, we hope that some understanding of these and other similar words will be gained; but the school had much to do for normal and retarded children in helping them to make their own judgments about weight. This judgment will have to be exercised in school life, and later adult life. The child is helped by activities which give him practice in comparing the weights of objects. This can be done in two ways:

1) Let the child pick up objects and distinguish by muscle sense which is heavier. Children can then practice this with their eyes closed. The game could also be played by getting the children to look at two objects. By writing down the one they think the heavier, and then each lifting the two objects to see if their guess are correct.

2) Miming is also helpful. Children can mime the scene in which

a man is struggling with a heavy bucket of sand, or a sack on his back. Another child can pretend to have a feather on his hand which he blows in the air. Another child can pretend to have a heavy bucket in one hand and a light bucket in the other.

This is the first approach. The second approach is through the use of scales. Every school should have a pair of scales or balances. With scales children can find out which of the two objects is the heavier without touching them. To begin with, of course, they do not use standard weights. They merely weigh one object against another, and get the idea of balancing. For example, a pupil can be balanced against a bag of sand. Sand is put in, or taken out, until there is balance. Balance varying amounts of sand against all manner of material, clay, wood, beads, nuts, shells. By this means children will find that a small amount of one material sometimes balances a large amount of another material. From this point you can lead on to the need for a standard weight. Here then you introduce the children to kilo, 1/2 kilo, 250 grams, 125 grams. Now have plenty of balancing of 1 kilo against two 1/2 kilos; 500 grams against two 250 grams, etc. Have 100 grams as well, and 50 grams. Be sure that you have plenty of these balancing exercises in which one weight is balanced against similar weights.

It is your wish that I give you two more case studies. I have picked out the records of two children, one boy, one girl; and we have not been very successful with them. Of course, I do not want you to think that we are not doing any good at all, but there is not much point about telling you children that we are succeeding with. I'm telling you our most difficult cases, and you can make up what stories you like to explain these.

Here's a girl: She is called Lorraine. She is age 10 years. She was 10 last May, so she is about 10 years and 5 months now. She is a pleasant looking little girl, a little above average height for her age. She has auburn hair which is usually neatly tied with a ribbon. When she attends the University Children's Centre, she is well-dressed, and gives the impression of being well cared for. When she is playing around at home, she looks cleaner and better dressed than her companions. She readily shows her feelings, being quick to smile or to sulk. Now you see, this is the reverse of the boy I showed you yesterday. She is well dressed, well looked-after, and we shall see in a moment the mother is too anxious about her. But she is still not reading. In her medical record, there is no history of any serious illness or injury. Her vision and hearing are reported quite normal. She lives in an old house in a poor district, but the home adequately furnished, and very clean and well-cared for. The family is on good terms with its neighbours. Lorraine's mother is an intelligent, house proud, working class Irish woman. She is ambitious for her children, and she welcomes opportunity to discuss Lorraine and Lorraine's difficulties. Lorraine is the youngest of 4 children. Michael age 18, Maureen 16, Elaine 13, and then Lorraine. For some reason that I have not been able to find, the boy Michael, age 18 years, will not live with his parents, but I rather think it is some fault with the parents and not the boy. One of Lorraine's older sisters torments Lorraine about her reading ability. The older children are worth looking at. Maureen, who works at a cosmetics counter in a large chemist shop, is the sister who is Lorraine's closest friend. The two girls share the same bed, while Elaine uses a single bed in the same room. During some cold weather in the winter, the parents tried to insist that the 3 girls slept in one large bed, but one daughter would not agree. Michael, age 18, is a joiner's apprentice, and he lives in a lodging in another part of the city. This is strange, as Lorraine's mother takes in lodgers. The mother has talked a lot about her son Michael, but she never mentions that he would not live at home. The mother was ambitious for Michal, and she was disappointed because he did not go to the Secondary Grammar School at 11 years of age. The father is said by the mother to spoil Lorraine, but he complains

that the mother does not defend Lorraine from Elaine, who teases her. But the father himself loses his temper when Lorraine tries to read for her mother and fails. The mother taught Elaine to read before she started school, at the age of 4 years. She tried to do the same with Lorraine, the girl we are interested now, but her actual words were these: "She would not attempt, she only wanted to play". You see how anxious Lorraine's mother is. She started to try to teach Lorraine when she was 3 years old, and she has been trying to teach her ever since. Naturally, Lorraine is very anxious about her reading. Her mother describes Lorraine as old-fashioned, but what the significance of that is I don't really know. When Lorraine attends the University Centre, she is always anxious to please. She puts away the chairs, and washes the cups without being asked. At home she is also very helpful about the house, and she likes to go errands for neighbours. Lorraine gets distressed if her mother is not at home when she returns from school. All the members of the family, except Michael, have tried to teach Lorraine to read, and all of them lose patience with her. The mother says that Lorraine's dearest wish is to be able to read better than her sister Elaine. This is a completely different family from the one yesterday.

What are her test results? Two examinations on the Terman Merrill - Binet test give and I.Q. of 80. The latest reading age we have for word-recognition taken in May this year gave us 5.7 years. She has only begun the first elements of reading. At the school to which she goes, there is little effort to give children individual work. The children attempt the same as the rest of the class. You see, we have some bad schools in England. The teacher says that the bottom 15 in the class are "deadwood", and Lorraine is one of the 15 that can't read.

Reading lessons were used for reading round the class, from the same reading book. The teacher sits Lorraine with a good reader, in the hopes that she would pick up something. The teacher said that Lorraine is always very anxious to help, or to find something that she could do properly. The teacher thought that there had been a very slight improvement in Lorraine's attainments this year.

It is quite true that he mechanical arithmetic is better. Her mechanical arithmetic age is somewhere between 7 and 7.1/2. Her school attendance is always very good. At the Centre, at the University Children's Centre Lorraine has been friendly and cooperative. Shen she first came she used to seek attention, but she is better now in this matter. Her attitude to the work depends on the difficulty of the work. She will not face up to any small difficulty. The work has to be very carefully graded, because once she comes up against some small difficulty she runs away from it. She is friendly with the other children, in general, but in the small group in which she works, there is also a boy who seeks attention. She quarrels with him sometimes because they are fighting for the teacher's attention. She very often asks for a book to take home so that her mother can give her extra reading lessons. Her mother does this in the lunch time, when she and Lorraine are the only ones in the house. We have tried Lorraine on many readers. The one we find gives slight progress is the Royal Road Readers Book. Just before the end of the University term, she was working from it. I listened to her read. She would complete the words, complete the words alright, if they have a picture, but when one covered the picture and she had to read the words there was great hesitation. You can sense the sort of level at which she is. We tried to get her interested in giving some material for the teacher to write down, and we did get her interested in making a book on "Ladies' Fashions. The teacher wrote the sentences down, and she read them by "heart", but there was no transfer whatever to any other reading material. She greatly enjoys the "Art & Craftwork" which is done in the University Centre, and she works in a wide variety of media.

What are the likely causes of her failing to read? Well, these are only likely causes. We can't say that this is the cause, but it is possible that there is over anxiety in the girl. This could have been handed on to the girl genetically from the mother, or the girl might have acquired it from the atmosphere of anxiety which is in the home. It could have been poor teaching in the early years, or it could be that the low level of intelligence that she has, her I.Q. is about 80 associated with these other conditions, has brought about her inability to read; but one has to be very careful, because other children of less ability, and as much anxiety, have learned to read.

I know you will have many theories about this boy. This boy is completely English, and he has been going to State School. He is now 11 years 5 months, and he is very tiny for his age. In personal appearance he looks a bright little 8 year old boy. He is clean and tidy and is very active. He is healthy. He smiles readily, and has attractive features, but if you watch him carefully, there is an underlying solemnity to his actions and expressions. His medical record shows that he has had no serious illness or injury. His vision and hearing are recorded as normal, and when he was 10 years 8 months, his weight was only about 24 kilos, so you can see he is tiny for his age. This boy whom we will call Ronnie, lives in an orphanage with 13 other children, including his two brothers. The house mother at the orphanage appears to be very capable, and she is very interested in the children. Ronnie is the oldest of the three boys. His brothers are age 8 years and 6 years. His mother is at present living in one room, with a man and their illegitimate child. The father says that he will take his boys from the orphanage if he can find accommodation, but we are not sure if the man is very reliable, and it is unlikely that Ronnie will return to either of his parents. Ronnie does not know this, and he believes that although he has been in the orphanage now for two years, it is only temporary accommodation for him. Both parents have visited him occasionally, separately of course, but the visits are now said to be getting less frequent.

When Ronnie was very young, he had to defend himself. When he was 6 years old, his mother was sent to prison two weeks for keeping him away from school. At that time Ronnie used to sit up very late at night waiting for his mother and father to return from drinking parties. Ronnie is on friendly terms with his brothers and with the other children at the present orphanage. He has had six changes of address and eight changes of school. He lived with his grandmother for a short time. She was said to be his main stay until she died. One of the brothers is under therapy at the Leeds City Child Guidance Clinic. In the home or in the orphanage he is very quick to learn new games, very adaptable. They often play "I spy" games at the orphanage, but Ronnie can't join in because he can't tell the initial letters of many of the words, although he has improved in this respect very recently. He is a member of the Wolf Cubs, but he can't pass some of his tests for his first badge because for some while he could not tell the time. Recently he has managed to do this. Ronnie tells the children in the orphanage that he does not want to learn to read, and that he is never going to go to work. At the school Ronnie sometimes is naughty, but in the whole he is well-behaved. An older boy in the orphanage says that Ronnie is always begging from the other boys. This tendency to beg, to ask for things, is also reported by the headmaster of his school, and is also noted by my students.

At the University Centre Ronnie has been very active and happy, but he finds it very difficult to concentrate on intellectual work. He tries to do his work too quickly, and will not attend to details. It was only during this past summer term that he really began to examine words before he started to read them. Previously he said the word if he recognized it without effort, but guessed

wildly if he could not spot it at once. During this term too he has learned many of his letter sounds, and can fill very simple words. His attitude to work has improved. He has worked through "Adventures in reading", Books 1, 2 and 2A. He has shown interest and ability in craftwork, and in compiling a book about "Cubs & Scouts". Until the summer term Ronnie could not or would not make the effort to recall letter sounds when asked to do so. When told to go to a set of cards on which there are word pictures and their initial letters from which one could find out the letter sound, Ronnie would often make a mental effort, and recall the sound without going to the trouble of sorting through the cards. Tonnie's laziness appears to be a symptom of his condition rather than an initial cause. Well, what are some of the possible causes of his rate retardation? Disturbed life and lack of security? Or absences from school at an early age? You remember his mother was sent to prison. Or perhaps sheer physical exhaustion due to bad food and neglect? Or perhaps eight changes of school between the ages of 5 and 9? Or perhaps the effect of this early failure has now produced an attitude where he does not intend to read.

Now, I will just show you his picture, just to show you what a nice little chap he is.

From this simple piece of apparatus, the child can see that the whole is made up of two halves, and the half is made of two quarters, and the whole is made up of four quarters. Next, you can do exactly the same thing with pieces of string, and if you want to introduce them to the idea of thirds, then cut your second piece of string up into three equal parts.

Now we come to drawing. We can have a child draw a line 1 cm. long, and we can divide it into two halves, at the half centimetre mark. Then we can have the child draw a line ten centimetres long, and we can divide it at the 5 centimetre mark; that too will give us a half. The child can ten cut the line into two parts, and these halves may be put together. The child can then divide the 5 cm. lines at the two and a half-centimetre mark. Once again, we have a whole, halves and quarters. Now note that all those fractions have been worked in an activity that employ the concept of length only. It is all right because the concept of length comes early. Some teachers start up with area, they have square paper. If the child hasn't got the concept of area, why should he recognize that half of the square, is, in fact, half of the area. This applies to the wooden or plastic circles that we have cut out into quarters and thirds. It is better to start with lenghts of string.

Now, another early concept is the concept of number. Tell the child to place out 10 counters, tell him to divide them into two equal halves. That's alright, because he's got the concept of number. Of course, if he hasn't got the concept of number, you would not be so foolish as to try to deal with concepts of fractions at all, would you? Or, you can have half the class stand up, or half the children put their left hand up; give up pencils to half the class. All these kinds of activities are alright because you are employing the concept of number.

Let's have a look now at some of the methods of introducing fractions that involve area. First of all, you can have a square or a circle nicely cut up into four equal parts, or three equal parts. You can demonstrate this on the blackboard, or you can have this in nice plastic or wooden circles, or squares nicely divided up into sections. That's one approach to introducting fractions. Then again, you can give each child in the group a paper square. First of all, he folds it over, cuts it into two rectangles, each is a half - say "a half", and write ½ a half". Then he folds the rectangle over again cuts, and he gets 4 small squares each a quarter of the whole. Then there's the use of square paper. You have, for example, a line 4 squares long, and another line 4 squares that way, enclosing a big square containing 16 small squares. The child then can count up 8 small squares and colour them; and colour in a further 4 squares etc.

The child can pour water from a litre bottle into two, half-litre bottles, and from one litre into four, quarter litre bottles. And the reverse process too - from four, one quarter litre bottles into one litre bottle. Be sure you do it both ways. One whole split into a number of fractions, and fractions coming together to make the whole.

Yesterday we were looking into this question of weight, and how we would get across to the children the idea of weight. We arrived at the stage where we had introduce them to the kilo and half kilo, 500 grs., 250 gms., etc. Now the children can be given exercises involving the weighing of articles, for example, bags of sand made up by the teacher. They record the weights in their notebook. Later on, you can occasionally give them real packets of food to weigh. With older retarded children, we need to introduce them to a simple form of weighing machine in which they can weigh each other, or weigh a small sack of corn, etc. The machines that weigh children at medical inspection time are ideal. The children can both weigh and measure each other.

Now, what about the grading of examples? Are you going to have any written work from these retarded children? If so, are you going to have them weighing in kilos only? You have to tell me that I can't answer that question. But I want to issue a warning to you about the concept of weight with retarded children. This warning also applies, to some extent, to normal children. First of all, what does the word mean? The weight of a body is the force that is exerted on it by the pull of the earth, by gravity - if you like. It is this pull of the earth, this force of gravity, which gives us this muscle sense - which weighs. Now, it is very important that you understand what we are talking about. Now this force, this weight, is a sense of "pushing down". This concept of weight, this handing down on our hands, this sense of the pull of the earth, it develops very slowly with children.

Piaget, in his recent works, suggests that the concept of weight does not develop in normal children until 9 years of age. One of my students has shown that it is probably more complex than even Piaget suggests. Normal children will acquire the concept of weight in relationship to a solid object, like a marble, earlier than they do in relationship to an atomistic substance like sugar. With any normal children the idea of weight in relationship to a stone or a marble develops earlier than it does in relationship to, say, a liquid that you play around with and change shapes with, or sugar - that you can pour and divide up into bits and pieces. You see, the principle of reversibility will operate in respect of a stone, but it will not operate at first, in relationship to sugar. Now, I'm saying this to you because many retarded children, in spite of all our efforts, will not get the concept of weight, they are likely to get the concept of weight in relationship to solids, and not in relation to other kinds of substances. Let me make it clear: they will weigh and balance and write in their notebook in a routine way, but not understand what they are really doing. The idea of the conservation of weight does not appear early in the child's life. Now, I'm not belittling all we have done. I've tried hard to put over the concept of weight to you. I do not think that weight is an easy concept for the child to get.

Piaget further suggests that concept of volume does not appear before about 11 in normal children. If that is so, it is quite certain that many retarded children will never get the concept of volume. I wanted to say that because it is most important that you understand these concepts, and the difficulty with which children form them. You can, even among adults, find great ignorance of the concept of weight or volume, and they'll perform the operation in a routine way; that's better than nothing at all. When you don't understand what you are doing, there's always a limit to what you can do, a ceiling.

The next measurement is "capacity". You remember in the free choice activity periods we recommended water play. Grown-ups

think that it is a waste of time, but in effect, the child is getting valuable ideas about capacity. The school, therefore, should have buckets, cans, bottles, cups and litre and half litre measuring vessels. That's for you, of course, we don't have litres and half litres, we have pints and quarters.

In their water play or in their sand play - these are some of the things you'll hear children say, "How many cups can be filled from this bottle? Let's pour all the sand from the cans into the buckets. How many cups can be filled from the bucket?" The children are making all kinds of judgments about capacity. They learn that a tall, narrow bottle may hold more, or may hold less water than a short fat one. This leads on to the need of a standard measure - the litre and the half litre. I'm going to leave it to you to decide if you're going to have any written exercises involving capacity. With older children, of course, we need real life activities, which involve capacity in relationship to, say, to milk and oil. The concept of capacity comes earlier in children. Do you remember the experiment I described with the water pouring? Where two vessels had equal amount of water in them? When the water was poured from one vessel into another vessel of a different shape; the level, perhaps, went up or down. Now, at certain stages, we saw that the child will say that there is more or less liquid; and then there came a stage where the child admitted that the amount of liquid was the same, ragardless of the shape of the bottle in which it was. By then the child has the concept of amount of substance. This is closer to capacity, but volume is much more difficult a concept, and does not develop until later.

Now we come on to the question of fractions. Once again the child has his introduction to the language of fractions, in the home, in the environment generally. He hears such expressions as: "Cut this length of wood in half"; or, "we need one quarter as much". Many children hear the terms "a half", "a quarter", even if they do not hear the names of any other fractions; and in case of the half or the quarter, there is very often something for the teacher to build on. It is often useful for the teacher to stop and thing of the origin of the word "fraction". It comes from the Latin word Frangere = to break. From that you can develop the idea that the whole is broken up into a number of equal parts. These equal parts are then considered as fractions of the whole. Now this breaking of a whole into equal parts needs to be done in a variety of activities. But we want to be careful about the assumptions we make regarding the concepts that children have. There are snags here that many teachers overlook. Now what are some of the earliest concepts that children make, develop?

Well, "number" and "length". I would start there: take a stick say 15 cms. long, and laber it "1" (one). Break it into two equal parts. Break it into halves and laber each part by the word "half". If you want to introduce the child to the notation, then introduce him to 1/2. Of course, with normal children we've got to do that, because with normal children we very soon go on to tell them the top figure tells the number of parts, and the bottom figure tells the kind of parts; but you won't be doing that with retarded children because you will not be going on to the four rules of fractions. Here we are, then: We take a stick 15 cms. long and we label it "one" or "whole"; we cut it into two halves, and we laber each part a half. Next, we can take some cardboard or paper strips. Give out say 3 strips to each child. On the first, they write "one whole" or "1". The 2nd strip they fold over and cut into two halves. The two halves are placed next to each other, underneath the whole - they write in "half", and write it in notation, if you likw, one over two $\frac{1}{2}$. We thus wee that one whole is made up of two halves or two halves taken together. Make a strip as long as the whole. The next step is fold it and cut first into halves, then into quarters. You can write on the word "Arter", if you like, and the numerical notation.

AULA DO PROFESSOR KENNETH LOVEL NO

CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS

Em 12/9/1958

Now the next example. "The fair little girl, with a white dress, ran along the wide street to the cake shop". Read it again and make a clear picture of the scene in your mind. Do not look at the story. I am now going to ask you a question. "Was the girl little?" "Was she fair?" "Did she wear a blue dress?" "What sort of street was it?" "Did she go fast or slowly?" "What was sold in the shop?" We are trying to get the child to read a short pasage, make a picture in the mind, and answer questions. But be very careful not to go too quickly. Up to this point the child has been reading with the teacher, and the teacher has been telling the child: "Picture it in the mind."

Here is the 1st exercise to be worked in which the child reads the story on his own. One sentence only: "One cold winter night I r ran along from home to the Post Office." (We still kept the picture of the post office door.) Here are the questions: "Was the sun shining?" "Was I going to school?" "Was it warm?" "Was anyone with me me?" "Did I go slowly?" "You are getting everything out of that one sentence. Here is another exercise with two sentences. Listen carefully. "Joan has a red ball and so has Dot. Roy plays with a blue one with spots on it." Only two sentences, and now the questions. "Who has the same kind of ball as Dot?" "Whose ball has white spots on it?" "Is there a red ball with white spots?" and so on.

Now we come to the 1st paragraph without a picture to it. Listen: "Once upon a time there were three brothers. The oldest brother was called Nick and he was a farmer. The second was called Dick and he was a miller. The youngest was called Jack and he did what he pleased all day long." Here are the questions: "Who was the oldest brother?" "Was Dick older than Jack?"

For training in reading for meaning, these stories may not suit you exactly. But the principle is clear. Start with picture and ask questions about the pictures. Then read one sentence and after the child made a picture of it in his mind ask one or two simple questions on what you have said, or on what they have read. Eventually, a short paragraph of two sentences no picture but questions on it. Now, this may well be too steep a grading for retarded children but the principle is there.

I want now to begin to cover a number of miscellaneous points that I can't put into any neat heading. First I would like to give a few points about the detection of school educable retarded children when you haven't any intelligence tests or skilled help available to you. You will all recognize the symptoms and I don't suppose I am going to tell you anything new, but at least we will put them into a short summary:

- 1st. Backwardness in speech and in vocabulary.
- 2nd. Poor response to attractive book, attractive pictures and attractive apparatus.
- 3rd. Lack of descrimination in sorting and matching games.
- 4th. Lack of persistence, of initiative, and self realiance.
- 5th. general apathy, diffidence (fail to tackle anything), lack of cooperation.
- 6th. The presence of restlessness, destructiveness, instability.

These characteristics are also presented in bright but unstable children. One symptom alone should not be considered sufficient evidence. Home conditions may affect speech and give poor vocabulary. Emotional instability may affect performance at school. Defects of vision or hearing may affect level of attainance. The conditions of school educable retardation can only be detected with certainty when a number of these characteristics occur together and are chronic.

Problem of dealing with money. Coins, but not paper notes, are sometimes given to children to play with as counters, but it is later that the child begins to realize the value of money. He only begins to realize that coins and paper notes have value in terms of goods and services. He sees that his parents, and brothers and sisters get necessary things, like food; and exciting things, like sweets, by handing over money at the shops or at the markets. Or he learns that money is necessary to ride in a bus, in a car or in a lorry. The child learns, too, that on exchanging money, usually paper notes, adults often get other paper notes and coins in addition to the goods they buy. This, he learns, is called "change". Through his experience he slowly gets to know that notes have different values, and coins have different values too. Slowly he is led to realize that there are differences in size, colour, marking, etc. At school we must use the free choice activity period and provide many opportunities for using and discussing money. Some opportunities will arrive spontaneously on the part of the child, when in free activity period he plays at shop or rides in train. But he is likely to be using money then indiscriminately, without understanding the value of the coins as such. More teacher directed activity must take place to make the meaning of money clear, for the earning of spending of money is a very important part of life in human communities. It affects their homes, the food they buy, their games, their thinking and their possessions.

The school educable retarded child must be given some understanding of the meaning of money. Teachers get the best response from children, specially school educable retarded ones, when the work is closely linked with the life of the community outside the school in village or town. To do this, we in England make great use of the classroom shop. Here the children can imitate the grown ups by playing at shop. Money calculations on paper have no meaning, unless children begin to realize that money can be used to buy things or perform services.

Such shops can be very simple and you need nothing elaborated at all. You can arrange a small display of goods on the floor, on the corner of the room. This can be called the open market. This can be seen in the country. 2nd. Goods can be displayed on a table. This is the usual kind of shop we find in the City schools. 3rd. One can make use of folding wood frame. You can use it in two ways. You can have a piece of wood put across between the bars and display the goods on the wood, or hang the objects from the wood. The advantage of this kind of shop is that it can be folded up very quickly and be put away. In England the most frequently used shop is that one that makes use of the table and can be put in a corner of the room. Some people suggest that pictures of shops may be used. This is better than nothing, but I suggest that some kind of actual shop, however simple, is better than a picture of one. Try to make the goods as attractive as possible. Give variety and interest by changing the goods from the shop when they become dirty, out of date or unattractive. You can have a grocery shop made from old cartons which hold local food cards. Vegetables can be made of plasticine or clay and painted. A sweet shop is also possible because sweets can be made

of plasticine. In England with normal children, but not school educable retarded children, we also use the post office. But we find the Post Office too difficult for school educable retarded children. We find it better to explain to them simply the work of the Post Office and have them make telephone calls, and buy stamps, etc. when they are 13 or 14 years of age, but not through a shop in the class room. However, whatever articles you sell in the shop, see that they are familiar and can be bought in the real shops. If this is not the case, then children will find the shop silly. Example: it would be possible to have pineapples in our class shop, but it will be silly to have papaya (melons, yes).

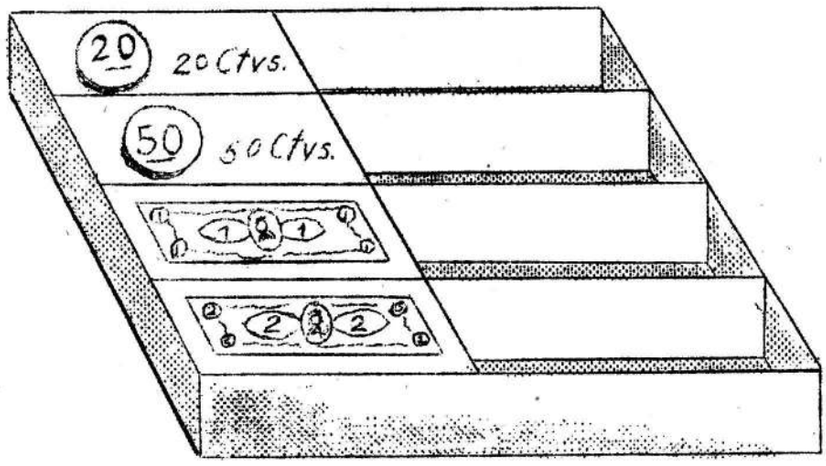
A difficulty that we have, and I am sure it is a difficulty for you too, is the impossibility of using the real price of the goods. Although we are sure that we ought to use real prices in some ways, it is no good starting English children with articles costing 3 shillings and 6 pence.

The use of the shop:

1st. Let a group of not more than 5 use the shop at a time.
2nd. Let each child in turn have an opportunity to be the shopkeeper.
3rd. Have real or imitation money. In England we use imitation money.
4th. During the early stage it is better to practice with a one note or coin at a time, so the children can have plenty of practice in recognising and using it. Let each child present a coin or note a given number of times, and let the shopkeeper hand over the article first. Later on we can give a larger note to the shop keeper, and the shop keeper can practice giving change and goods.

When the children have had experience with several coins and notes, then we use the sorting tray again. In the first compartment we sort the coins, and the notes in the second compartment.

We now have to record the purchase. At first the purchase should be restricted to one item only. The child should draw a picture of what he has purchased and the price of the article alongside. The next step is to let the child purchase two objects and draw in his book a picture of each object and put the price alongside each and find the total. I suggest that you use the same kind of note or coin first, I think you should start with cruzeiros without centavos. As we have already said we can give the idea of change from using the shop. We can also introduce the idea of subtraction of money through change. For example: "I bought _____ (name anything) for 7 cruzeiros and I pay with a 10 cruzeiros note. How much change must I receive? You have the subtraction of money right away. In England we use the money card quite often. Here is a large sheet of cardboard, or wood; divide it up into various sections and in each section, to the left, there is painted on a coin or note. You have a picture, here, of one cruzeiro note, 10 cruzeiro note, 20 cruzeiro note, and so on, as many as you like.



Here the child will place his imitation money breaking up these notes in different ways. A Cr$5,00 note will be split up in five single cruzeiro notes or in two cruzeiro notes and one cruzeiro note. It is a very useful piece of apparatus. If you don't use it you must consider it.

I am not going to work through the four rules in money. I have given you good grounding in graded steps in numbers, and you must apply the same principles when using the four rules in connection with money or length or anything else. The general idea is that you meet one difficulty at a time and see that there is adequate practice at that point. Think out carefully your graded steps.

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AULA DO PROFESSOR KENNETH LOVEL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 15/9/1958

This week I am going to tell you something of the work being done in England with what we call true mentally defective children. I want to begin by saying a little about the causes of mental deficienty, but we must be very careful what we say because very little is known for certainty in this field. Nevertheless I want you to have a brief summary of conditions as far as they are known as facts. Please stick to the facts and avoid all superstition. Of course, within 3 or 5 years, reasearch may have given us new information. There are 3 reasons why I am giving you this information:

1) As teachers you should be informed yourselves

2) By passing on accurate information to parents and the public, you can do much to influence the attitude of the public to mental defectiveness

3) You can encourage mothers-to-be, to make full use of the ante-natal clinics.

There has been much argument in the past about the relative parts played by heredity and environment as causes of defectiveness. Probably the best known text book in the world on mental defectiveness is written by the English clinician Treadgold. It is a very old book, but in 1956 it was completely revised by his son - but the Treadgolds put emphasis on genetic causes, more so than most other clinicians would in England and America.

I am going to do my best to steer a middle course, between those who put great stress on genetic causes and those who are too wildly enthusiastic about the environment.

Remember that if conditions go wrong in the uterus, and these conditions affect the growing foetus, that is an environmental effect. For a condition to be due to heredity, it must be transmitted by the germ plasm.

Well I am going to suggest that perhaps in 15% of cases, there is evidence that heredity is the main cause of mental defectiveness; in the remaining 85% of cases, the environment probably plays the major role, although genetic causes may play a subsidiary part in some instances.

In order to simplify things for you, I have divided up the causes into four main groups:

1) Pre-natal developmental disorders. The available evidence suggests that malformation of the foetus can be brought about by injury, chemical conditions, temperature, conditions, interference with oxygen supply and nutrition. One example of a pre-natal development disorder is underdevelopment of the size of the brain as a microcephalic children, although this condition can also be brought about genetically.

Mongolism is another well defined example of a pre-natal developmenal disorder. These children occur once in about every 900 pregnancies in Great Britain. The cause remains obscure, although it is possible that, for one reason or another, the mother is unable to provide proper endocrine gland balance for the foetus. We shall discuss this again later.

If a woman has blood in which the Rh factor is negative, and she is carrying a foetus whose blood is Rh positive, then toxic substances are produced. These substances when they reach the foetus, may cause damage to the blood, the liver, or the brain. At birth such children may have anemia, jaundice or a form of paralysis. Efficient treatment can be given in many cases, but sometimes mental defectiveness or cerebral palsy may result. Again, a woman who has German measles during the first three months of pregnancy may have a defective, blind or deaf child. If the expectant mother develops rubella during this period then she should obtain immediate medical advice and she will probably have Vitamin A preparation. In England and America, serum is being given to women who are merely exposed to the infection.

A woman suffering from syphilis may affect her off-spring, usually through the placental circulation and there is no doubt that syphilitic infection of the embryo can produce mental defecti veness. In England, now, syphilis is very rarely a cause of mental deficiency, and I understand that the frequency of syphilis has rapidly fallen here too, due to the efficacy of modern drugs.

Then there is the question of abortion - it is very difficult to decide if abortion does cause mental defectiveness, it may do so in some instances. It is quite true that the substances usually taken, such as in English "Quinine, Apial, Ergot" are powerful poisons, and they seem to have an effect on uterine function, but it is very hard to say to what extent they will cause mental defectiveness. There is of course considerable danger that the foetus will be injured if there is any attempt at surgical interference by the mother hereself or other medically unqualified persons.

That I think is a fair position of what one might call prenatal developed mental disorder.

The next main group is that of birth injuries. Many of the cerebral palsy defects in children and some mental defectiveness are due to birth injury. Complications may arise just before or during the birth process. Abnormal labour may do gross damage to the brain and asphyxia during birth may have a serious effect on the cells of the cerebral cortex through lack of oxigen. During both the pregnancy and the delivery, there are a number of conditions which may cause oxygen deprivation and result in irreparable cell damage.

If in the resulting off-spring there is great physical disability, as sometimes happen in cases of cerebral palsy, we must be sure that we do not underestimate the intelligence of the child. Some cerebral palsy children are of normal or superior intelligence. We must be aware that a child's motor development can be considerably affected but his intellectual development might be less affected. Note, too, that a small proportion of cerebral palsy cases are brought about by genetic causes and are not due to birth injuries or rhesus incompatibility.

Children who have suffered birth injuries often have epilepsy as well.

Now we come to the 3rd main group of causes. These may be termed metabolic disorders, or disorders of body chemistry in simpler language. Those of you who have studied biology will remember that the term metabolism relates to the building up of complex substances from simpler ones, and the breakdown of more complex bodies into simple ones. If you are not very familiar with these terms, think of the problem in terms of body chemistry.

A number of metabolic disorders have been discovered which

give rise to mental defectiveness. These disorders in body chemistry are due to genetic causes and the mental defectiveness is a side-effect of the incorrect body metabolism.

The best known condition is a disorder known in English as phenylketonuria; the condition can be diagnosed by the presence of phenylpyruvic acid in the urine. Sometimes there are accompanying skin diseases, convulsions; in my country, many of the affected children have fair hair and fair complexion and they show no obvious distinguishing features. If there are other brothers and sisters in the family who are normal, the child suffering from phenylketonuria will be lighter in hair colour than the others; the child may not be a blonde, but he or she will be lighter. Whether this is so here in Brasil I have no idea. Treatment involving a special diet has been tried in England to alleviate this condition, but it is too early to say what value it is going to have.

We now come to the 4th main group of causes. Mental defectiveness caused by injuries and infections after birth. First of all there is straight forward injury. Severe injury may cause defectiveness through damaging blood vessels with subsequent hemorrhage which damages areas of the brain.

Second, there are the infective fevers. Most children in my country, suffer one or more of the following infections - measles, mumps, and perhaps scarlet fever, but without lasting effect; but in a few children, if the disease occurs in the first two years of life, there is poisoning of the brain cells which permanently damages the central nervous system. After about 2 years of age, such disorders do not appear to have such serious consequences. In this group, we also have "whooping cough". We get very frightened in England when babies get whooping caugh, but at 5 years of age, whooping cough is distressing to those listening, but the child does not usually come to much harm.

The 3rd cause here - inflamation of the brain tissue itself, encephalitis and inflammation of its covering, meningitis, often leave permanent damage. The resulting intellectual defect may be severe; even if it is relatively slight, it may be accompanied by severe behaviour disorders of an anti-social nature.

Under this heading, too, comes malnutrition or under-nutrition. Severe under-feeding or incorrect feeding may retard mental development, particularly if vitamins are missing. The body chemistry is then affected.

Long illness in early childhood can also effect body metabolism - in most cases improved feeding or better health enables the body metabolism to adjust itself and some improvement in the level of intellectual functioning is noted; but in a few cases there is no improvement.

These then are the four main groups of causes. I have simplified the problem for you but I hope I have not over-simplified it.

Mothers often think that a fall, usually towards the end of the pregnancy is the cause of abnormality in the child. Now while the foetus or the embryo can be injured at any time, in England it is a very rare event for mental defectiveness to be due to a mother falling at the end of her pregnancy. In most cases where the defect is caused by conditions within the uterus, things go wrong early in the pregnancy. Perhaps here too I should say a few words about epilepsy. This is not a disease in itself - it is a symptom that the brain cells are not functioning properly. This may be due to many reasons, which we cannot

discuss here, nor can we discuss the different kinds of epilepsy.

Although epilepsy is frequently found with mental defectiveness, indeed in one mental defective hospital in London - at the famous Fountain Hospital, nearly 1/4 of all the children there have some kind of epilepsy. I am sure you realize that epilepsy is also found in all levels of intelligence. You remember Julius Ceaser, Napoleon, Van Gough, the English King Alfred the Great, the English poet Lord Byron; these are just a few of the people who are said to have suffered from convulsions.

Perhaps I should mention under group 1 pre-natal development disorder, the danger of X-rays, or gamma rays from atomic or thermo-nuclear explosions to the pregnant woman. I expect you have all read something of the very serious discussions that go on in England and America about the level of radio activity which is likely to endanger health.

I am sure when you go back to you states, when you are working with retarded children, you will do all you can to encourage your mothers-to-be to visit the ante-natal clinics regularly during pregnancy, so that they can avail themselves of the benefit of modern medical science.

Now let us turn to discuss, briefly, a few of the more frequently found types*/ of trainable and completely dependent children. The classification is based upon physical appearance, but I must point out very clearly to you, that most mental defectives form an indifferentiated group with no particular distinguishing features.

Although we are going to discuss some of the most frequently found type of trainable child, although what proportion of defective children are mongols no one knows for certain. A figure of 10% is probably near the mark in England. As I have already said, few things are known about the causes of mongolism with certainty. At the Galton laboratory at University College, London, we have Professor Penrose. He is professor of medical genetics and he has worked quite a lot in recent years on this problem. He has confirmed what others have found, that there is a relationship between maternal age and mongolism. The average maternal age for 1038 cases of mongolism he found to be 36.6 years - compared with an average age for all births of 28.6 years. Some have suggested to, that the very young mother is more likely to have a mongoloid child, but the evidence here is not clear. Penrose has also suggested that there is probably also a genetic cause at work in this sense. The mothers might have a lowered resistance to the effect of aging in respect of the production of off-spring with mongolism. In other words, these mothers are unable to maintain with regularity the necessary uterine conditions for healthy foetal development. On Penrose's suggestion this inability might be caused genetically.

Remember the above is a point of view for which there is some evidence, but we need lots more evidence before we accept this as certain. Note, too, that the distinguished American Psychiatrist Bender, reports that mongoloid children are more frequently born of nervous and highly strung mothers. Again, accept this view point with caution until more information is available.

Now the picture of the mongoloid child is literally that of the unfinished child. Many of you will know the characteristics of the child - short growth, slanting eyes, depressed nose bridge and large fissured tongue, flat facial features and short neck. The fingers are short and relatively thick, as are the toes, and the hands and feet are broad in proportion to the length. In this book

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*/ these only form a minority of the total number of defectives. You may know that the mongol is perhaps the most frequently found type

I have for you, you will see some pictures illustrating these points.

Mongols are rarely blind, but poor vision is the rule. They look closely at objects and short-sightedness is general in them. Some degree of "squint" is usually present too. Nazal discharge is frequent and this is particularly noticeable in children. The blood circulation is poor, quite apart from any congenital heart disease. The respiratory system is very vulnerable to infection and in England most of the deaths of mongols are attributable to bronchopneumonia, but pulmonary TB is not now often found in England, presumably because the incidence of TB is going down generally.

The mongol baby is slow to pass all the usual milestones in human development. In the least affected cases they will be sitting up by the end of the year, whereas those who subsequently turn out to be of idiot level, will not sit up, until say 5. The majority are between these extremes. Their intellectual capacities do not usually deteriorate until old age or when as occasionally happens a schizophrenic state develop in adolescence.

The progress one makes in training these children is often interrupted by the physical ailments from which they suffer. As a rule, they are placid and quite manageable - they are usually friendly although not always so. Learning takes place very slowly. They are sometimes said to be good at mimicry, but in fact they are not as good at this as normal children. Whereas the normal child soon passes to the stage of verbal expression, the mongol child continues to rely on mimicry for a much longer period to express his needs or to raise a laugh. As with normal children, their behaviour is much shaped by their environment. If circumstances are unfavourable due to a limited or unsympathetic environment, or due to overindulgence and lack of training and discipline, they may be difficult, bad tempered and destructive - but if treated properly, they can be drawn to group activity which they generally enjoy.

There is usually some initiative and curiosity in them which can be used as a basis for training. Some of the mannerism found in mongol children, such as rocking and teeth-grinding are found in other imbecile children and in normal children, but normal children tend to drop their habits sooner. However, the extraordinary facial grimaces which mongol children make are rarely seen among other defectives and may be regarded as a special feature specific to them. Mongol children have a sence of fun; they like simple games, modelling and painting. Ours like certain kinds of films too, such as animal films. Their interest in music is mainly their liking for dancing to music, or taking part in percussion band performances. They have a fair sense of rhythm but less idea of pitch.

As they approach adolescence, some of the higher grade mongols develop some awareness of their limitations. They show in a limited fashion some of the difficulties which normal adolescents show. But if we treat them as adults rather than as children, give them work to do and responsibilities to shoulder according to their ability, they do learn to adapt.

Recent work suggests that there might be an immaturity of the white blood corpuscles in mongoloids, indicating the existence of a disturbed metabolism. Other evidences also suggest that a further search for specific metabolic facts which interfere with normal brain functions may be profitable.

After mongolism, phenylketonuria forms the largest clearly defined group of cases of low grade deficiency in England. The frequency may or may not be the same in Brasil - until you have a good record of the incidence of this condition, we shall not know. I have already indicated to you that the condition can be detected by examination of urine. Most of the children suffering from this condition are in the dependent grade. A few are trainable, and the

very exceptional ones, school educable. They tend in England to be fair, or not so dark as their normal brothers and sisters. But of course this does not imply that they are all blue eyed and blond. What happens in this respect here, I dont know. A history of skin disorders is usual. The head tends to be small, and there is a small degree of microcephaly. These children are prone to mannerisms involving rapid repetitive movements of the fingers, such as flicking or twirling. Some have an ability to do some specific manual task, like spin a coin, but we find that some of them are destructibe and not easy to handle.

The next condition is microcephaly. People with small heads are known as microcephalic. A cranium circumference of forty-two centimeters is usually the measurement taken, below which an adult is regarded as a microcephalic. Obviously in children, this figure is smaller. The condition can be caused by any of the facts which affect the development of the brain, and the majority of the severe cases are due to damage of the foetus in the first three month of pregnancy. But some cases of microcephaly are due to genetic causes. The head is characterized by the narrowness of the forehead and the small circumference of the skull. There is a sloping forehead, a poor developed chin, but a face more or less normal-sized.

There are some pictures again here for you, that you may look at. While some microcephalics are active and nimble, others suffer from a degree of cerebral palsy. These may be very thin and may have poorly developed limbs, while there is also the complication of anemia sometimes. In all microcephalics there is a tendency to epilepsy and eye defects are common. The most severely affected cases are bed-ridden and completely dependent. Those of the trainable level may be very nimble, active and restless. These are usually friendly, but rather more likely to be destructive and to engage in impulsive behaviour than mongoloids. Some are school educable to a certain extent and may live in the community and learn their own living. These latter ones do not have very small heads, and there is no clear like that separates them from the general population.

Next, we come to hydrocephalics. Some children have very large heads. In the majority of these cases the abnormality is described as hydrocephalus. Now we cannot go into details of the causes, but there are groups of cases included under this term. All we need know, say, is that the head is much enlarged and globular in shape, due to an excess of cerebral spinal fluid which collects in the cavities in and around the brain. These children can be recognized by a high, wide forehead and a normal face which has the appearence of an imperfect pyramid. There are pictures here of a hydrocephalic girl. The skull is usually long from front to back.

Hydrocephaly does not always result in mental deficiency. It can be found among school educable retarded children and occasionally, in mild form, in persons of good mental ability.

Hydrocephaly is not a descase in itself, but is an anatomic deformity which can result from a number of causes. There is another useful and important distinction that can be made. Some hydrocephalics have brains which are expanding and they are getting worse. But there are those whose condition is stationary. In the former state the mental level deteriorates and the child may die. In the latter group, once the extention has ceased, improvement may follow. In this case, mental development may occur throughout the rest of childhood. Hydrocephalic children are frequently blind. Deafness is less common, but it does happen when the condition follows upon meningitis - and in Britain it was found that when the meningitis has been treated with streptomicine, this is especially likely to happen. Cerebral palsy is also likely to be present in hydrocephalics. Thus, in England we may find a hydrocephalic child at the completely dependent level, or in an occupacional center for trainable children, in a special school for school educable retarded children, in a school for physically handicapped children and, very rarely, in a normal school.

Sometimes we find that the cases of hydrocephaly have disturbances in growth, in fat distribution, appetite and sexual maturation. Thus, a case of hydrocephaly at high grade trainable level may be robust physically, may tend to excess fat, grow normally and show signs of puberty at seven or eight.

The last kind of mental defectives that I am going to describe is that known as the cretin. This condition is rare in many parts of England. I cannot estimate how frequent it is in Brasil, because it depends, in part, upon the food and the quantity of iodine in the soil. So you may have it in one part of Brasil and not in another. Some degree of reduced thyroid activity is quite frequent in mental deficiency, but the one condition is which the giving of thyroid extract to the child is useful, is that of the cretin.

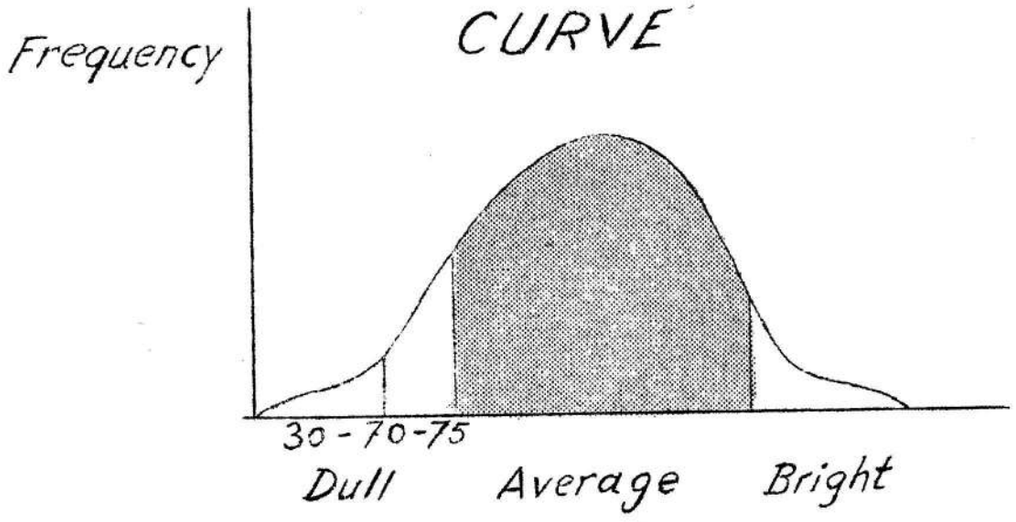
Now in England any areas where there is the lack of iodine in the food, cretins may be born with goitre. Other metabolic defects may likewise produce cretins and goitre in infancy. The majority of cretins in Great Britain are not associated with goitre. Indeed, the cause of the lack of activity on the part of the thyroid gland can be due to many causes, and the condition may take many forms. The two significant characteristics are: The child is usually dwarfed, and the abdomen grows out. The degree of mental defectiviness varies. It may be profound and the child might be an idiot then.

Confirmatory evidence for the state of cretinism is also provided by making a blood test. But the rapid improvement which takes place when thyroid extract is administered, is the best proof of the diagnosis. It is, however, easier to improve a physical condition than a mental condition. The therapy must continue for at least a year, before any estimate can be made of the extent to which improvement is likely to take place. In younger children the physical changes are rapid and dramatic.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E. - Datilografado em Inglês pelo C.O.J. do D.N.Cr.)

AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 16/9/1958

I want to break into the work we were doing yesterday and say a little now about the likely causes of low intelligence in school educable retarded children. It is only just a few sentences. On the examination of many children in the States and the Great Britain it seems as if human ability is distributed in what mathematicians call a normal curve. If, for example, we took a thousand women from the streets of Rio de Janeiro this afternoon, and measured their heights, we should find a few very tall women, we should find a few very short ones, and very many in between. The height of the last named would be somewhere about 5'3" in English measurement.



Now, as far as we can tell, intelligence tests scores are distributed roughly in that way. If we can examine all the children including the trainable children, we find a little bump down at the lower end of the curve. Now what about these children between an I.Q. of about 50 to 70 or 75? Many of them are dull, due to genetic causes. They are at the opposite end of the curve from the bright ones, and many of them have parents who are not very bright. But some of them score low on the Intelligence Test Score because of the extremely poor cultural setting in which they have been reared. Genetic causes and the poor cultural up-bringing probably accounts for most of the school educable retarded children; and in England now, we are more hopeful of doing something with school educable children who come from the very poor homes (favela), than we are with those who are coming from good homes, because the latter have probably been subject to good stimulation all the time. Indeed, if a child is school educable retarded, and he comes from the "favela" it is likely that you will get a rise in the intelligence score if you put him into new surroundings, give him better food, better stimulation and environment, etc. In addition to the-

se two main causes, we must also recognize that some school educable retarded children may be the way they are, because of some slight uterine disturbance during pregnancy, some slight injury at birth, effects of some minor infections in the early years, and yet it might be impossible to put one's finger on it exactly in a clinical sense. That's all I want to say about the causes of low ability in the school educable retarded children.

I now want you to look with me at the sheet that has been given out. This shows you the outline of the provision for mental defective children of England and Wales. In Scotland mentally defective children are in occupation centres which come under the Ministry of Education, whereas you can see from your sheet that in England and Wales they come under the Ministry of Health. Please do not think this makes a great deal of difference. The occupation centres in Scotland are orienteted in the same manner as they are in England and Wales. There is much agitation in England from the parents of trainable children to take the occupation centres away from the Ministry of Health, and put them under the Ministry of Education. Well, it might come about, I don't know, but I don't think it will make any difference.

Let's look at the sheet together. Our mentally defective children can either live at home, in community here - top left; or they can be in residential hospital care, (top right). If you look at the top left, you will see that community care is the responsibility of the local health authority. The children are brought up in a normal home environment. These tend to be the trainable mental defective. Now if you look on the right, you will see that in our mental deficiency hospitals, there are low grade defectives or completely dependable children; also school eduable children who are too unstable or violent, or antisocial to stay at home.

Let's move over now to the left hand side of the page. You can see that these trainable children can be sent to a private school if their parents wish to send them. I think you all know that in England, though there is a good state system of education hospitals, etc., you can always have things done privately if you wish.

If you move along a little to the right, you will see "statutory supervision". Again, the local education authorities can, if they so wish, have home teachers for children who cannot attend occupation centres.

Although our day occupation centres are usually mixed (coeducational) we do separate the sexes after 16 years of age. I dont think we fear so much of what might happen if they were left together, but it is the tremendous difficulty of organizing the activities - the kind of activities for these men and women if you have them together. It is so much easier if you have them separate. Persons of up to 40 years of age are found in the centres for older people.

A little to the right is the heading "Possible developments in the future", "Sheltered workshop" and a further to the right "Industrial training with a view to ultimate employment in industry". Our sheltered workshops, for older people are rather new, but some of these trainable men are doing useful work and earning money under sheltered conditions. Under "Industrial training", there is the actual attempt to get some of these people back into permanent employment in industry. How successful we shall be in the long run I do not know; but that is the idea, and experiments are now being carried out to that end.

For older girls and older lower grade women there are also occupation centres, but in general we have not done as much

for them as we have for the men. Now, to the extreme right hand side of that group, a line goes down the middle, indicating that the older people might be discharged under the Mental Deficiency Act, but some supervision may always be required for them. Of course , it may not be the local health authority giving the supervision, because the parents may still be living.

Remember we have now at the moment something like 270 occupation centres, with some ten to eleven thousand children in them. Now let's have a look at the right hand side of the paper. Remember in our mental deficiency hospitals, which are separate from our mental health hospitals, we should find low grade defective children, completely dependable, and school educable retarded children who are too antisocial to be left in the community.

Attached to these hospitals are occupation and training centres, so the child goes to an occupation centre or school in the hospital. These occupation centres or training centres at the hospitals are usually coeducation until 16. Now, for the older males there will be gardening, kinds of domestic work suitable for men, occupational therepy and there will be workshops; and for the females there will be laundry, sewing room, occupational therapy, and domestic work too, for the women.

Now, notice a dotted line coming down the middle of the page. Look at the bottom of the dotted line. It indicates that some school educable retarded children on leaving school, are so socially incompetent, that they have to be admitted to the deficiency hospital after 16 years of age. The aim, of course, is to rehabilitate these children and get them out if you can.

We also have men and women living in hospitals and working away from the hospitals by day, under supervision. Obviously we have to be careful about the young men and women that we allow out in this way. If they are going to be violent or seriously anti-social, one cannot allow them to work outside.

Our aim in England is to get rid of people in our mental hospitals as far as we can, because the fewer inside the less expense to the State, and considering the amount of money that we can afford to spend, these people are very well looked after, and I think good work is being done with them. I can say this with certainty, that our people in mental hospitals, whether they are children or adults, are kept active in working. Of course, we must recognize that there will always be the completely dependent individuals who will have to spend their whole lives in the mental institution.

In England and Wales legislation is made both for community and residential care for mental defectives. Many families wish to keep their handicapped child at home, and they should be encouraged to do so, providing conditions are suitable; but for those who can't be looked after at home, we feel that specialised hospital care is necessary.

Now let's have a look at our occupation and training centres. Provision is made both for children and adults. It is co-educational in character, but we must not look upon it as a school in the true educational sense. There is no specific age limit, each authority makes its own ruling, but we always transfer boys a junior mixed center to an older boys' or men's group. In the centers in the mental deficiency hospitals, the children are transferred to older classes usually at 16.

I would like to stress that our occupational centres have a scheme of progressive traning and their function is not just to mind children or merely to look after their physical care. It is a training program, and if a child is completely untrainable, then he is not admitted to an occupation centre. If he is completely dependent, he will be at home, or coming perhaps to one of

our special day "creches" for one day a week, or in a mental deficiency hospital. Training is carried out on 5 days a week, usually from 9,30 a.m. until 3,30 p.m. These times are adjusted to local and hospital conditions. Attendance at Day Training occupation centres is not compulsory at present, but we have recently had a Royal Commission investigating the problem of mental deficiency, and one of the recommendations made to the government was that attendance at occupation centres be compulsory.

Our experience may be of help to you when looking for a suitable building for an occupation centre.

First, we find that it is far better to build a new centre than try and adopt and old building. The building should be given over entirely to the occupation centre. We recommend one wash basin to every 8 children, 1 water closet for every 8 girls, 1 urinal for every 10 boys. There must be a staff room. The rooms should be brightly coloured with washable paint. There should be a safe method of heating (you do not generally need this). There should be a minimum of awkward stairs. This is very important. You will be lucky if you find an old house that will do all that for you. In addition, we always have a playground and a space for gardening and other outdoor activities.

When the centre is ready for work, it is better to have only a small number attended first, say 10 or 12 children. They should be some of the best children that you expect to come. Get them used to the routine of the centre, so that they are in a position to help smaller group who are admitted from week to week until the register is complete. Of course, with a normal school in England, one usually open the school all at once; but it is a different task opening an occupational centre. It is better to build up the numbers slowly.

What are the benefits of these occupational centres? First of all, let us consider the parents. By meeting members of the staff and other parents and social agencies, it helps the parents to adjust to their problems better. It helps them to see the problem in a better prospect. It helps them to gain a better insight into the limitations and the possibilities of the child. It gives the mother freedom from that child at least for part of the day. There is the knowledge that something is being done for the child by people who know the child's limitations, and practical advice is available when it is needed. These are a few of the things it does for the parents.

What are the benefits to the child? It allows it to grow up in a normal family environment and to keep the wider environment of the community. It is better than having a child in a mental deficiency hospital; because although our hospitals are very good, and we do not fear them in any way, we do find the children who have been brought up in the hospitals sometimes have difficulty in adjusting to the outside world when they are older. Further, children in the community retain their individuality more easily than they do under residential care. Again, in these occupation centres they get companionship at their own level. They are allowed to learn at their own rate, because of this, frustration is at a minimum. We must not, of course, belittle hospitals care and one advantage is that the hospital gives immediate medical attention. In our country, we just find that our mental deficiency hospitals contain the dependables and the school-educable retarded who are anti-social.

What are the advantage of these occupational centres to the community? Well, they certainly bring the problem to the public notice, because the public is paying for them. It helps the group of these mentally handicapped children to become more generally acceptable to the community, and in many cases the community gives practical offers to help.

What then are the aims of training in these occupational centres? First, we are trying to meet the individual needs of each child. Second, we are trying to help the children to lead a happy and contented life as far as we can. Third, we are trying to get the children to form good habits. Fourth, we are trying to make them more sociably acceptable. Fifth, we are trying to arouse the apathetic. Sixth, we are trying to provide a legitimate outlet for the restless and the overaggressive. Seventh, we are trying to develop some selfconfidence, some initiative and independence. Eighth, we are trying to develop the children's muscular control and coordination. Ninth, we are trying to develop any particular ability the child has . Tenth, we are trying to improve private and personal appearance, and later, later, to provide some suitable occupation if possible, under sheltered conditions. That's quite a lot to do.

From these points I have given you, you can see that we hope to do three main things:

1 - General improvement in the conduct and the bearing of the individual.
2 - A more useful and socially accepted member of the society.
3 - A person able to occupy himself with a minimum of supervision.

Thus the occupation centre takes children who are trainable, using the word in a wide sense. The centre always hopes that a beginning will have been made in toilet training before the child starts at the centre; but in any case, the child should be continent both ways by the end of one year in the occupation centre. If the child is not, there may be some doubt as to whether the child will be allowed to continue. Again, if the child is violently anti-social smashing furniture, atacking children, constant screaming, the child again may be asked to leave. You may feel unhappy about this some times. It is the old problem. Must we reject one to save many?

The usual admission age to the Day Occupation Centre is 5 years. A few authorities have started day "creches" for younger children, and for dependent defectives. Here the children may be cared for during the day, or for one day a week, but no training is given other than that related to toilet training and eating. Again, it gives the mother relief for one day or more a week. Such a child at 5 will not pass into the occupation centre unless he is too low grade.

Industrial classes or workshops for male adolescentes are staffed by men. The occupation centres, however are almost always staffed by women.

Boys who are excluded from general training at 14/16 in occupation centres and go to industrial centres are still in need of the kind of activity that they were engaging in in the occupation centre, so that many of the industrial classes are now including physical education, general knowledge, etc., in addition to the manual instructions. At this age too, a few mental defectives can begin a little reading, writing and number work.

If you are thinking, in this country, of starting anything in the nature of sheltered workshops or industrial classes, you should seriously consider whether part of the day should be given over to the kind of activities that the young people were doing earlier as children, such as speech training, language development, general knowledge, etc.

Older girls often tend to remain in the occupation centre helping with domestic duties of the younger children. At the same time, they join in such other activities as dancing, singing, and they have other classes more suited to their age and the ability; for example, simple handwork, simple needlework, laundry, simple cooking.

What is the curriculum in the occupation centres? In order to carry out the aims that I outlined before, the scheme of train-

ing must naturally suit the needs of the individual children; but in general, the scheme will follow along the following lines. It is the details that will change from centre to centre or child to child. First of all, there is sense training; a better term is "developmental training".

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E. Datilografo em ingles [illegible] C.O.J. do D.N.Cr.)

AULA DO PROFESSOR KENNETH LOVEL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 17/9/1958

We are continuing now our consideration of the work of the British Occupation Centres. We began with sense training. I suggest that a better term is"developmental training". In these activities the child learns to differentiate between different properties of objects, to understand relationships, and to name them. For example, hot and cold, long and short. By these means, the children get very elementary concepts. For these children it lays the foundation of all learning. These children cannot be told in advance what to do by verbal instructions. They must be shown what to do. They must be guided through the process, and perhaps, corrected many times. Sensory training then trains and improves visual perception and manual dexterity. It gives the child increased general knowledge and interest.

Next we come to "speech training". Here the effort is made to develop simple breathing exercises at first. For example, to learn to expel air correctly. A typical exercie is: place a feather or small piece of tissue paper on the palm of the hand, blow gently, then blow vigourously. There is also dramatization, singing, story telling, puppetry and general conversation. I have an English book here which illustrates the kind of speech training which goes on in English Occupation Centres. Except for basic types of exercise, like learning to expel air properly, I do not think that this will be of great help to you, because the sounds we so often want to make are not the sounds you want to make. The book is entitled "Teaching the Mental Handicapped how to Speak". I am sure you can get some help here on speech training in Portuguese. The important thing to realise is that speech training improves the child's facility in communication. Be sure to have a series of exercises worked out which help the children at this point. We have all agreed on the necessity of good speech training for these children through graded series of speech exercises, see you have your own exercises for your language.

Next we come on to handwork. I won't say the exact kind of things we are doing, for I'm sure you must know by now. Remember that it is the sense of achievement that you give these children, and the self-confidence that you build in them, which is of such importance to them. You will, of course, also give them a useful pastime, and I would like to say this about handwork both for trainable children and for school-educable children. While we strongly believe in introducing them to a wide range of materials and techniques, and giving them as much experience in these different activities as possible, we believe that at the secondary stage, from 11 onwards, the child should be encouraged to develop particular skill in one or two crafts if he can. We think strongly about this because we feel, especially with school-educable retarded children, that confidence increases enormously, if they become masterful in one or two particular crafts.

Then there is music and movement and physical training. The latter helps in developing and strengthening the body. Physical educacion also helps to improve breathing, and because of the exercise involved circulation and digestion are helped. There is also improvement in muscular control and muscular coordination. Children get the experience of the discipline of working in a group and responding to command.

Then we have free choice activity periods in our occupation centres, and, very important for these children, habit training.

Naturally, toilet training plays an important part when they come into the centres at 5. We shall talk about this again later. All we need say now is that regular and frequent toilet training prevents many accidentes, and it establishes the habit of going to the toilet. Linked with this, there is washing of hands after the toilet. We have each child use his own towel, which is indicated by distinguishing mark. Then there are all other problems about personal hygiene: washing the teeth; and as you will see the film on Friday, there is the care of the hair, nails, personal appearance, and other problems of a personal nature. These things are very important with the adolescent defective girls. We definitely try to get these to take a pride in their personal appearances, and mirrors are provided for this aim. Then with all children of whatever age, there are table manners and other problems of general behavious, the receiving of visitors into the school and speaking to them; problems associated with riding in public transport and problems of road safety.

In addition we have religious instructions in our occupation centres as in our schools. There is also some nature work; with the older children there are money values; changing money; simple buying and selling - no written work, of course, and the amount of money is small.

We also receive school broadcasts in occupation centres; for example we would listen to a school broadcast, perhaps, which deals with simple stories. Then there are domestic activities for the girls, and a certain amount of outdoor activities, such as gardening, etc. for boys, and also, if any of them can manage it, telling the time. But as I told you the other day, up to about 12 years of age not many of ours have learned to tell the time. That might have to be left until the occupation centres for the older children. In general, then, there is no formal school work undertaken at all. There is no attempt at teaching reading, and there is no attempt at number work, other than teaching children to count up to say, 5 or so. But so often you will notice that they have no concept of numbers. Of course, if a particular child can benefit from a little more number or word recognition, then they have it.

In the centres for older children and adolescents, i.e., say over 13, other activities may be introduced. There would be some simple cooking, simple laundry work, simple housework, and needlework (in English called running repairs). For adolescent boys there would be some gardening, some woodwork, perhaps mat-making and shoe repairing. But all the other activities, such as sense training, music and movement, physical training, habit training, goes on. With the older child, 15 or 16, you want to watch carefully to see if the child is ready for any reading or any further number work, but our experience is this, that these children only get the very smallest elements of word-recognition.

Now there is one point here I would like to stress. It is wrong to try and push these children academically. We even come up against this problem of teaching the child to write his own name. It is a great social asset to be able to write one's own name; but supposing that in later life some unscrupulous rogue put a document in front of one of these children and ask him to put his signature at the bottom. The child can't understand the document, remember. He might put his name to it. Of course, in the English law his signature would be worthless if the child had been certified under the Mental Deficiency Act; but all kinds of difficulties can arise, and some of our people think it is better not to teach the child to write his own name. You must decide this point for yourself.

Now, let's have a look at the progress record. I have brought out from England one of the progress books that we use in some of our occupation centres. It does enable the teachers or instructors to record, in an objective form, the progress of the child. It makes the instructors task easier when reporting to the parents. Again, very often wall progress charts are used, especially with the younger children. By looking at these wall charts one can see at a glance which child can button up his coat, which child can wash his face, or what progress the children are making in handwork. Some believe that these wall charts act as an incentive to these children, and they give a ready picture to the staff and visitors, etc., of the abilities of any particular child. Others think the least able children are disheartned. This is a debatable point, and it applies as much to normal children or school educable children as it does to trainable children. I think myself this is very good when you have got bright children who can take the criticism and the competition, but whether it is a good thing with less able people, it is very debatable. If you do not make the progress public, then the teachers themselves should keep an accurate record of what the child has done.

Let's turn now to the problem of staffing in our occupation centres. In our occupation centres we have very very few qualified teachers. They are nearly all women, and the intellectual quality of the instructors is nowhere near equal to the intellectual quality of our teachers. But they are excellent people who are doing a first class job of work, but it is not always easy for us to get the right kind of people.

At the nursery end of our occupation centres (5 year old children), many of the children are not toilet trained, and there is a good deal of dirty work to do. At this level we are now sometimes employing "char-women", to do this dirty work. It is not always easy for us in England to get the right kind of women, because we can't have these women to do everything. Some of our instructors must be able to do work with the children. Here is a list of some of the things we look for when selecting women for work in our centres - I'm now excluding the women who are employed to do the dirtier work. They must be people of some maturity and some experience. They've got to be able to meet, not only the needs of the child, but also the problems and difficulties of the parents. This is a tough assignment, and we get too many women offering themselves who have many personal problems themselves. They must be able to approach the work with understanding, sympathy and common sense. They have to be tactful with other members of the staff, and they have to have contacts with the officials of the local authority. They must have much patience. In our country we like them to be able to understand the problem of mental defectiveness at all ages, from 5 to 15. We like them to be able to play the piano, if possible. They've got to be able to deal with trades people. They have to be able to help with the mid-day mean, because, remember, our children will be there for lunch every day at 12:00 o'clock; I mean lunch too, not just a cup of coffee. They have to be able to write reports on children, and they have to have a knowledge of most of the things in the time table. That's the sort of person you want. It is not only a question of just sitting with the children, helping them with the feeding, or watching them feed. Though the cooking staff are separate, the cook also has to have sympathy, and she must be of the temperament that can work in such a centre.

To get these people is very difficult because a woman who is capable and well-balanced, intelligent, etc., often does not want to work in an occupation centre. This is true also of teachers. We reckon one member of the staff to every 10 to 15 children. You will find in our centres today that there is a mixture of women who are quite capable, and of the kind that I have been describing, and others who are nowhere near this standard, who have to do the dirtier work. Staffing is not an easy problem.

Then there is the problem of the person-in-charge of the centre. The National Association of Mental Health now run courses for the people serving in the centres. They take a course which lasts one year full time, or two years part time. At the end of the course, if their work is satisfactory, they are awarded their certificate, and these are the people that are likely to be promoted, to be in charge of these centres. The National Association of Mental Health organizes and runs these courses.

I must say to you that there is a great gulf between the intellectual quality of these people and our teachers in the schools, including, of course, schools for school-educable retarded children. Sometimes it is difficult to select people to be in charge of these centres. I tell you these things because sometimes you think that we have solved all our problems, but we have not. We have very real problems in the question of staffing. If you establish these occupation centres on a big scale, you will get these problems too.

Let's have a look at the time table. The children arrive at 9:30 or 9:45; they may walk with their mothers or walk on their own; or come by special bus, or in cars. I think in the film that you will see on Friday, they arrive in cars. When they come into the centres, they change their shoes, visit the toilet, go to assembly for hymns and prayers, and that will take until 10:00 o'clock. We need not go through the day-by-day routine in detail. I think it is quite clear if you read the second sheet. At 10:50 a.m. you see they have a break for milk, and then around about 12 o'clock, they have their lunch; and then, after lunch they have rest time. I did not mention rest time in my talk to you, but rest time is an important part of the life in the centre with the younger children. Those who do not need to rest, they have a quiete time - they look at books or pictures. The afternoon activities then begin properly, and at 3:00 o'clock they have final prayers, and go home. That's a typical day for an occupation centre.

I'm giving out now another time table which was taken for you from the book I was looking at here yesterday, Kirman's book on Mental Deficiency. I think by now that you should have a fairly good idea of the kind of things that happen in our occupation centres.

I want now just to give you a few notes, a few ideas, about one of the centres that you will see in the film on Friday. You will see there are a number of centres in the city of Leeds. You are shown the centres in North Leeds, South Leeds, East Leeds and West Leeds.

Here are just a few points I will give you about the East Leeds Centre. It is under the supervision of Mrs. Taylor that I mentioned just now. It is a new building, I should think about 5 years old; built for the purpose in the Eastern part of the city. It is all on one floor, and it is very much - in building - like a modern English school, with very light classrooms and large windows. The children are admitted at 5, and are in the first class from 5 to 6. There is a very determined effort made to get the children toilet trained, and Mrs. Taylor does her best to keep the children in this class until they are trained. In other words, she does not like incontinent children in the other classes in the centre, so a very determined effort is made in that class. She has two or three of these "char-women", who are doing very little but changing nappies, etc. Well, then, once the children are clean, they begin to move up through the classes. They stay in the centre until they are about 12 or 13. They then have to move on to a senior occupation centre.

Just let me remind you again that the intelligence quotients of these children, for what they are worth, varies from about 25 to

50. The completely dependent children, you see, are not there, because I have told you clearly that it is a training institution, a training center, and if the children cannot be trained they cannot be admitted. But I would say this , in our occupation centres, we are taking children of far less ability than anything I have seen in Pestalozzi. Some of them are very very weak children. There are 104 children in the whole centre. Throughout the classes that is all the work being carried on that I have been describing to you this afternoon. There is a great deal of picture matching use of jigsaws, physical education, dancing, percussion bank, etc., and I will give you now the sensory training scheme in the top class. This will give you an idea of the level of work in the top class.

SENSORY TRAINING SCHEME FOR THE TOP CLASS Matching colours; matching pictures; counting and matching symbols up to 9; recognition and matching of coins; recognition (i.e. saying what the picture is) and placing it with other pictures in the series; threading and counting beads - one to nine; fastening bottons; tying bows; matching a word in a picture; and telling the time.

I have told you I went to this centre just before I came out and I made a special point of going to the top class to find out exactly what level the children had reached. There was not a single child who could read a word, and one boy only could tell the time. That shows you the level of children we have in our occupation centres. Until you see these children and the levels that we are working with, I think it is difficult for you to understand why one gets so low a level of attainment. Now you can't say there that you've not got a teacher. Mrs. Taylor is an experienced qualified teacher. She has taught normal children. I can only say that the general level is low, compared with anything I have seen in Pestalozzi here.

I now want to tell you just a few words about what we call in England, "a short stay home". This is a fairly new development. Attached to the East Leeds Occupation Centre there is "a short stay home" where up to 12 children at any one time can stay when it is necessary for them to be away from their parents. The child, of course, has to be mentally deficient; but here in the "short stay home", they will take dependent children,for example a child who is bed-ridden and of idiot grade. The authority is only looking after the children for a while, say, while the parents are having a holiday, or the parents are ill, or the mother is pregnant. The child can come here for up to one month. You see some very sad cases in this "short stay home". I think you realize how much the mothers need a rest and change sometimes, away from these children. There are a number of bedrooms, and there are cooking facilities, medical attention is readily available, and the defective child can stay there for a month. But if the parents can afford it, the parents are asked to pay towards the upkeep; but it does not, in any way, operate against the poor. If the parents are poor, they get their place as well as parents who have money. It is quite right if the parents can pay, that they should be asked to give something towards the upkeep of the child. You get all sorts of cases in this "short stay home". They vary from the bed-ridden idiots to trainable children who can walk about and play. There is only one of these "short stay homes" in Leeds, but they are now beginning to appear in other parts of the country, although I am not pretending that they are widespread. Again, I'm sure you realize that the setting up, the building, the staffing, and the running, cost money.

Now let me remind you once again that our occupation centres are only taking these children who will never be able to live independently as men and women. They may earn some money in sheltered workshops later on, it is true, but they will not be

able to work on their own. Every possible child is tried in a school, in a special school, and sometimes children are taken out of an occupation centre and tried in a oficial school for a while.

I told you the other day about a little girl who would be leaving a special school now in September, to go to an occupation centre. It is completely impossible to make any contact with her at all. But to look at her, she looks lovely. No physical defect or mark at all.

Over the last 15 years in England, you can see this general trend. The special schools now take children that used to be in the occupation centres. I really believe now that every child who possibly could benefit from a school is getting into school, and our occupation centres are now taking children who are much lower and weaker in ability than they were 15 years ago. Dr. Lessa was in the English Occupation Centres about 15 years ago, and I am sure if he went back now, he would see that. The occupation centres accept children now, who would have been kept out of them 15 years ago.

I do want to tell you now something about "home teaching". We do not, of course, regard home teaching as, in any way, a satisfactory substitute for an occupation centre. It does not provide the defective child with the companions that he needs. It leaves him isolated and without the experience of group life. But in the following cases, we try to provide home teaching:

1 - If the child lives in a rural area, too far away from an occupation centre for daily travel.

2 - If the child is unable to travel daily because of some further physical disability.

3 - Or, if the child is considered to be unsuitable for an occupation centre.

Once again we want the lady who is to be the home teacher to have many good qualities. She has to be able to adapt her knowledge of varied handicrafts to the inevitable limitation she will find in the home. She must be a good social worker. She's got to get on with very different kinds of people in all different kinds of homes. Once again, she doesn't want to have too many personal problems of her own. I am sure you understand that they are not always easy to come by.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais do C.B.P.E. Datilografado em inglês pelo C.O.J. do D.N.Cr. - M.S.)

AULA DO PROFESSOR KENNETH LOVEL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA EM 18/9/1958

Continuing our work now concerning home teaching, the number of children allocated to a home teacher will depend upon the distances to be travelled. Obviously a home teacher in a city can handle more children than a teacher in a country area who has large distances to travel. Each child should be visited at least once a fortnight, and at least one hour should be spent with the child. We allow our home teachers one day a week for writing up notes, preparing and finishing handwork and notifying the homes of the children to be visited during the coming week. Now, remember it is necessary to warn the homes, telling the day and the time you expect to be there. What then are the aims of home teaching? First, during each visit the home teacher should try to bring the child fresh interests by providing handwork of various forms, which the child can continue through the intervening period.

Second, to encourage the child to acquire skills in simples household tasks.

Third, to give speech training.

Fourth, to give conversation and news lessons, to make the child feel an important member of the family with a part to play.

Fifth, to teach or train the child during the visit, and not allow the visit to become a mere social call.

Now the parents have a very important part to play in home teaching. First, they must be made to realize that their attitude to the scheme will affect its value and its outcome to the child. Second, they must leave the teacher and the child alone for some part of the period. Third, they must be prepared to make space available so that work can be done under reasonable conditions. Fourth, they must see that the child is in a clean and tidy condition. The visit should be an eventful period to the child. Fifth - the parents must work out with the teacher the problems of the disposal of the handwork.

Now I have already said that the home teaching scheme leaves parents and children feeling somewhat isolated. An attempt to help in this matter is made on the following lines:-

First, a small group of children is collected together occasionally in one of their homes or in some other suitable premises.

Second, children and their parents are invited to join parties or outings of an occupational centre, if travel is not prohibited by distance or incapacity.

Third,-some health authorities have a holiday home or camp in the country or by sea where children are taken from the occupational centres. If vacancies occur, then children on the home teaching list may be taken to the holiday home or camp. This is most helpful, as it gives the parents relief from having the child all the time. They can then have a holiday too. The National Association for Mental Health in Great Britain also has holiday homes to which parties of mentally defective children can go for a holiday.

That gives you an outline of our home teaching scheme. Once again remember that the ladies who operate this scheme are employed by the local authorities; if they use their car for travelling they will, of course, get a car allowance to cover their expenses. And the teachers who take part in this work are the same kind of people that work in our occupation centers. Very good women, but not as good as our school teachers, as far as academic ability goes.

I told you yesterday that the staff at the occupational centres of the home teachers must have some way of reporting upon the child.

This book has been designed by the National Association of Mental Health and is the best that we have. On the first page it asks some of the usual questions:- The name of the child and his address, the date of his birth, the date of the first attendance of the centre or when the home teaching began. The date when he left the occupation centre, reasons for leaving, the name of another centre to which he was transferred, and so on. On the second page we have the admission report. This is the initial report on the child which should be submitted to the occupation centre by the local authority, after the child has been examined by a medical officer. The name of the child and his birth date again, his I.Q., if it is known, and his mental age. Reasons for admission to the centre, was he excluded from school under the education act or did the family request that the child be sent to the Centre. It also asks if the child lives with his parents, whether he is under the control of the local authorities, whether he is living with a guardian, and whether he is out of a mental deficiency hospital on license.

Next, any information about partents, brothers and sisters, and the attitude of the family to the defective child. Then a note on the home conditions. Next, a brief history of the case is required, including the schools, any school that the child has attended or any occupation centres.

Next, details of a medical history of the child, any defects, physical abnormalities, etc., and any information that should be brought to the notice of the supervisor of the centre.

Then points of interest about the child, such as social attitudes, outside interests, name by which the child is called at home, and any other information that will help the supervisor to enable the child to settle down in his new surroundings.

We then come to the supervisor's first report on the child. This report will be made after the child has been in the centre for some period. There are questions about the emotional development of the child; is his behaviour generally stable or does he fly into tempers? Does he live in a world of his own? Does he need continual encouragement? What of his social attitudes? How dependent is he on adults? Is he friendly or antagonistic towards other children?

Next, his physical condition. Note any peculiatities - flat feet; use of left hand; any deficiency you notice in seeing or hearing, any ailments that you notice during the period he has been under observation Is he susceptible to colds? Chilblains, ear discharges?

Now, what about physical activities of the child? What about his posture? His walk? Muscular coordination? Then there are problems of hygiene, of personal hygiene, general cleanliness, ability to go to the toilet alone; ability to blow nose; ability to feed oneself; to dress oneself. Knowledge of colours, money values, ability to tell the time.

Next, sense training. What handwork operations has the child mastered? Then report on music, sense of rhythm and so on. Domestic abilities. Any outside interests such as football or keeping pets. That is the supervisors initial report. And after that there is the supervisor's periodical report. The form here is rather simpler than for the initial report. But it runs along the same general lines.

The next thing that I have been asked to speak about is basic home training.

Now, I have no experience of this at all, because the children we will now discuss are between birth and five years of age. Whilst I am quite familiar with normal children and I work with normal children up to five years of age, and even school educable children of this age,

I am not familiar with, I have not worked with children who are truly mentally defective in this age range. The suggestions which I am going to offer you have taken from the work of Miss Dean, who is responsible at the National Association of Mental Health in London, for the training of supervisors in the occupational centres.

The suggestions which we are going to give you are to help parents with the child in the home who is likely to benefit from training when he can go to a local authority occupational centre at five years of age.

Some parents in their anxiety to get results and to prove to themselves and to others that their handicapped child is better than they have been led to believe, try to rush the child and overtax his abilities. As a result, the child might become agitated and upset, and further progress may be delayed.

The aim of training a child at this or any other age, is to help him to live as normal a life as he can, to help him develop his capacities to the full, to help him to live as happy and adjusted as possible. Also to help him to give a minimum of unhappiness and trouble to others around.

It is important to start training early. If the child can be made happy and contented, well behaved, clean in appearance and habits, and generally acceptable to all those with whom he comes in contact, both the child and the parents are going to benefit greatly.

The difficulty is often for the mother to know where to begin. Fathers should certainly be brought in, but most of the training falls on the mother.

And we are giving you these suggestions now so that you can pass them on to mothers, if they ask you for guidance in this direction. Now, remember that the attitude of the parents is of great importance. Agitated and uncontrolled action on their part tends to produce similar results on the child. We have also the same sort of thing with normal children. Noisy teacher, noisy class. Quiet teacher, quiet class.

The first thing is the problem of eating. The parents, the child and the surrounding area should be protected, if possible. In early days, the child's face is almost certainly to be messy. Be sure to have a dump flannel and cloth available. Fingers may be used at first to put the food into the mouth. Indeed, before the use of spoons and pushers is possible, play materials may have to be used to prepare the child for the necessary manipulative ability. For example, sand play with wooden spoons. The first food should be soft, so that additional chewing is not necessary. The child learns to open the mouth at the appropriate moment.

Right from the start the mother should see that the mouth is closed as soon as the food is inside it, because we don't want the child eating with his mouth open.

When the first steps have been learned, have been established, the child should then be encouraged to hold the spoon himself, with the mother's hand guiding it, to pick up the food with a spoon and guide it to his mouth.

To help in the picking up of food a deep plate with a wide rim is helpful. It will save you a good deal of mess.

Now, constante repetition of these acts leads the child to the stage where he wants to put the food in his mouth on his own. His first movements are going to be clumsy resulting in a lot of spilling and bad aiming. But it is well worthwhile, because once the child has mastered it he has done something.

Remember that bringing a pusher into use is a much more complicated job. The child is doing two different operations at the same time.

Soon the child will get to the stage where we should introduce him to semi-solid and solid foods. Don't forget here it is necessary to cut the food up to suitable sized pieces, and to remove all bones or fruitstones.

Next - drinking. We should make a start with small amounts of fluids introduced into the mouth by a teaspoon. We might start with the child in a sitting position, so that the liquid can easily be spit out or allowed to dribble away on the child's cheeks. On the other hand, if the child is put into a position where he is slightly inclined backwards, there is a much better chance of the fluid being swallowed. And the desired reaction is more quickly established. Once again, remember to prepare yourself for accidents when you are introducing the child to drinking. When you established the swallowing reflex, it is then time to teach the child the actual process of drinking. First, bring the container to the child's mouth. The amount of fluid should be small and the vessel tilted back carefully. Allow the child to take only a small amount each time. When he has become accustomed to this, then he should be helped to hold the drinking cup. This we hope will lead to a desire on the part of the child to hold the cup himself, but you must hold the cup to his mouth until you are quite sure that the child is able to hold it on his own. To begin with a two handled mug is better than a cup. This, of course, will lead in due time to an ordinary cup.

Now we come to undressing and dressing. We have to get the child to recognize his own cloths, and we have to get across the routine to him. Our training should train the child to take off garments and put them on in a certain sequence, in a certain order, in a sequence that makes things as easy as possible. Now in this country I imagine this is much easier than in mine, because your boys and girls are only wearing vests and pants, except in the colder south or in the mountains. The comments that I will give you relate, of course, to my country, and obviously things are much simpler for you.

There are two main actions in dressing and undressing - pull up and pull down. In the early stages the mother does this for the child and she should use words to suit the action involved. So that in time the child associates certain actions with certain words. Whilst the training is in progress, the movements can be helped by allowing the child to play with a hoop which he can pass over the body in both directions. You see, you get the arms movements exactly. At the same time, when the hoop is on the floor the child can be encouraged to step in and step out in the same way as one steps in and steps out of one's clothes.

Sometimes it is helpful to provide the children with bright garments to which they can become accustomed. In the training period, this bright garments makes the job more interesting. I think that is about all you need with juniors and children here. You are not worried so much with buttons, and zip fasteners as our children are. But when you are practicing buttoning or tieing you will practice on pieces of material, on wooden frames. Of course, the child then has to move away from working with bottons, and tieing and so on, on a frame, to bottoning a real piece of cloth. Even for simple clothes there is a certain routine that we should establish. Shoes should come off first. First the child should be encouraged to use his hands to help in these actions. You have not got the problem of socks usually but if you have the child must be shown how to pull off each sock in turn, and then he is shown with his hands how to push down the trousers or knickers, or whatever he is wearing over the hips, and to drop them to the floor and step our of them as the child practiced to step out of the hoop.

Removing garments over the head is much more complicated and the earlier attempts should be made with loose fitting and easily removable clothes. Indeed, all training in dressing might be given in clothes that are too large.

The putting on of clothes is more complicated than the taking off of clothes. The child now has to recognize right from left and front from back. As far as shirts or blouses are concerned, or socks

or shoes, a coloured strip sewed on the left or right side, or sewn on the sock is helpful, as the child comes to associate a certain little coloured tape with a certain arm.

The child should also be trained to place his clothes on a chair, folded and in the right order for dressing in the morning.

By these means we begin to train the child to care for his own clothes and at the same time giving him some independence in doing things by himself.

There is one rule that we can apply to trainable children as to normal children:- Never do for the child what he can do for himself. Encourage the child to take an interest in himself and some pride in his appearance. A long wardrobe mirror is excellent. The child can see himself full length.

Next we come to washing and care of teeth and hair. Many children including trainable children, like playing with water and like being in the bath. Well, right from the start, we can make a beginning in teaching the child to wash himself. The first thing is to get the child to hold the soap. Then he has to learn to rub it between his hands. And to put it back in the dish and not in the water. He then has to learn to hold the towel with his mother while he is being dried.

Now to help the child to wash his face and neck, a glove flannel is of help. This does not fall off his hand. Now he has got to be taught to put the soap in the flannel. These children have to be taught, they have to be trained rather to overcome the strong desire to play rather than get on with the job of washing in a bathroom or from a washbasin. A box is perhaps necessary for the child to be at the correct height to use the tap.

Bathing is a more complicated job because these children, and indeed some normal children, tend to neglect certain parts of the body. We have in English the term "high tide mark". The children have to be watched for cleanliness behind the ears, feet and in all folds and crevices in the body. Of course normal children are also careless in these matters, but even more difficulty is to be found in trainable retarded children in these matters.

For the care of the hair and teeth, it is helpful if both mother and child look in into the same mirror. The mother stands behind the child, you see, there is not then a reversal. As far as teeth cleanning is concerned the child's hand will have to be guided to the proper motions, forward, backward, sideways, up and down and along the sides of the teeth.

The action of rinsing the mouth and spitting out is also a complication. Of course you get this trouble with normal children; but you get it more so with trainable ones. It is helpful if the toothpaste has a pleasabt taste, so that if the child swallows it, it is not going to taste umpleasantly. Then remember, you have to watch these children in squeezing up the tooth paste as you have to with normal children. You see, so much of what we are saying has to be done with normal children much earlier, and probably not in such detail. Also they learn quicker.

We then come to brushing and combing and fastening the hair. A large comb is to be preferred here to a small one, and with girls, clips are easier than bows. Remember that it takes quite a high mental age to tie a bow. In fact, an ordinary knot with a piece of string is only tied by normal children from four years of age onwards. So don't think that you are going to get bows tied by these children. And then again with girls I suppose that short hair is easier than long hair. But once again, it is easier if the mother stands behind the child and looks into the mirror. The mother guides the child's hand to whatever has to be done with the hair, and then after a while we hope that the child will be able to take it over for himself.

In England toilet training with normal children is begun early.

With normal children about 60% of mothers start sitting their children on a pot when they are a fortnight old. I suggest to you that the best approach to toilet training is a calm, unemotional and consistent attitude. The child must not feel that he is wicked if he has an accident. On the other hand, the parents must establish a routine and observe at those times when it has been noticed that he usually needs to empty bladder or bowels. Now, with a defective child it is even more essential than with ordinary children to establish a routine since he may find it difficult to express his needs for some time and tell his mother that he is ready.

If the parent is matter-of-fact, that is to say, calm and consistent, the habit should be gradually built up. All children have accidents from time to time. A temporary illness or a marked emotional upset in a normal child, can bring about an accident. But the child settles down again and there is no more trouble. Well now, with patience and perseverance it is possible to train most mentally handicapped children, providing there is no real physical defect. Most children that are capable of learning simple tasks can be taught to be clean.

Well now, as soon as possible teach the child to indicate his needs by the use of a word. If this is impossible with a defective child, then by a gesture or some small movement. The child should be taught to make this gesture quietly, or to speak quietly so as not to embarass visitors or to embarass his parents, if they are in public.

Teachers or instructors in the occupational centres, and brothers sisters and relatives should know the word or sign that the child uses to indicate that he wants to go to the toilet, and once the child says the word or makes the sign the adult take action at once, and not keep the child waiting. If you do keep the child waiting you are asking for trouble.

With older trainable children some training needs to be given them by an older boy or an older girl, or father or mother in the use of public conveniences, because trainable children are often to be seen walking on our streets, going to the centre or going to a shop.

In England there has been some arguments about the best kind of pot for young children. I don't know if you have them here, but we have had these elaborate pots shaped like animal toys. The majority of opinion in England is against them. It is better, it is thought, to keep to a pot of plain design, of a suitable size, that does not shake or bend, that has a comfortable rim and a sensible handle. A washable mat should be placed underneath the pot. This not only saves any mess on the floor, but also prevents the pot from slipping.

When we change over our children from the pot to a water-closet, W.C., we have what we call training seats. These will fit on to the pot before the child is big enough to use the W.C., and then they can be fitted on to a normal W.C. These training seats are very good, because the back seat and the arms provide comfort, and a good position for the body to function.

Mrs. Silveira says that you do not have training seats with a back and arms here. When the child is promoted, if you like, to the normal W.C. it is necessary to provide a stool, so that his legs do not dangle in the air. The child's ideal position should give a slightly forward movement to the body, with bent knees. This helps to prevent straining.

From the hygienic point of view, carelessness and lack of attention in cleaning afterwards can lead to soreness and chafing. This will produce discomfort to the child and the dislike perhaps for the whole process.

We are hoping all the time to get these children independent as fas as possible. So see that toilet paper is nearby. Don't let

this become a plaything. In normal English schools sometimes teachers keep the toilet paper, and the child has to ask teacher for some toilet paper. That is not the right thing to do. The right thing to do is to keep the toilet paper in the lavatory, near to the W.C., and with all children see that they treat it properly. Remember that when in the W.C. the child has to be able to reach the chain or the handle by which the flushing mechanism is worked. Also make sure that the child cannot lock himself in the lavatory. It is easy to arrange this, a small bolt outside of his reach.

You realize that for the very young and for the incontinent child it is necessary to use napkins, and protective pads. But we believe it is a good thing to get away from napkins as soon as possible.

These are some of the points in basic training. There is also the problem of the parents teaching the child or training him, not with this basic training but the kind of training which is given in an occupational centre to a child between five and fifteen...

But for some there is no occupational centre or home teacher available. Then the parents have to play the part of a home teacher. In the states of Brazil that would be the position. You will have to suggest to any parents what they should be doing. I think you understand sufficiently well the work that we do in our occupational centres to be able to adapt them to your local circumstances and suggest to the parents the kind of training which should go in the home. It would have to be adapted to the background of the home and the environment. For example, our friends here from Minas Gerais could suggest to the parents various sense training activities involving apparatus built out of bamboo.

Habit training is the same everywhere more or less, except for any local customs. Handwork could vary enormously according to the area and the facilities you could have.

Music - well, the parents might be able to do something but they may not be able to do very much.

Speech training - You certainly should encourage the parents to do a lot of speech training. I only hope that you have some little booklets here on speech training in Portuguese, that you could give to such parents.

As for physical education, what the parents can do in the home is lomited, but it might be possible to build climbing frame, or use a tree.

(Serviços de gravação e mimeografia em inglês a cargo da Coordenação dos Cursos do INEP e da Seção de Audio-Visuais da C.B.P.E. - Datilografado em inglês pelo C.O.J. do N.U.Cr.)

AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA
EM 19/9/1958

I am now going to tell you now something about the education, or the education and training, of children in one of our large mental deficience hospitals. This hospital has 1500 beds and it accommodates patients of all ages. At present there are 150 children who are attending the school and training centre. I'm sure you realize that bed-ridden idiot children are excluded from that number. In other words these are children who walk about on their feet and who can benefit in some way from the training and/or schooling. School is from 9 o'clock until 11,45 and from 1,30 p.m. to 3,45. The ages range from 5 to 16 and their intelligence quotient are distributed as follows: about a 1/5 are between 50 and 70 I.Q.; about a half are in the trainable range between, roughly say, 20 to 50; and the remaining below 20 or it was impossible to test them in any way. That hospital has rather trainable children in it than we normally have. I do not know the reason for this. Nearly all the children have some defect in speech and about 1/4 have no speech at all, while 17% of them are mongols and about 23% suffer from epilepsy. Now I must emphasize that each of these children had been an urgent problem in the home or to the local health authorities in the area from which he came. The behaviour problems of these 150 children can be well imagined. I told you that in the school educable range from an I.Q. about 50, it is the most difficult children who get into the mental hospital. The school is accommodated in 6 bright well ventilated classrooms and the staff consist of 7 occupational therapists. In other words they have well qualified people there because our occupational therapists are well qualified. They have 3 years full time training, which begins at 18 after they have 7 years of secondary schooling.

What are the aims of such a school? First to make the children as efficient and as independent in their daily lives as possible. Second, to get them into contact with their environment especially in the social sense. Third, to improve their muscular coordination, to give occupation and speech therapy for those who need it, and to begin work in number and reading with the brightest of them in the school educable range; and also to combat the institutionalizing influence of a large unit. For the most severely handicapped children, the best that can be done is to teach them to be clean, to dress themselves, to feed themselves, understand a few simple directions and give them as much independence as possible. At the other end of the group you are going to have school educable retarded children who are very unstable. As you well realize by now, in the initial stages, education must go on through the senses. The handling of materials and apparatus are so necessary for the child when forming the simplest concepts. There are the usual exercises involving matching and sorting, the usual arts and crafts, movement with music given to help motor coordination, singing, percussion bands, skipping, and apparatus on which children slide, balance and climb. Self confidence must be estabilished from the beginning. In an atmosphere where they find themselves with their own kind, they feel confortable and at home.

From these many activities that they undergo, they develop much the same as they do in an outside day occupation center. Good work habits are inculcated. For those children who must remain in custodian care the training is direct towards making them competent in simple skills. Some will attain a wage in the training centre and with these children we have to awake an interest in the outside world and keep them interested in the world beyond the hospital. They use the school radio programs.

Every week parties of the more able of the children are taken for a walk to the nearest town. Here they undertake various errands including visiting the post-office and bank, using the telephone, buying household commodities for the staff and thus helping to learn the value of money. Learning to tell the time is helpful, because sometimes if it is wet they travel by bus and they want to be able to tell the time. The development of these children is inevitably slow. When they reach 16 there is an evening club one night a week. Here there are all kinds of recreation and recreative activities, such as games and puppet theatre, story reading and music and dancing.

What happens to these children as they become adults? Here is a follow-up study of 156 of them, 5 or more years after leaving the school. 18% have either been discharged as been no longer defective, or they are doing daily employment away from the hospital and coming back at night. 29% are doing an useful job in the hospital and about 16% are working in the adults occupational centre. Only 22% are unemployable in any way. The remainder could not be found or they had died. It was found that the occupation success roughly followed their I.Q. These figures may not be very impressive for you but the majority of these people are working in some way. And nearly 1/5 had either been discharged completely or were working away from the hospital by day and living there at night.

There is going to be a big effort to get rid of some of the feeble minded men and women in institutions and give them work in the community. The use of hostels, we are convinced, will be of value here. These young men and women may be capable of earning their living but for some time they need general guidance. If they live in a hostel there would be some skilled and understanding person there to see that they had proper food and that they were properly clothed, that they were clean and free of disease, that they were spending their money wisely, and generally looking after themselves. They will also make sure that they are in good company. If these people have no home to go to, they may get lodgings with an unsatisfactory landlady and they would not be under the general supervision and support that they would be in a hostel. Of course, it would not be intended that the persons should live in a hostel for ever. Eventually it is hoped that they were be completely free to live where they like. Once again with the hostels, we know what we want. But hostels are expensive and we have only a few. I don't want you to think for a moment that we have got hostels for everybody. I would like just to say what I said many times before to you; when you do these things on a big scale you will find them very expensive.

I will go on now to discuss a number of different problems which I have been asked to talk about. For example, we are going to talk about "what do intelligence tests measure". I want you to put this problem in proper prespective; I am also going to talk about some recent views on backwardness in reading and I would like to say something about maladjustment and also something about the education of the parents of handicapped children. If we have any time left I am going to deal with the problem of teaching simple concepts of health and very simple ideas of science to school educable retarded children. Dr. Lessa was keen that I should do something on this and I've collected some books for this purpose. The world that we are living today is a world of science even for the school educable retarded children.

Intelligence testing. Man has been measuring intelligences now for 50 years but we are still unable to agree completely about what these tests measure. Of course, one must not be too frightened because you can measure electricity accurately

but I don't think you can tell me exactly what electricity is. If you tell me it is a number os electrons passing along a wire I shall ask you what electrons are and then the fun begins. There had been many definitions of intelligence put forward. One group of definitions put emphasis on the adaptation of the individual to his environment. It is the power of adaptation. Another definition of intelligence stressed that it was the ability to learn. Another group of definition said that the intelligence was the ability, the power, to carry on abstract thinking. This, of course, involves the use of ideas, of symbols dealing with the environment. There is, of course, a good deal of overlapping in these view points. Since about the year 1949 there has been a great change in our attitude towards intelligence tests. This change has come about in England an in U.S.A. I think that I should also say at this point that in Russia they do not have intelligence tests at all; they don't want to have them. They don't have them in any of the countries behind the iron curtain. But in Jugoslavia, which has put one foot in each political camp they use the Terman Merrill test. Over the last 9 years or so has been a great change in our attitude towards intelligence tests and what they measure. When we look at the word intelligence rather closely you will see that we often use it in 3 different ways, or we give it 3 different meanings. And there has grown up now in Europe and in America to some extent the tendency of talk about intelligence A, B or C, according to the way in which we are using the word.

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AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA
EM 22/9/1958

INTELLIGENCE A is inborn potention and cannot be measured. This is due to the quality of the brain structure, and is wholly determined by genetic conditions or by uterine conditions, etc., as I explained to you in a lecture last week.

INTELLIGENCE B relates to the functioning of the brain and is a result of the person's total experience resulting from the whole environment. Naturally this would include teaching and whole influence of educational opportunities generally. There is now suggestive evidence that the brain structure becomes modified to some extent by the signals fed into it. But note that Intelligence B can only be measured by a test which is appropriate to the culture. Sometimes it is possible to make general judgements on changes in Intelligence B, but usually it is better to make an estimate on a standardized intelligence test and get a score which we may call Intelligence C.

Now, I want to say a few brief words about Intelligence B. In every day life Intelligence B will correspond closely to what we call understanding, insight, quickness of thought, and practical judgement. I think you can see, therefore, that it is difficult to make an accurate assessment of Intelligence B without some kind of measuring rod.

I hope now that when you use the word intelligence you have some understanding of the meaning that you are giving to it. If you think in terms of the quality of the brain, well, we have no means of measuring it. If you want to think of it in terms of the behaviour in every day life, well it is too global an approach to be accurate. Therefore, we need some kind of measuring scale. I I hope now that you realize that it is quite impossible to compare the intelligence of people unless they have broadly the same cultural background and training. Intelligence behaviour is seen only through the way of life of the individual. Thus, in an entirely new culture pattern, an intelligence test had to be devised by trial and error.

At the Congress of applied Psychology in Rome last April, your own psychologist Pierre Weil of Belo Horizonte, gave details of his investigation into the effects of schooling on intelligence test scores. Using his own non-verbal test, and examining some 27,000 people between 6 and 60 yeras of age in all parts of Brazil, he has produced evidence which suggests that certain kinds of intelligence test questions cannot be answered unless the child has had considerable schooling. The mental operations demanded by certain kinds of questions are the prerogative of those who have been through the educational mill. Now, do not think that intelligence test scores are useless. They are, in fact, the best single predictor that we have of a child's likely performance in school work, but it must not be considered in isolation, because his I.Q. score is likely to depend on some extent, upon the opportunities that he has had; and during the school life-time a child's I.Q. will vary somewhat according to the stimulation of the environment, his mental health, etc.

Now, a word about intelligence and attainments. I suggest that the way of looking at intelligence and attainments, is to say that the former refers to the more general qualities of thinking, of such things as comprehension , level of concept development, reasoning, and grasp of relationship. These are qualities which, to some extent, are acquired in the course of normal develop ment, though to some extent, these qualities are also dependent upon education.

Attainments, on the other hand, refer more to knowledge and skills which are more directly learned and whose acquisition and retention depend more on the person's interests, and on personality traits such as industriousness. Though there is usually some small difference between attainment scores and intelligence test scores, we sometimes find that a child's attainments are below that which we would expect from his intelligence test scores, and sometimes his level of attainment are above what one would expect from his intelligence test scores. Some people find it very hard to expect the latter case.

A child has a mental age of 9. If his reading age is only 7, everybody will accept it; but if his reading age is 11, people will find it difficult to believe. Now this happens. The reason, of course, is that intelligence tests only measure certain kinds of thinking skill; also attainment depends more on total personality. Since intelligence and attainment depend on the environment to some extent we must expect discrepancies between them as between, say, language and mathematics.

Now, finally a word about the 1937 Terman Merrill revision of the Binet test. You will remember that I have frequently recommended that you should use either that test or the Wechsler Intelligence scale for children when serious decisions about children have to be taken. In England, there is some tendency to use the Wechsler Intelligence Scale for children rather than the Terman Merrill now. This is for a number of technical reasons which I can't discuss here, but your experts on testing in this country can explain this to you.I want you to be aware of this, however; the Terman Merrill test has to be used sometimes, especially if the mental age is less than 5 years, because the Wechsler Intelligence Scale for children does not go below a mental age of 5.

I am sure you understand now that it is silly to talk about one race of people being more or less intelligent than another race. You can't compare them unless they have the same cultural background. You can compare white American children with our children, or with Dutch children, or with Swedish children, but you can't compare the children of São Paulo with the children of Amazonas, because the background is so different. That's why I have impressed upon you the need for getting your Terman Merrill or your Wechsler Intelligence Scale standardized for this part of Brazil; and until you do so, you will underestimate the ability of your children here. I can't tell you by how much you will underestimate them, but you will underestimate to some extent.

The next topic I have been asked to speak about is the importance of education for parents of handicapped or exceptional children.

Few people are trained before parenthood in the care, upbringing and education of children. Parent and child so often learn together, and with normal children, the mistakes that are made are usually more than compensated for by the successes that are gained. With normal children, the mistakes that parents make are not so serious. With exceptional children, though, the education and the training is much more complex. Mistakes made with these children are more likely to affect the child's development adversely. The parents of exceptional children are so often uncertain. They are confused; they are unduly apprehensive, and they are overwhelmed by their sense of inadequacy. Now, for these parents a knowledge of what normal children can do will give a better understanding of what the exceptional child can and can't do.

You know that we have our teachers teach normal children before we have them teach handicapped children. We think they understand the problem far better, if they know the wide variation in the behaviour of normal children; and you sometimes find that

the exceptional child isn't as exceptional as his mother thinks. This certainly is true of maladjusted children. Another reason for educating the parents is that we must try and impress upon them the need for carrying out any kind of treatment that has been recommended. I'm sure you will find that some unsatisfactory families will not carry out the skilled advice that has been given to them and which will help them. Again, we have to make clear to parents how important it is for the child to acquire satisfying social relationships. The handicapped child needs to enjoy satisfying social relationships with other children and with adults, just as normal children do. The exceptional child stretches out his hands eagerly for friendship and understanding, but he may find great difficulty in stabilizing the relationships that he needs. The simplest relationship, perhaps even taken for granted by normal children, are often slowly and painfully built up by the exceptional child. The parents must understand clearly that he or she has to teach the child to behave in ways which are socially and emotionally acceptable to other children and adults. The parent needs help in the difficult task of making his child feel wanted, and parent needs help when coping with the bewilderment of the child, and the child's unhappiness when his attempts at friendliness with other people are rejected and ignored. Sometimes the parent may find that his or her social adjustment is inadequate, and then he or she is unable to form satisfying and worthwhile relationship with other people. Sometimes the parent and the child have to learn together the arts of creating and maintaining good social relationships and friendship. Parents then must prepare their child for the varying reactions that the child will receive when he goes into the community and tries to engage in his activities.

Education can help parents to understand and tolerate ignorance, superstition and prejudice toward his child's handicaps. The attitude of the community toward the education of handicapped children is important. The parent wants education facilities for his child, and he may encounter resistance, hostility and opposition to the inclusion of his child in the class for non-handicapped children. A parent has to be ready for this. On the other hand, of course, the parents of handicapped children must understand that non-handicapped children must also be educated according to their abilities and needs.

Most children present some problems to their parents in adolescence. That is certainly true of our cultural patterns, and I am sure it is true of yours. But the problems are often exaggerated and intensified in children who are denied the opportunities of living a normal life. So often it is the parents, not the child, who find the period of adolescence trying. Some parents who can accept the limitations of the exceptional child in childhood resist the continued existence of the limitations of the child as he approaches adulthood. There is often a resurrection of the initial emotional reactions which were present in the child's infancy. In this stage the parents often need help in re-examining their emotions towards the child, towards their own insecurities and fears and towards society.

N.B. On most of pages 4 [illegible] I am repeating what I said on pages 1 and 2. This was by request.

Let's talk now about the three meanings of the term "intelligence". Sometimes when we talk about intelligence we imply that we are referring to something which was inborn, or at least, something that the child came into the world with. Sometimes when we use the word, we are referring to a person's performance in everyday life, their insight, their practical judgement, their understanding , their quickness of thought - the sort of person that in everyday life we call intelligent. Sometimes when we talk about intelligence we refer to the score made on the intelligence tests.

The first meaning I call Intelligence A. It is literally the quality of the brain with which we are born. But we can't measure it. The second kind of intelligence - the kind of intelligence which refer to the performance in all-round daily life, I call Intelligence B. The way in which Intelligence B manifests itself depends upon the cultural pattern. Intelligence B is too global - it's too big, it's too vast, it's too vague if you like, to give any assessment of it, and so we have to devise intelligence tests. Likewise, Intelligence C and the way it is measured depends upon the cultural pattern. In other words, we can only measure intelligence in relation to the cultural pattern. This measurement of intelligence we call Intelligence C. Well, I've been through this because people have got so worked up about intelligence so it is no good talking about measuring inborn intelligence. The intelligence that a child displays at 10 years of age, depends upon the quality of the brain with which he came into the world, and all the stimulation and all the signals - i would prefer to say that he has been receiving ever since birth. It has been very necessary for us in Europe and in America to clarify our thoughts on these points. Too many people say that intelligence tests measure inborn intelligence. Of course, intelligence tests, the score on the intelligence tests, is partly dependent upon the brain with which we came into the world, and there's no doubt about that. But the questions that we have to answer in the intelligence tests are also dependent upon all the experience and training we had in life.

I told you before that in the case of school educable retarded children who have come out of a very bad background we often find, after some years of a stimulating environment, that their score on intelligence tests rises. It is a real rise. You can also see why it is very silly to try and say that one race is more intelligent than another when their cultural background is so different. Of course, there may be real differences between races or tribes. There might be, for example, a tribe whose food was seriously deficient in vitamins. Such a tribe would probably, be less intelligent than the next tribe who had a well-balanced diet.

I also make it clear to you that Pierre Weil's work has shown that some of the questions that are set in intelligence tests are only answered by children who have been through the educational mill. You see, in Europe we can't find bright children as you can here who are illiterate. To us, this was a very interesting piece of work; but it is exactly what we would expect, but we couldn't show it because we can't find many illiterate children.

We will go now with the problem of the education of the parents. I was talking about "period of adolescence". By adolescence, too, we find that the frustrations, and the irritations, and the disappointments, and even perhaps, the sheer tiredness of the parents, are growing to the point where the parents lose, to a certain extent, their objectivity and their optimism.

I now want to tell you about an experiment in group therapy with the mothers of some mentally defective children. This was non-directed group therapy in the sense that the mothers met together and said what they liked, and the therapist did not take an active part, in the sense of directing. You may feel at the end of the experiment which I am going to describe, that the experiment did not accomplish very much. But it does bring out the kind of difficulties that the mothers have, and it does show to what extent the mothers get "insight" in such group the-

rapy. Well, I think you realize that many parents have great difficulty in adjusting to the existence of mental deficiency in their children.

This experiment that I am going to describe to you consisted of 21 sessions, each of 1-1/2 hours, spread over a six-month period. 11 mothers started in the first session; five dropped out after the second session; five more joined in the ninth session. In the first few sessions, the mothers kept to safe topics. They were making what we call "prestige manoeuvres" (manoeuvres to maintain their prestige). They were also intellectualizing the problem. For example, one mother said that the physician had stopped giving glutamic acid too early.

I have told you before that we do not in England, believe that glutamic acid is of any use in rasing intelligence test score.

Another mother said that the drug for malaria which had been given to the father during the war had affected his fertility. The physicians were blamed because they give no help to deficient children. Then there were discussions around "thumb sucking". There were complaints about overprotecting grandparents. There were discussions about "in-laws", mother-in-law, father-in-law. There were discussions about neighbours and these women all agreed that the fathers were overprotecting and that they did not accept their share in disciplining the children. Perhaps you now understand better what I mean by "sticking to safe topics", by"making prestige manoeuvres", and by "intellectualizing the problem". Of course when any of us are in a tough spot, we all reply, to some extent, with these manoeuvres. You have only to be at a cocktail party to hear a lady embarrassed over her clothes or something like that, say all this and more!

By the seventh session, the mothers were beginning to look back into their own lives. They were looking back in their own life's deprivation; they were looking back for experiences that they did not want their own children to have. They seemed to be saying that one might meet ones unmet dependency. Mrs. M. and Mrs.L., feared the inheritance of mental deficiency; they said they would have no more children. Mrs. L. and Mrs. S. gave very moving descriptions of the way in which their psychological mechanisms broke down in certain situations. Mrs. S. had been embarrassed for several years in social situations with her child until one day she met on the tramcar an old school rival, and then her old fears were reactivated. She was left with the feeling that the problem of her child had been displaced, but not solved. It appeared that the child was an "ego extension" of the mother. And the mother loses face because of the child. All the children of these mothers were trainable but not, what I have carefully describe to you, as school educable retarded children. At the ninth session one mother certainly stated that she hoped that there would be a sudden change in her child. In the same session, Mrs. P. said that she dispaired of ever adjusting to her child. The child embarrassed her and infuriated her in public by undressing and making strange sounds; from her description you could see that Mrs. B's problem was a problem of losing her own face in public, and the other mothers were emphatic about this. They got clear insight into Mrs. B's mind. In the tenth session we had 5 new people who joined in on the ninth session. These 5 mothers had come from another organization which was working with retarded and mentally deficient children, and the 5 when they joined in the group said that they had no hope that anything could be done to help. In the twelfth session there was much criticism of physicians and therapists. Mrs. M and Mrs. L. said they wanted prescriptions and orders from their physicians. They did not want anything else. Mrs. W. flatly said that physicians and social workers

were not meeting her needs. In the thirteenth session, Mrs. W. admitted that she had spent a whole winter crying. In the fourteenth session all the mothers agreed on the profound effect on their lives of having a mentally deficient child. Mrs. L. and Mrs. B. revealed their belief in the predictive value of dreams, and their belief in thelepathy. By the sixteenth session, the mothers were unanimous in agreement that their problems lay within themselves. When Mrs. P. brought out her own strong feeling of inadequacy, this was met by support from all the other members of the group. When Mrs. L. complained that all her neighbours rejected her son, the group of mothers were with her on this point until Mrs. L. realized that it was just one couple in the neighbourhood that had avoided her. Mrs. L.was much more able to accept from the whole group her hostility and withdrawal as far as the neighbours were concerned than she concerned than she could from a social worker. It appeared that Mrs. L's hostility came out in more than one form. Mrs. L. had been on bad terms with her own mother. It was in the sixteenth session that for the first time Mrs. B. looked upon her child as a unique individual, with his own needs and his own fears, rather than thinking of the effect that the child had on her and her feelings, and of the loss of self-esteem which she, the mother felt in the neighbourhood. By the twentieth session, the mothers realized that the group was soon to break up; and they realized that once again they would be struggling on their own without meeting, and problems connected with the separation became prominent. Mrs. B. said that she had got a little more from this group than she would have got from any other gathering. There was a bried revival of the fears as to what would happen to their children when the mothers died.

What conclusions can be draw from this? I've got quite a few here for you:

1 - There is often overprotection of the mentally deficient child.
2 - Rejection and hostility was observed in the case of 2 of the mothers.
3 - Displacement of responsibility for the child's condition was seen in one instance.
4 - Two mothers were quite unable to accept the existence of the deficiency of the child.
5 - One of the mothers appeared to be border-line psychotic.
6 - Resistance to group investigation was seen in every session.
7 - The psychological mechanisms of identification, withdrawal, projection, rationalization and intelectualization frequently observed.
8 - Resentment towards physicians frequently observed.
9 - In the sixteenth session, which was a crucial one, the group realized that the problem of living with mentally deficient children is the problem of living with ones own anxieties, fears, insecurities, feelings, etc.

The clear realization appeared that some of ones problems lies with ones own psychological self and one's past experiences.

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AULA DO PROFESSOR KENNETH LOVELL
NO
CURSO INTENSIVO SÔBRE EDUCAÇÃO DAS CRIANÇAS MENTALMENTE RETARDADAS
DADA
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I was talking to you yesterday about the problem of educating parents, and I was describing to you an experiment in group therapy. This study suggests that the difficulties which parents have in handling the problem of mentally defectiveness are broadly three:

1. There is the inability to find any acceptable cause of action that the parents can pursue to help the child. That cause, however, should tend to diminish in the future because as knowledge becomes spread abroad, we can help parents more.

2. There is a threat to the parents' psychological security. The parents sometimes feel that they have created something defective. They feel that they are a failure. This is more difficult to overcome.

3. The defective child reactivates, brings to life again or reinforces, their own internal psychological conflicts. It reactivates their hostilities, fears, and their own insecurity. It is quite possible that if they had not had a defective child, some other unfortunate happening in their lives would have triggered off their internal psychological conflict.

Now, these problems that we have been discussing in connection with mentally defective children and their parents, are also present, to a greater or lesser extent, in the case of other less deficient children, and although I have been talking about mothers, remember, these same problems are with the fathers. It is most important, I think, that you should understand that these problems are more acute in middle class families than in working class families. Now we can't stop to discuss why that is. For a number of reasons working class people often feel more psychologically secure than middle class people. Furthermore, these problems are accentuated or made worse by the attitude of the family and the society. For example, Western societies have now for many years, shown the greatest sympathy and understanding for blind children. I think that's true here as much as in Europe or United States, and the parents of blind children do not face the problems that the parents of mentally defective children face, because the society offers so much more understanding, and within limits, is prepared to accept the blind child. This illustrates the fact that the problems of the parents, although fundamentally linked with their own psychological make-up, are made worse, or eased by the attitude of society in general.

Now, let's turn to the ways in which the parents can be helped. So far I have outlined the problems. In just a very few cases one finds that the parents feel that the upbringing of an exceptional child is their full responsibility, and this very few resent any implication that they are incapable of coping on their own. But usually parents are only too glad to have help. Well, that's how it is with us, and my experience here suggests that this is so here too. But the guidance that is given must be given in such a way that it implies no threat to the self-esteem of the parents. If the parents are well-educated, and they are diligent and strongly motivated, then books and literature can be of some help; but it is rarely enough, and the greater part of the help comes from either skilled people or from meetings of the parents themselves. The people from whom help is most likely to come will be teachers, physicians, psycho-

logists, social workers and therapists. These can be of help in the following ways:

1) By giving knowledge of facts, as to how these handicaps arise. I'm very keen on this information being passed on to the public, that is why I spent some time talking to you about the etiology of mental defectiveness. It gets rid of superstition, The public gets to understand that these things can happen, perhaps, to anyone. At least, in our present state of ignorance, we can't always prevent these things happening. But, with greater knowledge and greater understanding of the problem, the guilt in the parents is likely to be less. This is very important. We must put emphasis on knowledge of facts.

2) By helping the parents to motivate the child, by helping the child to acquire and improve skills; by helping the child to acquire knowledge; by helping the child to form and maintain social relationships. As the child's personal and social adjustments improve, as the parents see the child making progress, the latter are helped enormously.

3) By helping the parents to get the child to acquire values and standards of conduct.

4) By helping the parents to acquire a firm and consistent method of guiding the child, that will result in emotional security for the child; It will give the child feelings of worth and self-esteem and independence, which is commensurate with his ability. In all these things, as the parents see the child improving, the parents feel happier.

5) Parents educating each other. They meet to discuss common problems, their commond needs, and the common goals or their aims. They get strength from one another. They get understanding, and they get knowledge and comfort from those who have actually lived through similar experiences.

6) If the parents are seriously disturbed, then you will have to see that some form of psycho-therapy is available for them. But the general problem in psycho-therapy is not an easy one. One of the problems which psycho-therapy does not seem to solve is this. Psycho-therapy, undoubtedly, can give you insight. Indeed, it is one method of acquiring insight but it does not always appear to strengthen the ego-mechanisms, and so enable the parents to be able to handle the problem with greater ease. Or to put it into simple language, insight does not always enable us to do what we want to do.

Parents have done a great deal, undoubtedly, to educate themselves and to obtain State help for themselves and their children in many countries. Effective parental education is based upon a knowledge of the principles of mental health for the parents and the child, and on a knowledge of the extent of the child's disability.

What I am going to say now is an applicable to normal children as exceptional children, although in the case of exceptional children maladjustment is likely to come more often and be more severe, because of the greater frustration. But as I paint the picture, I expect we shall see ourselves now and again. If we assume that we are tolerably normal, you will see that what I say applies to normal people as well as to what one might call maladjusted exceptional children.

I am going to take some of the thoughts that I have here in my book, because I think it will serve its purpose. The first

first thing is that it is very difficult to define what maladjustment is. Or if you like, put it the other way round: it is very difficult to define what normality is.

Normality is relative to the cultural pattern. Some kinds of thinking and behaviour which are abnormal in one culture are completely acceptable in another. The same goes for subcultural groups within a culture. Again, some forms of behaviour which are normal for one child or adult may be abnormal for another. For example, the introverted child finds it far less easy to make friends than the extroverted. What may be normal at one age may not be normal at another age. For example, in Western Europe the young adolescents often have an intense interest in a member of their own sex. This is especially true in the female; but when they get two or three years older, the interest is in a member of the opposite sex. Again, our ideas of normalities change with the time. A reformer, in his own generation, may be looked upon as a maladjusted and dangerous man, but in the next generation he may be looked upon as intelligent, progressive and normal. The problem of defining normality and maladjustment is very difficult, and you ought to be very careful before you describe people as maladjusted. All I can say to give you a definition of normality is this. In rather general, in rather loose terms, a person's behaviour is normal insofar as he can make his thoughts and behaviour conform to the major moral and social values of the cultural group. But I have warned you that it is difficult. Maladjustment in some form is always existent. Our history books are full of examples of collective mental illness. The massacre of the innocents, the inquisition, devil worship, witchcraft. They are examples of what we would call collective mental illness. However, all people seem to have the capacity for greed, lust, hate, vanity and envy. There is some of the animal in all of us, and the price that we pay for giving up the primitive tendencies is often considerable; and it looks as if the battle for mental health is never won. Our generation has to fight it. We can wipe out diptheric; we can wipe out leprosy, but we can't wipe out human tendencies. It may be that here we are touching upon a theological problem, since the Bible tells us we are all sinners.

How then does psychological adjustment and mal-adjustment appear to arise? I am not going to consider psycho-analytic theories, and I am not going to say anything which contradicts them.

One can look upon the question of psychological adjustment in terms of the reduction of human needs. We have bodily drives and we have psychological mechanisms. We also have secondary needs and interests that have been brought about through learning and experience. Both these primary and secondary needs, bring about striving behaviour in the individual. This striving on the part of the individual is directed towards goals, which in return will reduce the need will satisfy the need.

The child then, through his striving behaviour, is trying to reach certain goals. These goals will reduce his needs, whatever they are at the moment. If the child reaches a number of these goals, providing they are socially acceptable, then there will be healthy personal adjustment. But very often there are barriers, which results in the child being frustrated. These barriers can be due to many many causes. A mother might abandon a child. The child might be handicapped and might be rejected by his school mates. There are very many possible barriers in a child's life.

If the child is unable to make any appropriate responses whatever to the situation in which he is, or if the child frequently gets only partial success, then he may become maladjusted.

Furthermore, if the child repeatedly gets no success whatever, he may eventually suffer mental breakdown. But also note that the very goal that the child selects depends, to some extent, upon his adjustment, because the maladjusted child more often chooses goals which are unacceptable to society. The goals the child chooses are also dependent upon his sentiments, and the insight he has, and on his own potentialities. Unfortunately, when a child becomes maladjusted, parents and teachers often put additional barriers between him and other goals that he might seek, and quite often in maladjustment, one hits a vicious circle of barriers, inappropriate response, partial successes, maladjustment.

Every well-adjusted child does not reach all his goals. It would be bad for him if he did; but he reaches a proportion of the goals which are socially acceptable in his culture. A well-adjusted child then suffers frustration from time to time, but he seems to be able to handle it in a more satisfactory manner, and he seems to be able to handle it in a more satisfactory manner, and he seems to be able to switch to fresh goals, which are likely both to satisfy his needs and be acceptable to society. There is also strong evidence now to suggest that the tendency to maladjustment even eventual breackdown is, in part, determined genetically. In other words, some children come into the world with, as it were, a more robust central nervous system than others. This helps them to handle frustration more efficiently. Such children are less likely to succumb to maladjustment when under stress. But also note that we can all become maladjusted, and we can have a nervous breakdown, if enough pressure is put upon us. The important thing to remember is that some become maladjusted easier than others.

Now there are important happenings in the invironment which precipitate the maladjusted, especially if these conditions persist over many years. I will name some of the likely conditions. I am not saying that these are the conditions in any particular child, but these are likely to be barriers to the child:

1. Defective parent/child relationship. This is important up to adolescence, in spite of what psycho-analytic theory says.

2. Inconsistency in the matter of praise and blame, rewards and punishment.

3. A mature upheaval in the life of the community, such as mass migration, or unemployment, or war.

4. The fact that the child has to live in contact with groups of people whose cultural and moral standards are different from those of his home.

5. Physical disabilities - For example, a boy who can't play games, or an older girl who can't compete with other girls for the attention of young men, are likely to suffer frustration, unless they can choose other goals.

Later on I am going to mention some of the happenings in the school which are likely to act as barriers, but I would just like to say, at this point, that it is possible that the number of maladjusted children is increasing. I said it is possible, I am not saying the number is increasing. This may be due to a number of causes, such as, the rapid rate of social change or the fact that life is becoming more complex and less understandable to children. There is often a feeling that the family no longer forms part of an organic community. Certainly in Western Europe and in the U.S.A. there is increasing isolation of the family unit, and from your large apartment houses here, I should think the same is happening. In Western Europe there is the impersonal nature of much of the day's work. There are then a number of reasons why it is likely that the number of mal-adjusted children will increase. Those of

you who were at my lecture at the Cultura Inglêsa will remember that I said that looking out over the next 50 years, it is more than likely that the number of children in the special schools, for blind, or deaf, and other kinds of physical defect, will decrease; but the number of children in special schools for school educable retarded and the mal-adjusted is likely to increase.

What sort of barriers does the school raise? Well, I can only speak here of our schools, and may be your problems are not quite the same, and you must reject what you think is not applicable to your schools. We find that going to school at the age of 5 years can be a source of frustration. The period when the child is learning to read, write and do number work, and any time when he is unable to keep abreast with the school work he is likely to feel frustrated. The retarded child of course is likely to feel very frustrated. By about 6.1/2 years of age many of them begin to realize that they are not doing the same kind of things that their colleagues are doing. This is likely to be a big barrier. Again, in England a critical period is when we sleet them at 11 years of age, for different kinds of secondary education especially if undue pressure has been put on the child by the parents. I would make a guess that among middle class parents in Brazil, there is pressure put on children by the parents and the schools to get into"Ginásio", because you have not enough"ginásios"to educate children who could profit from them. Other possible barriers i in the child's school life are: A head-teacher or assistant teacher, whose personal relationships with his pupils are poor; and at the adolescent period, the failure of the adolescent to secure within the school any kind of recognition or security of personal relationshops with other adolescents.

What are the kinds of responses that we get to frustration? The number is very large, but I will group them for you under 5 or 6 main headings.

I - Agression: The child will attack, physically or verbally, a person or an object which is linked to the frustrating situation. Sometimes the aggression is turned in on the self, as in anxiety and in guilt feelings, and sometimes the aggression is directed to a person or group of people who are far removed from the source of frustration. This direction of aggression on to people far removed from the scene is a good example of projection.

II - Psycho-somatic disturbance: The child can develop some physical condition, such as asthma, enuresis and the child can withdraw, because of this, from the frustrating situation with a rationalized excuse.

III - Compensation: This can cover a wide variety of symptoms, from day-dreaming to exhibitionism.

IV - Rationalization: The child or the adult puts the blame for his failure on to some other person or objects, or else, says that the goal is not worth obtaining. (It is the story of the fox and the grapes).

V - Withdrawal: The child withdraws physically from the situation, and on the surface becomes apathetic about the goal; or the child withdraws in fantasy.

VI - Regression: The child reverts to a more childish form of behaviour. He may even lose motor and language skills or he may display "temper tantrums".

All these things can be seen in adults as well as in children and we all react in these ways sometimes. Now, let's hold up

the mirror a little closer. I am now going to give you some of the day-to-day symptoms, which you will see in mal-adjusted children and in adults. But I want you to be careful here. If you see just one or two of these symptoms appearing now and again, do not take it very seriously. Children go through phases and grow up. All children are stubborn at times. All children like a certain amount of solitary play. Some adults talk to themselves sometimes. It is when you see a number of these symptoms I am going to give you, appearing frequently and consistently, over a considerable period of time, that one is on the lookout for a maladjustment. I guarantee that everyone of us here will show some of these symptoms from time to time.

1. Destructive tendencies towards people and things
2. Extreme restlessness
3. Feelings of inferiority
4. Stubbornness
5. Abnormal fears (as of the dark)
6. Over-sensitivity to criticism and suggestions
7. Inability to work hard at anything
8. Inability to make decisions
9. Easily excited
10. Frequent emotional upsets
11. Feelings of being different from other people
12. Lying and cheating
13. Marked solitariness
14. Excessive sulking
15. Feelings of great importance
16. Repeated truancy from home and school
17. Bed-wetting (enuresis)
18. Thumb-sucking
19. Fingernail biting
20. Facial ticks, grimaces
21. Frequent passin of urine - other causes excluded
22. Nervous finger movements and hand wringing
23. Talking to oneself.

You can add to that list I'm sure. You have all see these symptoms. But do not label a child maladjusted because you see one symptom now and again breaking out. It is when you get a cluster of them, over a period of time, that you look out for trouble.

What is the role of the teacher? What can the teacher do about it? I must warn you at the outset that the problem of maladjustment in children is intractable in many cases. When everything has been done, some children do not improve. Other children recover for no apparent reason whatever. In some instances different symptoms break out. You cure one symptom, and something entirely different breaks out. What is the teacher going to do? Well, here are some suggestions for you, and I am assuming here that the maladjustment is not so severe that the child has to be sent to a special school, or that the child is not a psychotic.

The first thing for the teacher is to get to know the characteristics of normal children, and watch out for early signs of mal-adjustment. The teacher should be on the lookout for children who are excessively lazy, aggressive, anxious, living in fantasy, and without companions.

In our training courses in England, we always give a course on child development, because you can't understand mal-adjusted children or any other kind of exceptional children, unless you understand what ordinary children do. I frequently stress this to you, although in our course here we have not said very much about ordinary children, except, of course, that our work in number and reading closely parallels the work for normal children in many ways.

Second, keep a close watch on pupil/teacher relationships. An authoritarian attitude is as unhelpful to children as a weak submissive attitude. Children react to agression - with agression.

Attempt with all retarded children, as with normal children to combine firmness with friendliness and understanding. All children prefer order to disorder, in spite of what some teachers think; because order enables the child to do some work; children thereby get a sense of achievement, and they also know what is expected of them, and they have not always got to make the decision.

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