

Conductive Education

A New Approach to Teaching Functional Skills

Presented by Ester Cotton, PT, FCSP

Barbara Emsley, OTR - Workshop Facilitator

Course Outline, Reference Material and Bibliographies

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October 12 - 16

Peapack, NJ

CONDUCTIVE EDUCATION WORKSHOP

OCTOBER 12 - 16, 1991

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COURSE OUTLINE

Introduction to Conductive Education

Ester Cotton, FCSP
October 12 & 13, 1991

Day 1 Saturday, October 12

8:30 - 9:00 AM Registration, coffee refreshments
9:00 AM Cerebral Palsy
Attitudes to treatment
Education and management of cerebral palsy
Working for function
12:00 Lunch will be provided
1:00 PM Conductive Education- The Five Principles
1. The environment
2. The group
3. The conductor
4. The program and day routine
5. Rhythmical Intention
4:00 PM Adjourn

Day 2 Sunday, October 13

9:00 AM The use of the Hand in Conductive Education
The development of the human hand
a). Anthropologically
b). Phylogenetically
c). Ontogenetically
The hand in cerebral palsy
12:00 Lunch will be provided
1:00 PM Sunday afternoon
The groups
The mother and her baby
The mother and baby groups
The nursery
Getting ready for school
4:00 PM Adjourn

Pediatric Workshop

October 14 & 15, 1991

Day 1 Monday October 14

9:00am Setting up a group
Team work vs Conductors
Learning to program
12:00 Lunch will be provided
1:00pm Organizing the environment
Conductive for learning
Organizing the day routine to the
advantage of the child
4:00pm Adjourn

Pediatric Workshop (continued)

Day 2 Tuesday, October 15

9:00 AM 1. Assessing children deciding on priorities
2. Making the task series
3. Using Rhythmical Intention
12:00 Lunch will be provided
1:00 PM Attempting to run a group/ groups,
using lying, sitting at a table, free
sitting, standing, and walking.
4:00 PM Adjourn

Adult Hemiplegia Workshop Wednesday October 16

9:00 AM The stroke patient and his problems
Treatment or Learning
Working for Function
The Basic Motor Pattern
12:00 Lunch will be provided
1:00 PM Organizing a day routine
The task series
The group
Rhythmical Intention
4:00 PM Adjourn

Attitudes to treatment of Cerebral Palsy

The last thirty years have shown an ever increasing interest in the possibility of integrating children with Cerebral Palsy into our society. This goal, coupled with the increased knowledge of child development and neurology has given rise to experimentation in treatment.

Experimentation has also been prompted by the survival rate amongst children with Cerebral Palsy as well as the decrease in other childhood diseases.

Doctors, Neurologists and Therapists have used their knowledge, observations and experiences to develop various approaches to the problems of Cerebral Palsy. These systems fall into different categories;

- Those based on ontogenetic development (Bobath, Rood, Vojta)
- Those based on phylogenetic development (Temple-Fay, Doman, Vojta)
- Those based on neurophysiological theories (Bobath, Rood, Vojta, Temple-Fay)
- Those based on orthopaedic procedures (Phelps, Tardieu)

In the education field we have systems of communication, (Bliss, Paget-Gorman), systems which deal with sensory integration, perceptual and visuo-motor disturbances (Ayres, Frostig) and other educational systems (Cruikshank, Strauss, Steiner).

The teacher and therapist has an ever increasing field of information to learn from. If for a moment we look at all these systems we shall note features common for them all:

1. They all divide treatment from education.
2. Treatment is divided into Physiotherapy, Speech Therapy and Occupational Therapy.
3. Treatment and educational sessions are episodic.
4. Improvements are created by the skill of the therapists by the handling of the child rather than by the effort of the child himself.

The organisation of these systems looks like this

Treatment

Physiotherapist }
Occupational Therapist }
Speech Therapist }

Education

{ Nursery Nurse
{ Nursery Teacher
{ Teacher

TEAM

Neurologist }
Paediatrician }
Orthopaedic Surgeon }

{ Psychologist

with the child circulating between the members of the team for episodic, symptomatic treatment. The positive side of this arrangement is the advice and expertise of the specialist, (which should never be underestimated) the negative side is the confusion and passivity it produces in the child.

We started off by saying that our goal was to produce a child who would be able to integrate better into our Society. That is the goal of everybody dealing with Cerebral Palsy. The question is how this can best be done and where we put the emphasis.

Conductive Education

In Conductive Education (Peto) the emphasis is on education. By putting all the cerebral-palsied child's problems under the umbrella of learning Peto acquired the unity of approach to all problems so missing in the systems described above. He expressed this the first time I met him in three short sentences; "The child must learn everything from sitting on the pot to the A.B.C.". "No time of the day is better for learning than another", and "We work in order to (reach a goal) not because of (the symptoms".)

Professor Peto worked for many years himself with groups of children and it was from his observations and experiences as well as his knowledge of neurology, rehabilitation and education that he developed the structure of Conductive Education as it is now practised in his *Institute in Budapest.

1. To socialise the children, to make them more child-orientated and secure the children work in groups.
2. To unite all the disciplines, Peto created a new profession, the Conductor** who acts as an educator of the children in all situations.
3. To correlate, repeat and reinforce all learnt skills, the children work to a structured programme which is fully understood by the children as well as the Conductors.
4. To make it possible for the children to learn new motor skills and new motor patterns without being handled, Peto developed a learning method which enabled the children to work for long periods with attention and concentration. This method is Rhythmical Intention.

The theoretical background for Conductive Education is of course normal child development and Neurophysiology. But Peto also turned to the Neuropsychologists and the theories about acquisition of motor skills and regulation of behaviour. It was through the study of Pavlov, Vygotsky, Luria and Bernstein that the idea of using speech and language, Rhythmical Intention emerged.

* The Institute for Conductive Education of the Motor Disabled and Conductor's College was founded in Budapest by Professor Peto in 1945. Since his death in 1967, it has been under the leadership of his pupil and co-operator, Dr. Maria Hari. The Institute is a Rehabilitation Centre for many hundreds of patients, the majority of whom are residential; 200 children with cerebral palsy, several groups of spinal bifidae and muscular dystrophies. It also houses adult paraplegias and hemiplegias, and has a large out-patient department for babies and adult neurological cases. As far as the children are concerned, the Institute is neither a hospital nor a school but is regarded as a pre-school training centre from where they move into suitable schools as soon as possible.

** The Institute is also a 'Conductor's College. The training of conductors takes four years. The girls are accepted on selection; 'A' level qualifications are needed as well as aptitude for the work. The professional qualifications are recognised by the Ministry of Education.

A few points about the background to Rhythmical Intention.

1. Pavlov. When Pavlov became interested in forming more and more elaborate chains of conditioned responses he found this very difficult in animals but very easy in humans. He argued that language acted as a special signal in man. In many experiments he showed that language can take the place of either direct or indirect stimulus. Pavlov introduced the notion of "the second signalling system". (Language)
2. Vygotsky. Vygotsky in opposition to Piaget (1923) set out to show that the child's egocentric speech serves as a useful function in the child's mental development. Vygotsky also showed that speech not only accompanies motor activity but serves to orientate it. He hypothesised that "speech, even in the early years serves an adaptive planning function in the life of the child".
3. Luria. Luria has made endless experiments with children of all ages to assess the influence of speech on their motor behaviour. These experiments are so many and so varied that one cannot describe them in detail in this short article. The gist of the experiments points to the child being able to control his motor behaviour better when reinforcing his movements with speech, later by internalising his speech but using it again when in difficulties. (In the period in which I have worked with Conductive Education I have had the opportunity of observing children using speech when in difficulties).
4. Peto. Peto used the information from these and many other sources to develop his method Rhythmical Intention. The children use speech, or inner speech, to express an intention. This is followed by a movement, which is carried out rhythmically while counting from one to five. The movement may also be accompanied with dynamic speech, up, up, up, down, down, down.

The use of Rhythmical Intention

Peto looked at Rhythmical Intention as a tool one gave the children to help them in their work. In a group there may be children who cannot speak, who do not understand verbal commands or have poor body image. They will not be able to regulate this performance. But as the children are working together other stimuli will aid the child. He will be able to look, to copy and to link these experiences with language.

Some positive points about Rhythmical Intention

1. It enables the children to work for very long periods during the day.
2. It encourages the children to produce sounds and to speak in all positions.
3. It helps the children to learn new motor patterns by establishing contact between the higher centres of the brain and the trunk and limbs.
4. It develops body image and an idea of position in space.
5. It furthers concentration.
6. It helps the children to work actively so also developing motor memory.

Conductive education is an educational system which gives children the security and time needed to learn the tasks of daily living needed for their independence. Rhythmical Intention is only a small part of this system. The most important part is the security produced by the positive attitude of the conductors to the children in all situations. The children and the conductors share the pleasure of the progress of each child, together motivating the group to further efforts.

Introducing Conductive Education is full of difficulties. The need for a new structure and a new profession delays the progress of this system outside Hungary as well as the general fear of anything new. Nevertheless, we have in England over the last 10 years developed Conductive Education in four schools and one Centre for young children and Babies (and mothers). The Spastics Society has added a special unit to its Ingfield Manor residential school in Sussex. This Unit only practises Conductive Education and receives children about the age of four for two years of intense pre-school training. The Unit has been open for two years and the first five children are ready to go. Those interested to know more about this method can study the tapes and slides prepared by The Medical Recording Library of the progress and method of progression of these first five children. The slides give a better idea of the work than an article can ever do.

Bibliography:

- Frolov (1937) Pavlov and his school
Luria (1961) The role of speech in the regulation of normal and abnormal behaviour
Luria, The Working Brain, Penguin Press
Bernstein N, The co-ordination and regulation of movement, Penguin Press
Held, Plasticity in Sensory Motor Systems (Scientific American)
Bobath K, Bobath B, (1964) The facilitation of normal postural reactions and movements in the treatment of Cerebral Palsy
Cotton (1974) Conductive Education and Cerebral Palsy, The Spastics Society
Conductive Education, Five sets of tape/slides, Medical Recording Service Foundation, P.O. Box 99, Chelmsford CM1 5HL

CONDUCTIVE EDUCATION FURNITURE

Shek Yam Pre-School Centre, The Spastics Association of Hong Kong

Jeanette Ng, Occupational Therapist

"Do not ask what can I do to help the cerebral palsied child, but rather what can the child do to help himself."¹

András Pető

Introduction

In order that cerebral palsied children can learn to help themselves, the first step, I believe, is to provide them with the right type of furniture — furniture which enables them to grasp, hold and release. Being able to hold on, children can learn to sit upright, to stand up, to take steps and, most of all, to work for themselves.²

Having been involved with cerebral palsied children for some years, I find that slatted plinths, ladderback chairs and stools are absolutely useful. In this article I would like to share with the reader some of the practical points that I have learnt from the children using this furniture.

The children I work with are two to six years old and have a bodyweight of 20 to 45 pounds; they are 30" to 40" tall. The furniture that I am going to talk about has been found to be suitable for over 90 per cent of them.

Slatted Plinth for Pre-school Children

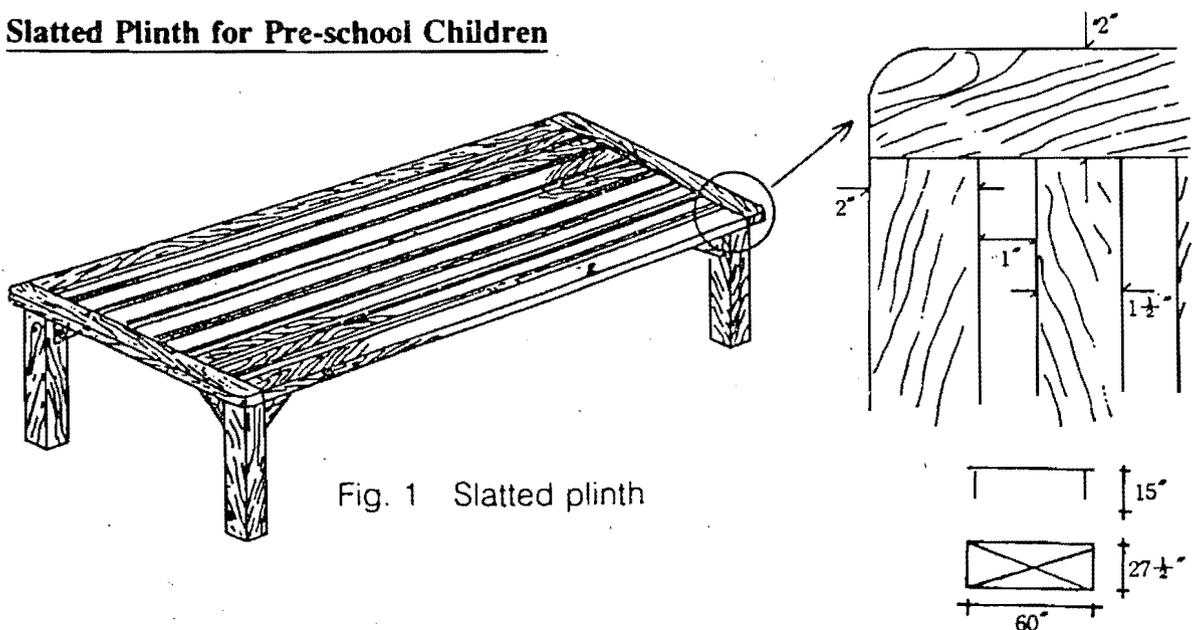
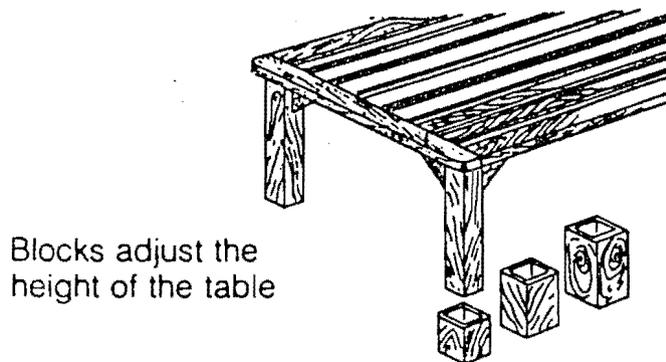


Fig. 1 Slatted plinth

Having worked with a few different plinths, I find the type shown in Fig. 1 the best.

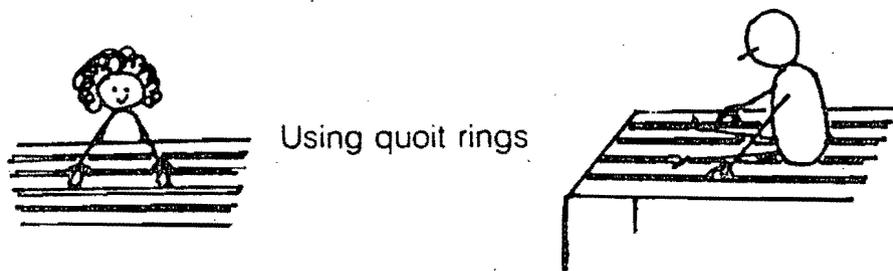
This plinth is made of redwood with a weight of about 30 pounds. It is heavy enough to provide stability for the children, but it is also light enough for the staff to lift up so that it can easily be moved around.

The height of this plinth is 15". This height has been found to be suitable for the majority of the children in the Centre. However, if a higher surface is needed for the older children or for standing, then blocks for raising the height are useful. The blocks that are used most are 2", 3", 5" and 7" high. Sometimes, for the very small children, a lower plinth of 12" may be needed.

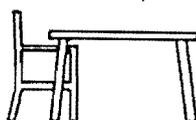


The slats of the table are 1½" thick; they are highly polished on all the sides. The children have no problem grasping the slats.

The space between the slats is narrow enough (1") to hold a rubber quoit ring, which sometimes is very useful for facilitating the children to hold on.



The edge of this plinth is ½" thick. The children can therefore hold onto the edge as well. Moreover, the thin edge allows the armrests of the children's chairs to go underneath it. Besides enabling the child to go nearer to the plinth, it is also useful in preventing a chair toppling over when a child has the tendency to thrust himself backwards.



The armrests of the chair fit under the table

Removable Table Top

A removable table top can be put onto the plinth for the more able children to use as an ordinary table, for lessons, play, feeding, etc.

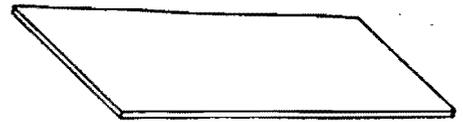


Fig. 2 Table top

Ladderback Chair (Adjustable)

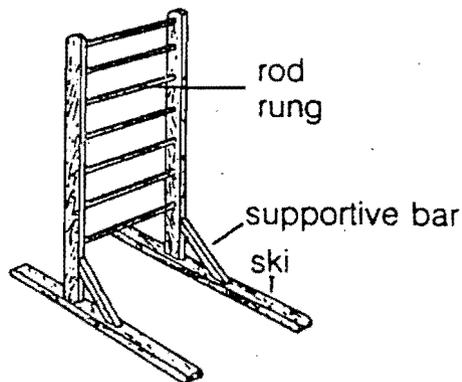
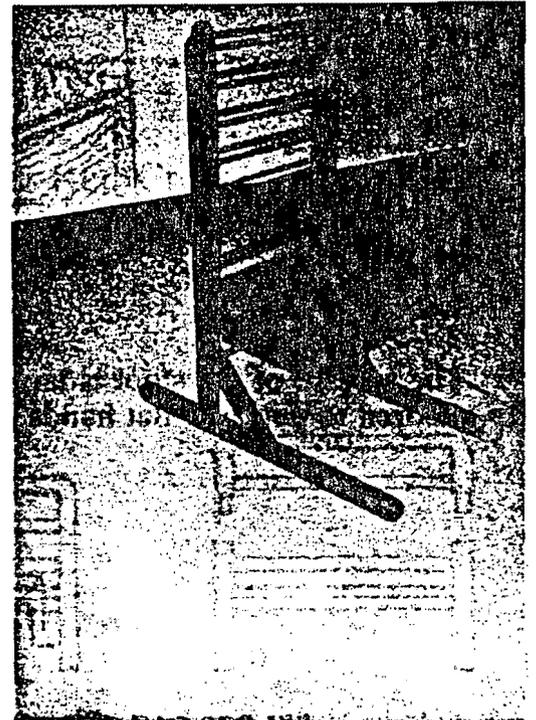
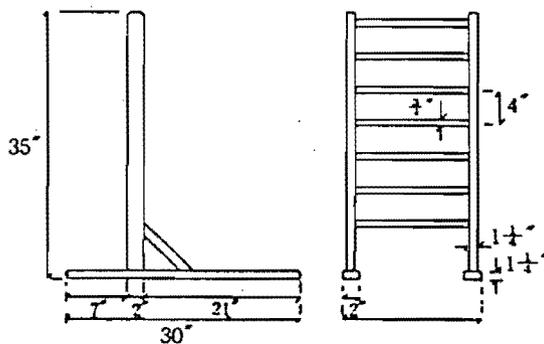


Fig. 3 Ladderframe



This ladderback chair is made of redwood and stainless steel rods. Though it is heavy enough to provide stability, it is not difficult to push on the floor. Ever since we started using the stainless steel rods, none of the children have found the metal rods cold to hold onto.

The removable seat can be put on if a heavier chair is needed.

Of the three different diameters of the rods, $\frac{1}{2}$ " , $\frac{3}{4}$ " and 1" , the $\frac{3}{4}$ " has been found to be the most useful. The very small hands tend to slip off when holding onto the 1" rod, and the $\frac{1}{2}$ " one appears to be too thin to facilitate a good grasp. Over 95 per cent of the children in the Centre are able to use the $\frac{3}{4}$ " ones.

The space between the rods is 4". If the rods are closer, it seems to confuse the children.

The skis have rounded ends. Their underneath parts are highly planed and sandpapered. These two properties of the skis help to reduce friction between the skis and the floor. The ladderback chair can thus be pushed smoothly. It is worth noting that the underneath parts of the skis should not be waxed as the wax would trap dust particles and thus would increase friction as the chair is pushed along the floor.

Stool

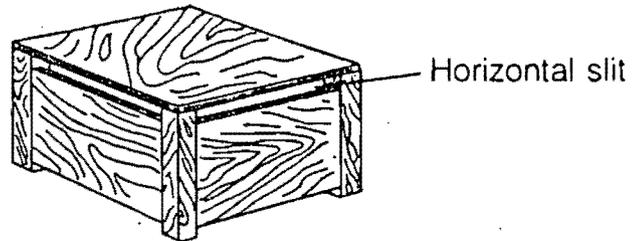
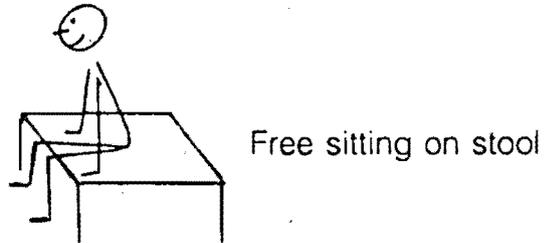


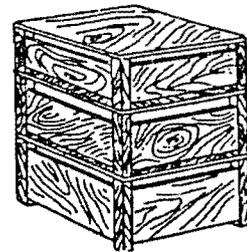
Fig. 4 Stool

The surface of the stool is large and non-slippery. The large surface enables the children to put their flat hands on the stool for fixation in free sitting.



There are horizontal slits along the sides of the stool. The children can thus hold on to the edge of the stool for support if necessary.

Stools of heights 7", 8" and 9" are found to suit most children in the Centre. Despite the different heights of the stools the surface areas are the same, 14" by 14", so that the stools can be stacked up easily. This is especially useful in places where space is limited.



Stacking of stools

Conclusion

It is important that this furniture is not just used in one room as children need to generalize the skills they learn in Conductive Education sessions. The versatility of this furniture allows it to be used on different occasions and in various activities of daily living throughout the day, like when eating, dressing, toileting and all kinds of play or other activities.

The above is just a summary of my limited experience of furniture I gained over the past few years. I hope other staff can contribute their valuable experience so that better furniture can be designed and made for cerebral palsied children.

References

1. Cottam, Ph. J. & Sutton, A. (1986) "Conductive Education — A System for Overcoming Motor Disorder", Croom Helm, London.
2. Cotton, E. (1980) "The Hand as a Guide to Learning", The Spastics Society, England.

John F. Kennedy Centre, Hong Kong Red Cross

Wance Kwan, Occupational Therapist

Modified Bedframe

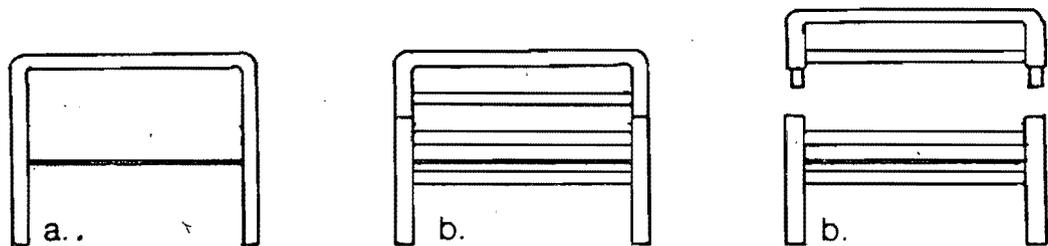


Fig. 5 Horizontal bars and removable bed-end rail
a. Before modification b. After modification

This is a simple modification of the ordinary bedframe.

As a rule the children will get out of bed at the long side and then move to the potty by cruising (walking sideways) along the bed. The child can then hold onto the horizontal bars which are added to the bed-ends and sit down on the potty.

Occasionally it might be advantageous if the upper portion of the bed-end frame can be lifted out so that the child, while lying on his tummy, can push himself down and off at the foot-end of the bed.

For getting into the bed, however, it will be better for the child to cruise along the side of the bed once again and then climb into it.

Horizontal Bar

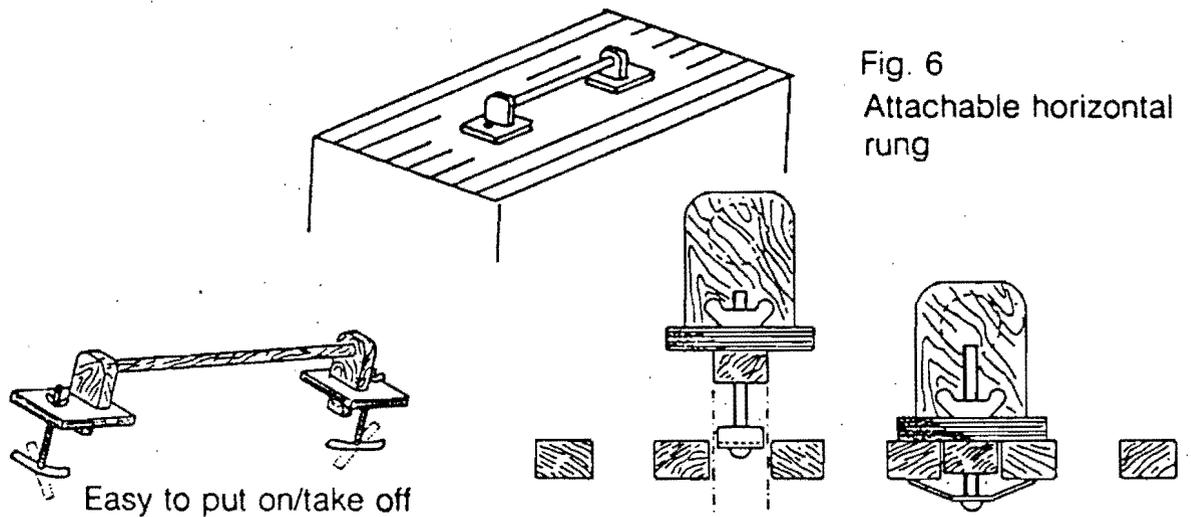


Fig. 6
Attachable horizontal
rung

We have come across children who can only hold effectively onto thin cylindrical rods. Holding onto this thin rod would be a preliminary step before progressing to holding onto the slats of the plinth. The one depicted above is convenient to screw on and easy to take off from the plinth.

Deborrah Thornhill, Physiotherapist and Esther Nam, Occupational Therapist
Furniture for Severely Disabled Adolescents

Slatted Plinth for Severely Disabled Adolescents

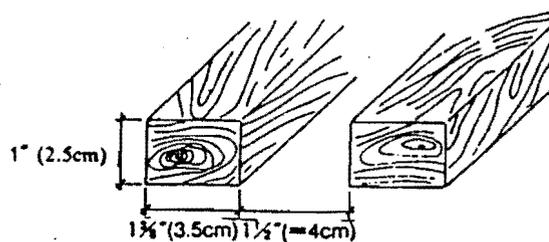


Fig. 7 Slatted plinth
for adolescents

Disabled adolescents who have severe contractures of their hands are not able to grasp on to the usual style of Conductive Education slatted plinths.

A more suitable design for grasping is when the gaps of the plinths are wider than the slats. The optimal dimensions are:

- 1 3/8" (3.5cm) for the slats
- 1 1/2" (4cm) for the gaps

The slats should be slightly rounded and polished to prevent splintering and discomfort.

Stick

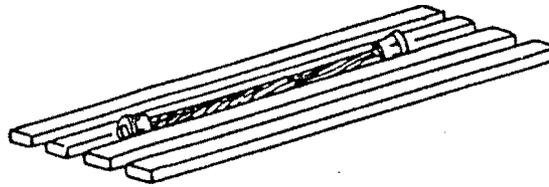


Fig. 8 Rubber tips prevent the stick from falling through the gaps

The diameter of the stick * used in the hand programmes is about 1" (2.5cm) and it could therefore easily fall through the gaps of the plinth. When we started the Conductive Education programme this happened quite frequently and the stick made a clatter as it hit the ground. This often elicited the startle reflex in some of the adolescents which made them reflexively pull up their arms and legs and fall over, causing discomfort and anxiety.

To prevent this problem rubber tips, usually used for walking sticks, are fixed to the ends of the sticks.

Staff members of the John F. Kennedy Centre

Wall Bars in the Toilets for Young Children

To ensure consistency in the training of toileting it is advantageous to install these wall bars in the toilets in addition to letting the children use ladderchairs and modified bed-end rails for toileting.

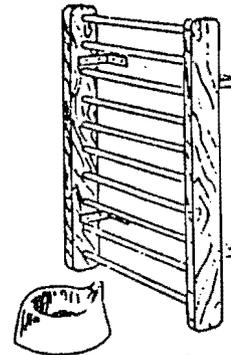


Fig. 9 Wall bars in the toilet

Slatted Classroom Table

To have a slatted table in the classroom, dining hall and bedroom makes the children more independent and helps them to generalize their skills.

A bookcase can be attached to the classroom table.

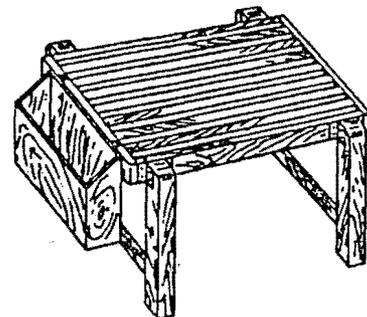


Fig. 10 Slatted classroom table with bookcase

* Being a broom handle

Plywood Table Top

This $\frac{1}{8}$ " plywood table top has the advantage of being very light — it can be carried on one finger! — and when turned upside-down it can be used for playing ping pong, etc. The raised edges prevent the balls from falling down so easily. There is also resistance to warping with changing humidity.

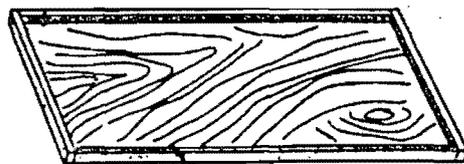


Fig. 11 Upside-down table top

Studs, Wheels and Sandbags

If the ladderframe does not slide well enough on the floor, metal or plastic studs can be attached to the four end-parts of the skis.

On a high friction floor, wheels may have to be fixed to the front parts of the skis.

To make the ladderframe more stable and to regulate the resistance when walking, sandbags of different weights will prove helpful. We now use a series of 1kg, 2kg, 3kg, and even 4 kg sandbags according to the individual needs of the child.

For older children and taller ladderframes two supportive bars will be needed to prevent the ladderframe from breaking at the joints.

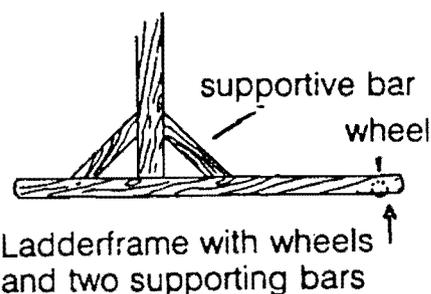
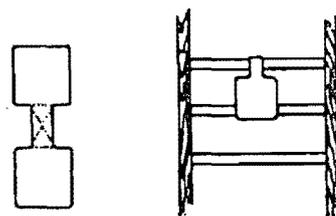


Fig. 12



Sandbag on ladderframe

Aluminium Ladderframe

This aluminium ladderframe was an experimental design by Mr. Chan Tsun Ming. It weighs only 5 pounds, whereas a wooden ladderframe of the same height weighs almost 10 pounds. The lightness of this aluminium ladderframe made it possible for a small, severely athetoid boy to push it forward by himself, and this motivated him to walk. Sandbags can weigh it down according to the needs of the child. The skis are detachable.

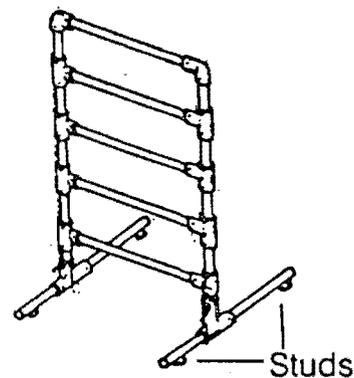


Fig. 13 Aluminium ladderframe

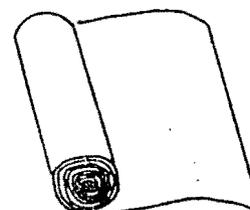
Furniture in Budapest

Anita Tatlow, Physiotherapist

Old Institute

While the slatted plinths in the Old Institute in Villanyi Út are the same size in the various rooms so they can be stacked easily against the wall (one inside the other), ladderback chairs and stools are of different make and colour. Some of the chairs have high ladderbacks with 1" rungs, other chairs are low and have partial backrests. There are numerous footboards and they also vary in design and colour. Clearly the furniture was assembled gradually. It is noticeable that while the more severely disabled children sit at slatted plinths, the more advanced children will sit at normal tables. However, for the lying programme they all use slatted plinths.

Budapest is the place where, quite literally, the "red carpet" is rolled out for disabled children! This is a very long, narrow carpet, easy to handle, which provides spatial confines so that it is easier for the children to roll, play, jump, make somersaults, drive their bikes, etc.



The red carpet

Slatted Plinth for Stroke Patients

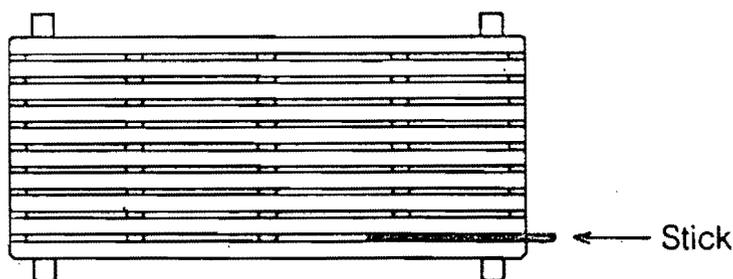


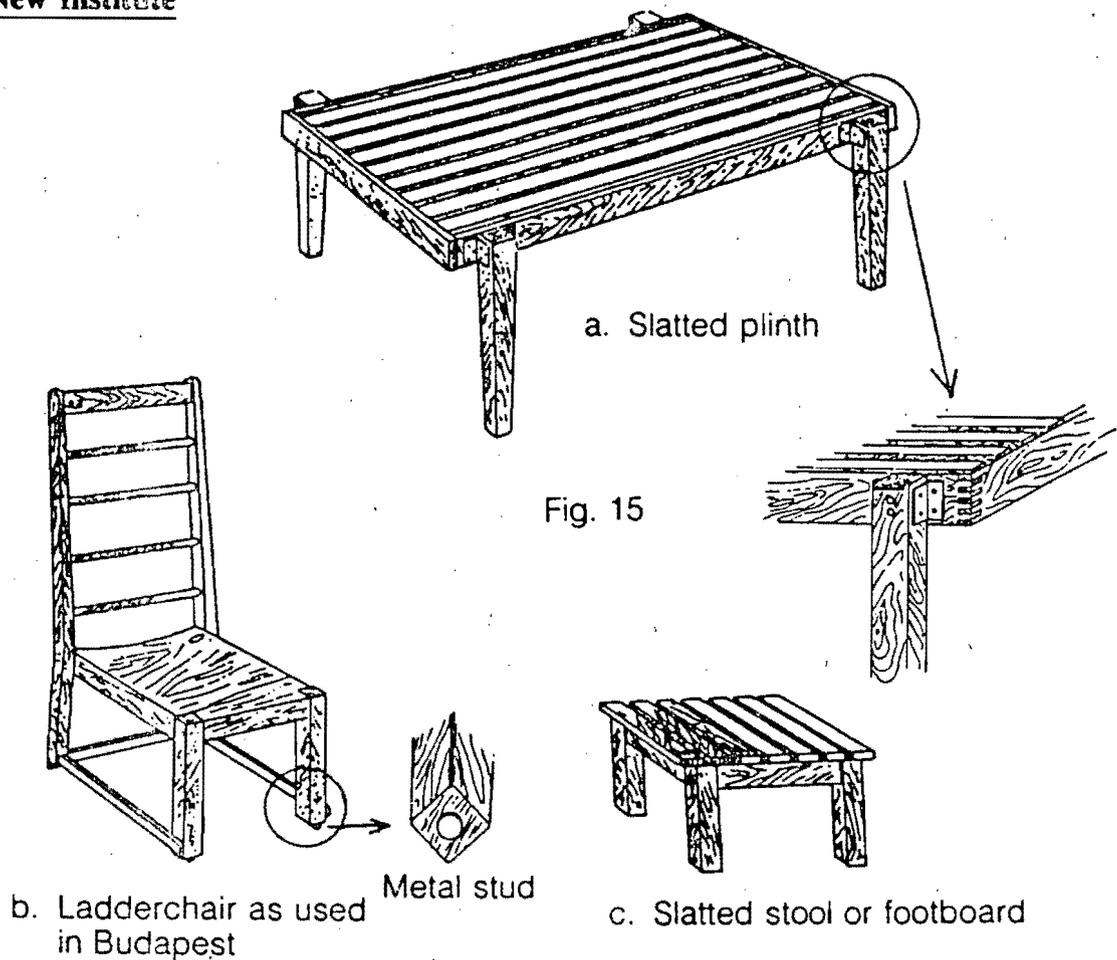
Fig. 14 Slatted plinth with three cross-bars, seen from above

Analysing their loss of motor function, adults who have suffered a stroke will gradually understand which movements they have to re-learn to become independent in their life. The plinth will help them to do so.

Prolonged use of the slatted plinth, especially when performing the lying programme, will reveal many possibilities for re-learning more varied and precise movements.

The stick, which is about 28" by 1", can be placed over the cross-bars without falling onto the floor.

New Institute



In the New Institute there is homogenous and aesthetically beautiful furniture in a light brown colour, which harmonises with the orange colour on part of the walls. Besides the slatted plinths they also use slatted stools or footboards.

The ladderchairs have a metal stud inserted to those parts of the legs which touch the ground so that the children can push the chair better.

Bench

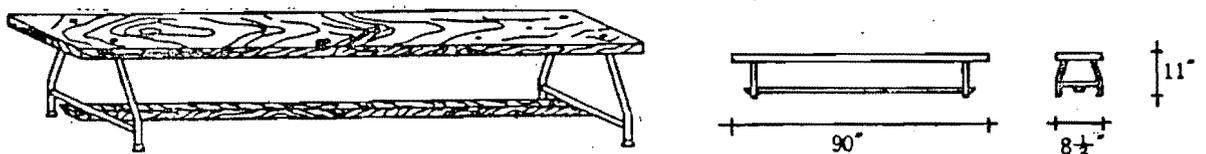


Fig. 16 Bench

(according to the size of the room)

Long benches are always found in the rooms for the 4-7 year old children who belong to the mixed spastic group. These benches are very important as they make it possible for the child himself to learn how to part the legs while sliding forwards (or backwards!) while sitting across the bench. It is equally good training for the arms and hands. Gradually the children can use these benches with only minimal supervision, many times a day. The benches can be seen as the link between sitting on the pot with parted legs and walking with parted legs. The constant emphasis on parting the legs will help to prevent threatening deformities of the hips, it will ensure stable free sitting and help the child acquire standing and walking balance.

The benches can also be used for a variety of games.

Floor Ladder and Ramp

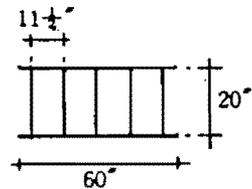


Fig. 17 Ramp

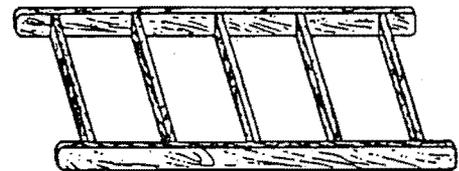
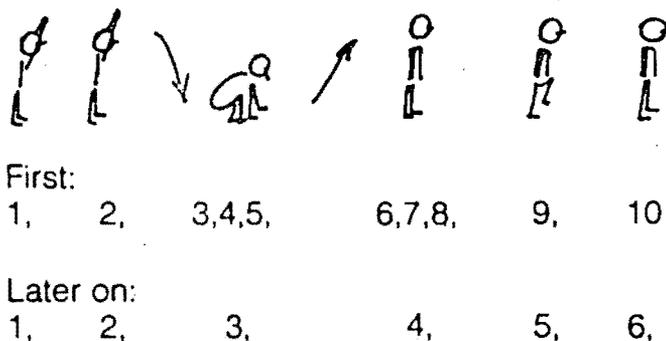


Fig. 18 Floor ladder

The floor ladder and ramp are used for improving walking balance. Stepping over the floor ladder the child may say: "Clap, clap (lifting the arms over the head and clapping the hands), squat, stand up, step, step;" or he may count according to his walking ability.



Floor ladder in New Institute, Budapest

The Multipurpose Furniture

Louis Wong, Occupational Therapist

In Conductive Education the disabled child's learning is emphasized at all times and special furniture and accessories facilitate this learning process. There is then a multipurpose function of the furniture as it enables the child to:

- Fixate himself
- Control his associated reactions
- Control his abnormal reflex activity
- Become secure, confident and motivated
- Use the basic motor pattern
- Toilet himself
- Cooperate and participate better in the classroom setting
- Increase his independence in the dormitory
- Improve his hand function
- Learn how to eat, play, etc. on his own
- Socialize with other children
- Increase his physical stamina

In short, the child will learn to do things for himself.

According to the child's individual problems the following accessories might be needed:

- Vertical and horizontal rods which can be attached to the slatted plinth; quoit rings; removable table tops; blocks and small mats for the plinth; writing boards; sandbags; sticks (long and short, thick and thin ones); hand rails; floor potties; foot prints, etc.

Postscript

Editor

Quality Work in Conductive Education

The reason why the topic "Conductive Education Furniture" was chosen as the lead article in the first issue of this publication is that the time has come to aim at quality work, now that the philosophy and the principles underlying this system of education of the motor disabled are better known amongst rehabilitation workers in Hong Kong. Suitable furniture is an important baseline. Only if we strive for quality work in Conductive Education will the disabled children have a chance to progress fast.

As this is the first publication on the topic of furniture outside Hungary—as far as I know—we up to now had to acquire the special furniture on a trial-and-error basis and at times we went wrong.

Past Mistakes

There was the ladderframe which instead of sliding smoothly on the floor (yet giving enough resistance so the cerebral palsied child could learn to bring his arms and his body weight forward) had the tendency to tip forwards, thus frustrating both child and staff. Another ladderframe had too closely set rungs which confused and hindered the child and yet another one had too thick rungs so that small hands slipped off. While stainless steel rungs proved popular with the children, a cheaper substitute, plated metal, started to rust. Long vertical rungs on the ladderframe, thought to help the children acquire grasp in mid-position, proved disappointing.

Some of the slatted plinths were too heavy to be moved around without straining the backs of the staff, some small ones too light to give the children security. The gaps of some plinths were so wide that the quoit rings fell through and the children's wrists got stuck; other gaps were so narrow that larger and badly deformed hands could not grasp the slats. Sharp edges of the slats hurt hands and feet. Too broad edges of the plinths pressed onto the children's thighs and caused discomfort.

Suitable Furniture

The daily use of the furniture made us aware of the importance of suitable weight, spacing, size and texture of the furniture and how to deal with high friction floor.

Adjusting the dimensions of the furniture in proportion to the body, the room and the purpose of using it is all important. Exact measurements have therefore not always been given, and where they have been given they should be adjusted according to individual needs.

When acquiring new furniture it might be advisable to inspect some centre's furniture on the spot (like Shek Yam Pre-school Centre), so as to learn more fully about the properties of suitable furniture and how to use it.

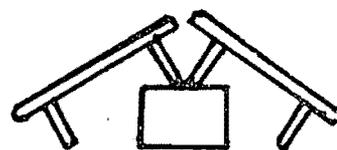
Progress of Disabled Children—Using Normal Furniture

It must be stressed that the Conductive Education furniture and accessories should be seen as an in-between device only. When not needed any more, they should be phased out, the sooner, the better. Normal table tops then replace the slatted plinth (except for the plinth programme), clasped hands in forward position replace the ladderframe, footprints become unnecessary as the child learns to place his feet correctly, etc. Making the children long-term dependent on special furniture and accessories is not Conductive Education, but daily progress in learning to master movements is. It is this dynamic approach which motivates the children. The normalisation process can be speeded up in an all-day Conductive Education environment.

Flexibility of the Furniture

Lastly, the furniture should not be seen as something static. It has countless

uses, is portable and can be transformed. Games are much loved by children; tip the benches over to make a channel and let the children play football by holding onto two ladderframes sideways; or stand up the plinths onto the bench so the child has to pull himself up against gravity and can slide down on the other side. While doing so he can wear a rucksack and pretend he is mountaineering!



Furniture sketches by Chan Tsun Ming
Occupational Therapist Assistant, John F. Kennedy Centre

Furniture Finding List

Shek Yam Pre-school Centre

- Fig. 1, p. 11 Slatted Plinth for Pre-school Children
- Fig. 2, p. 13 Removable Table Top
- Fig. 3, p. 13 Ladderback Chair (adjustable)
- Fig. 4, p. 14 Stool

John F. Kennedy Centre

- Fig. 5, p. 15 Modified Bedframe
- Fig. 6, p. 16 Horizontal Bar
- Fig. 7, p. 16 Slatted Plinth for Severely Disabled Adolescents
- Fig. 8, p. 17 Rubbertipped Sticks
- Fig. 9, p. 17 Wall Bars in Toilet
- Fig. 10, p. 17 Slatted Classroom Table
- Fig. 11, p. 18 Plywood Table Top
- Fig. 12, p. 18 Ladderframe with Wheels
- Fig. 13, p. 18 Aluminium Ladderframe

Budapest

- Fig. 14, p. 19 Slatted Plinth for Hemiplegic Patients
- Fig. 15, p. 20 Slatted Plinth, Ladderchair and Stool
- Fig. 16, p. 20 Bench*
- Fig. 17, p. 21 Ramp
- Fig. 18, p. 21 Floor Ladder

SITTING ROUND THE EDGES

Ester Cotton FCSP

Professor Peto's genius expressed itself in his holistic outlook on child habilitation and adult rehabilitation. This creates the most important difference between Conductive Education and all other methods of treatment. Peto stressed over and over again that we are dealing with a child or an adult human being - not individual symptoms. This does not mean that symptoms are ignored but that they will be addressed within the whole management, not one by one as in a Jigsaw Puzzle.

In this article, I shall concentrate on how Conductive Education influences the hemiplegic patients to overcome their confusion, sense of rejection and isolation and how it develops their functional abilities.

When I think of the many stroke patients I have treated in Hospitals, Clinics and in their homes I am haunted by a spectre, 'The sitting round the edges syndrome'. For hours on end the patients are pushed up against the wall condemned to a state of total passivity. (Fig.1).

Conductive Education, said Peto, rests on five pillars. These five pillars are the principles of conductive education but even more they are the facilitations for active learning.

We need:-

1. The right environment
2. A well matched group
3. Staff who understand the whole condition -
Adult Hemiplegia
4. A programme and day routine
5. Rhythmical Intention

Of these five only the last, Rhythmical Intention is a technique as well as a facilitation. The other four provide the positive background for the restoration of an active, socially interacting human being.

The Environment

This must be conducive to learning, activity and interaction. The room can be organised in many different ways. Furniture must be simple; the chairs should be the right height in order to allow for the feet being flat on the floor. The tables must be firm, steady and of the right height to allow the arms to rest on them, so that the patients can maintain a symmetrical position.

Fig 8.

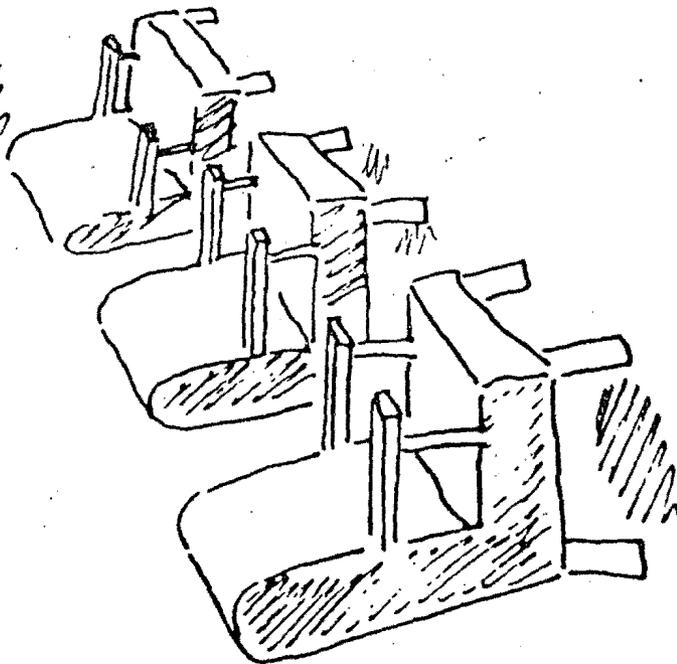
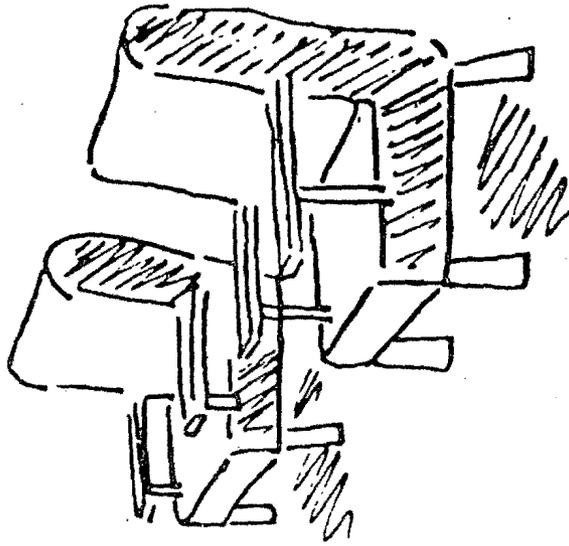
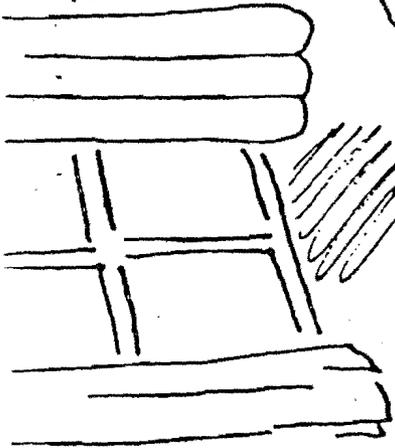
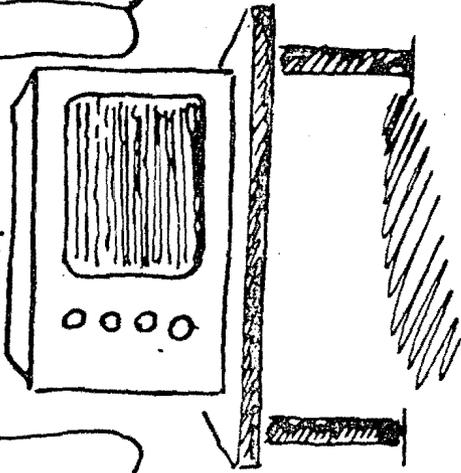
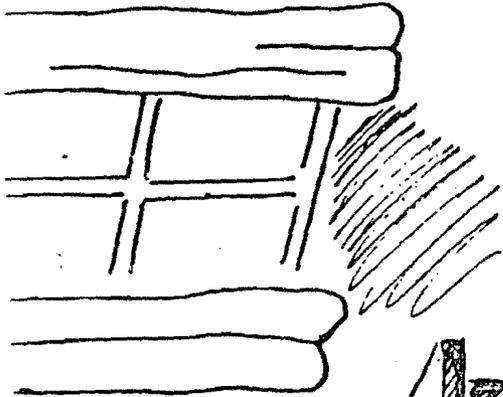


Fig 10.

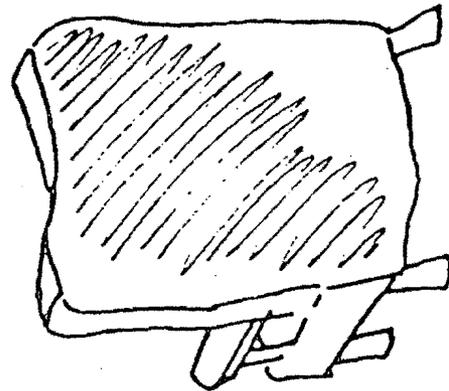
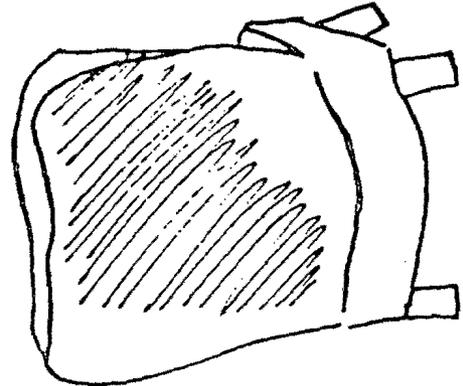
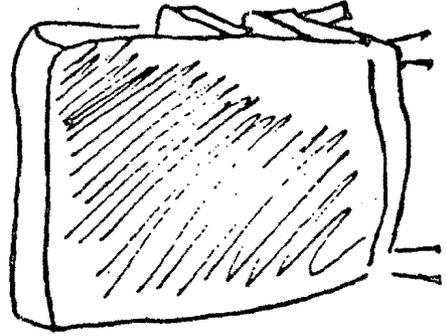
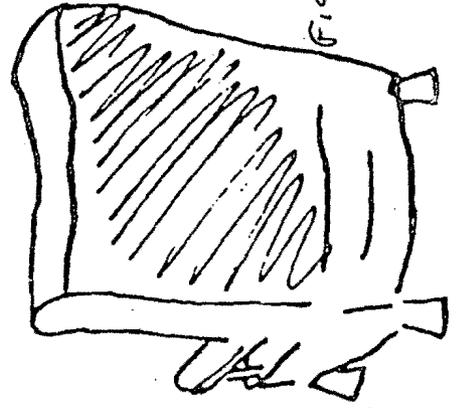
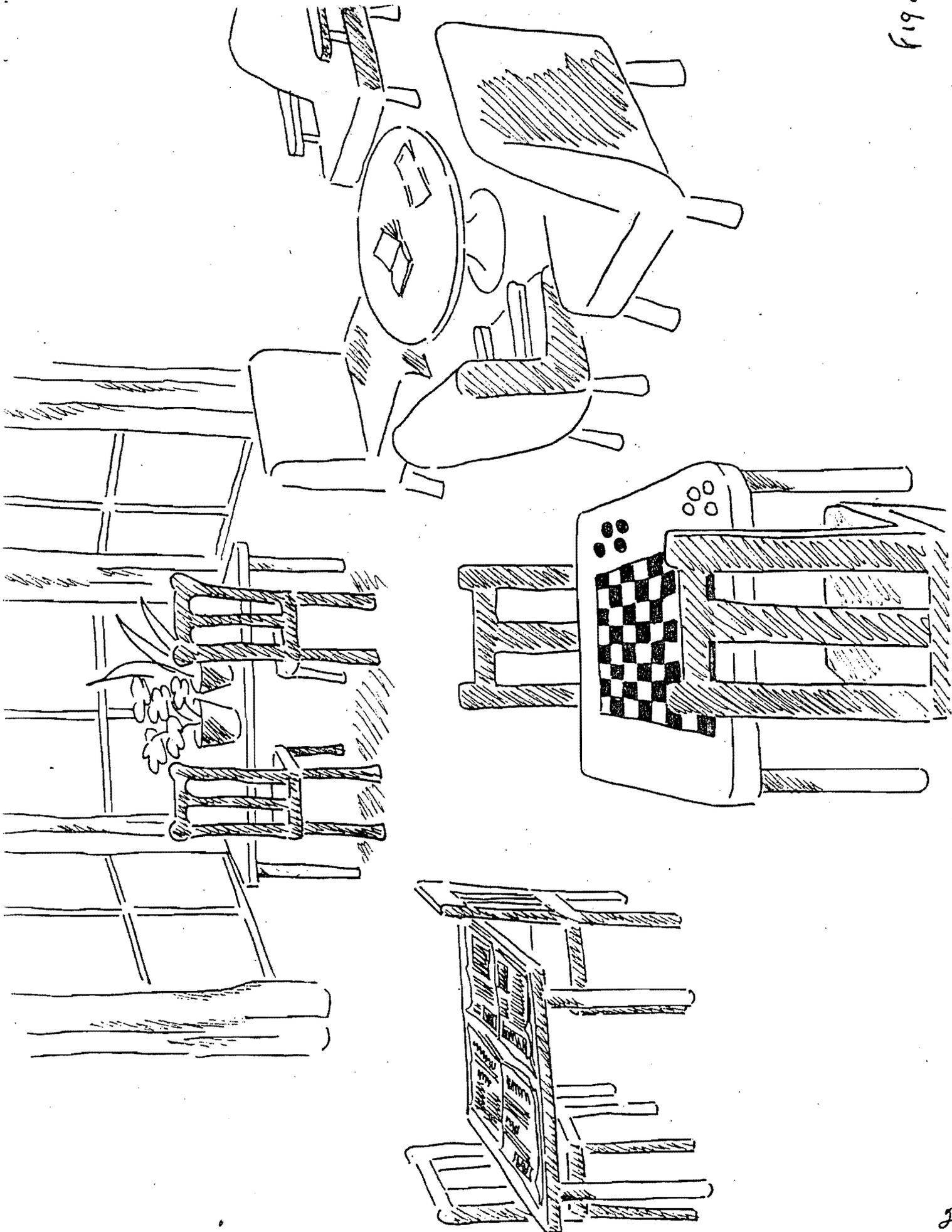


Fig. 19.

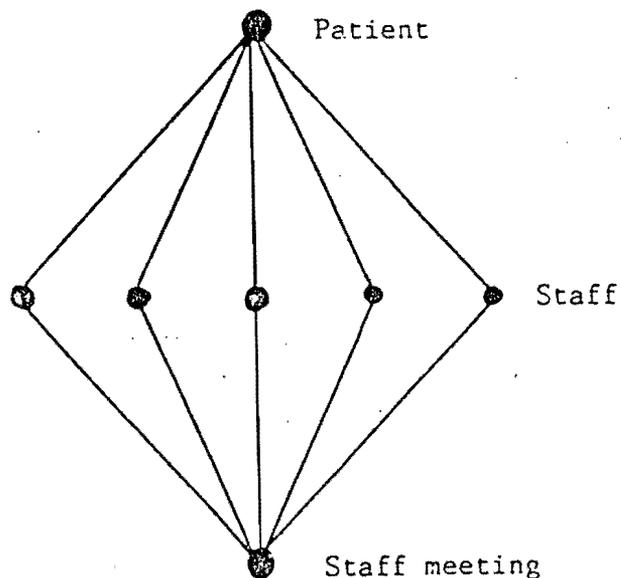


The patients are facing one another and can work in large or small groups assisted by the staff. This arrangement is specially important in residential situations to make a demarcation between activity and rest.(Fig.2)

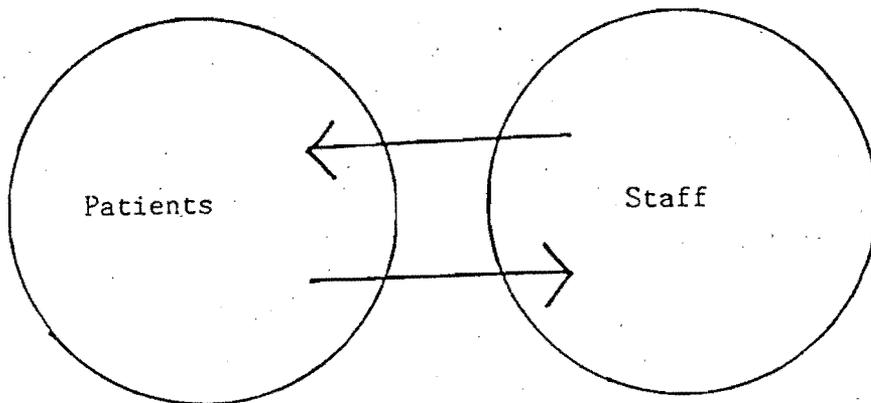
The Staff:

The staff will work together and participate in all the work not only in their own speciality (Physiotherapy, Speech Therapy, Occupational Therapy, Nursing) and will learn to use their specialities within the total management.

Instead of the multi-disciplinary team (Fig.3a)



We now have: (Fig. 3b).



2 groups of patients and staff interacting with one another.

The following is an example of a day routine in a day centre for out patients who come three times a week from 10.00 a.m. to 3.00 p.m.

1. Arrival - Welcome - Tea? - Toilet?
2. Task Series - sitting at a table.

3. Free-Sitting activities
 - a). Communication skills
 - b). Movement from sitting to standing
and from standing to walking
4. Toilet and Hand Wash
5. Lunch
6. Rest and Recreation
7. Lying Task-Series
8. Standing and walking to transport home.

The arrival - rest and departure periods are important social activities and there should be no passive waiting.

On arrival it is essential that the room is ready and the staff ready to receive the group. The feeling of being expected will put the patient in a positive, cooperative and relaxed mood which will encourage active participation.

Lunch should be regarded as a social occasion. Some of the staff should join the patients and help when necessary with any feeding, swallowing or chewing problems.

Above all staff must encourage conversation between the patients as fellow sufferers are the best councillors.

Rest: After lunch a rest is often much appreciated and should be regarded as an activity, the opposite to work (not passivity following inactivity). The patients can rest on mattresses on the floor and must be comfortable and warm. Many drop off to sleep. This period can also be used for individual splinting or passive stretchings.

Some, especially the men, prefer a stroll outside, probably to have a chance for a smoke.

The Task Series

The task series are built up of task-parts and lead the patients to a goal. The goals will be increasingly complex. Task series do not represent physiotherapy but gives the patient the opportunity to learn how he can overcome spasticity and learn new skills. As it is the same motor pattern which constantly prevents the performance of motor acts e.g.

retraction of the shoulder, flexion of the elbow and wrist, fisting of the hand, the same combination may be practised in all positions - supine, sitting at a table, free sitting and standing.

Rhythmical Intention

This technique was developed by Peto to enable the brain injured patient to plan his actions, using speech (the second signalling system) and to perform the actions by counting rhythmically to 5.

In adult hemiplegia, Rhythmical Intention is the main facilitation during the task series much assisted by the eyes and the good side acting as a guide.

Rhythmical Intention:

- enables the patients to work for very long periods of time.
- encourages sound and speech in all positions.
- helps to establish contact between the cortex, the trunk and the limbs.

- develops body image and an idea of position in space.
- furthers concentration.
- facilitates active work and develops motor learning.

I have tried to stress that only a part of Conductive Education deals with techniques and individual symptoms. These are important and described in many other publications. What really matters is the positive, expectant management and respectful attitude to the patients that give a background which is conducive for learning.

Typical for Professor Peto was his answer to the following question: 'Why are you using clasping of the hands to such a large extent'? I was expecting an answer explaining the problems of a-symmetry, midline orientation, the fistled hand, the bent elbow and retracted shoulder. To my surprise he said, 'It is good for the patient to get a grip on himself'.

CONDUCTIVE EDUCATION IN HONG KONG : PUBLICATIONS

1. Hong Kong Physiotherapy Journal, Special Issue: Conductive Education Vol.8, 1986, pp. 35. Articles by the following authors : Cotton, Opper, Yen, Kinsman, Reid Campion, Jernqvist.
2. Conductive Education in Hong Kong, No.1, 1987, pp.60 (English/Chinese). Focussing on : Development of Conductive Education in Hong Kong; Conductive Education Furniture. Joint Council for the Physically and Mentally Disabled (Rehab. Division, Hong Kong Council of Social Service).
3. Conductive Education in Hong Kong, No.2, 1988, pp. 35 (English/Chinese). Focussing on : The Multiply Handicapped Child; Conductive Education and Parents. Joint Council for the Physically and Mentally Disabled (Rehab. Division, Hong Kong Council of Social Service).
4. Conductive Education in Hong Kong, No.3, 1989, pp.52 (English/Chinese). Focussing on : Observations of Various Groups in Budapest, 1987. Joint Council for the Physically and Mentally Disabled (Rehab. Division, Hong Kong Council of Social Service).
5. The 1987 Budapest Report, Hong Kong Delegates, pp. 192. In-depth description of the Peto Institute.
6. The 1988 Budapest Report, Hong Kong Delegates, pp.38. Focussing on the following items at the Peto Institute: Rhythmical Intention for Various Motor Disordered Groups; Education of Hand Function; Orthopaedic Management; Personality Development. Also included : The Human Principle, by M. Hari.
7. Let's Work with Songs (with tape), The Spastics Association of Hong Kong, pp.55 (English/Chinese), 1987.
8. The Basic Motor Pattern, translated into Chinese by the Spastics Association of Hong Kong, 1986.
9. The Hand as a Guide to Learning, translated into Chinese by the Spastics Association of Hong Kong, 1986.
10. The Peto-System (Conductive Education) : Facilitation of Movements/Actions of the Cerebral Palsied Child, by Anita Tatlow, pp.25-40, the Proceedings of the 3rd International Physiotherapy Congress, Hong Kong, 1990.
11. Development of Conductive Education in Hong Kong in the 1980's and Early 1990's. Conductive Education Project Team, 1991. It includes : The Peto-System (Conductive Education) and Hong Kong - Speech given by Marion Fang at the First World Congress of the International Peto Association; and The Peto-System (Conductive Education) in Hong Kong : Training and Organization 1984-1990 - Speech given by Anita Tatlow at the Conductive Education Association (England) 8th Annual Conference.

Autumn 1990

Issue No. 4



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Joint Council for the Physically and Mentally Disabled
(Rehabilitation Division, Hong Kong Council of Social Service)

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Working Group on Conductive Education
Joint Council for the Physically and Mentally Disabled
(Rehabilitation Division, Hong Kong Council of Social Service)

FOUNDATION FOR CONDUCTIVE EDUCATION

PUBLICATIONS CATALOGUE

NEW - ENGLISH EDITION

DINA: A MOTHER PRACTISES CONDUCTIVE EDUCATION (Peto-method) by Karoly and Hagda Akos, The Foundation for Conductive Education and Alabanda, 1991 - £12.95

Comprising a 'Booklet for mothers' on how to bring up a young cerebrally palsied child and a detailed record of the contact between the authors and two German mothers following this programme.

NEW - FIRST WORLD CONGRESS: PROCEEDINGS - £25.00

Transcripts of papers read to the 1st World Congress of the International Peto Association, Budapest, December 1990.

THE TRANSFORMERS - Broadcasting Support Services - £3.45

The book of the recent TV series, putting Conductive Education in its wider educational context.

THE CONDUCTOR

Published quarterly The Conductor provides a comprehensive update of the world-wide developments, publications and research in Conductive Education, and offers a forum for discussion. There is a comprehensive index at the end of each yearly volume and the magazine comprises an essential reference for all with a serious interest in this rapidly developing field.

The Conductor documents the Foundation's work in establishing Conductive Education in the United Kingdom. It also carries extensive news of the International movement, from Hungary, Israel, Australia, New Zealand, Germany, Hong Kong and elsewhere.

Recent articles have included a report on the World Congress in Budapest, accounts of Conductive Education and Parkinson's disease and reports and analysis from Russia and Belgium.

News pages cover political and professional developments in the United Kingdom, events in Budapest and innovations to develop existing services around the World in the light of Conductive Education.

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Back issues	£1.50 (each)
Double issue nos: 9/10	£3.00
Bulk buys (20 copies or more)	£1.00 (each)

VIDEOS

A GIFT FROM HUNGARY - £11.95 * SEE BELOW

Twelve-minute video on the Foundation's work to bring Conductive Education to the UK, featuring Bob Hoskins.

STEP BY STEP - £27.95 * SEE BELOW

Thirty-minute video showing the integrated day at the Foundation's Birmingham Institute, the only school outside Hungary which is run on wholly Conductive lines by fully trained conductors from the Peto Institute.

THE CHALLENGE OF CONDUCTIVE EDUCATION

Forty-minute video showing interviews with parents whose children have received Conductive Education. Available ONLY from 20th Century Tixen, 28 Southampton Street, Brighton, East Sussex BN2 2UT. (Tel: 0273-692336). £15.00 to hire, £30.00 to buy (reductions for individuals and unfunded groups).

ALL VIDEOS AVAILABLE ON VHS ONLY

* VIDEOS CAN BE HIRED AT A COST OF £5.95 INCLUDING POSTAGE AND PACKING IN THE UK AND £6.95 OUTSIDE THE UK. THIS COST IS FOR A ONE MONTH PERIOD

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P.3

CONDUCTIVE EDUCATION by Maria Hari and Karoly Akos.
Routledge, 1988 - £13.95

First published in Hungarian in 1971 this English translation is so far the only extensive exposition of Conductive Education from the Institute where it was developed.

COME WIND, COME WEATHER, by Janet Read, University of Warwick.
1988 - £7.75

Research report on the experiences of British families taking children to the Peto Institute in Budapest.

WAS IST KONDUKTIVE PADAGOGIK? EIN UEBERBLICK by Gabriele Haug,
Atabanda, 1988 - £3.50

A brief outline of Conductive Education written by a participant on the 1987 six-week course at the Peto Institute. (NOTE: THIS BOOK IS IN GERMAN)

THE HUMAN PRINCIPLE IN CONDUCTIVE EDUCATION by Maria Hari,
The Peto Institute, 1989 - £2.00

Pamphlet comprising a thoughtful essay on the centrality of the development of consciousness and will in Conductive Education.

SPECIAL EDUCATION NEEDS REVIEW - VOL. 2 - £10.95

Occasional review of special education: twelve original articles including 'The Impact of Special Education' by Andrew Sutton (pp. 161-187).

BLUE GUIDE TO HUNGARY by Bob Dent, Black, 1990 - £13.95

Up-to-date guide for visitors and tourists in the well-known international series.

STICKERS - 10.50 each or £7.50 for 20

Waterproof peel-off stickers bearing the Foundation's logo. Green and Red.

"GOING TO BUDAPEST" - £16.95

An extensive guide for those contemplating a first visit to the Peto Institute in Budapest, with booklets, leaflets, pamphlets on Conductive Education, finance, accommodation, official procedures, Social Security problems, life in Budapest etc, etc...

TWO YEARS ON, edited by Andrew Sutton - £4.95

Full proceedings of the Education Conference held at the School of Education, University of Birmingham, June 1989, describing the work and context of establishing Conductive Education in the United Kingdom.

ANNUAL REVIEWS

These booklets provide a year-by-year record of the rapid development of the Foundation's work in establishing Conductive Education in the UK and are essential source materials for students writing essays and dissertations and for lecturers preparing courses.

Conductive Education: the First Step, 1988 - £1.00

First Annual Review of the work of the Foundation.

Annual Review, 1989 - £1.00

Second Annual Review of the work of the Foundation.

Ready for the 90s, 1990 - £1.50

Third Annual Review of the work of the Foundation.

The System Unfolds, 1991 - £2.00

Fourth Annual Review of the work of the Foundation.

SPECIAL OFFER, ALL FOUR REVIEWS - £4.50

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SPECIAL INTERNATIONAL EDITION

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**CONDUCTIVE EDUCATION
AND ITS
CANADIAN APPLICATION**

A report from the

**FIRST WORLD CONGRESS:
THE INTERNATIONAL PETO ASSOCIATION**

BUDAPEST, HUNGARY

November 29-December 1, 1990

**Jerry Lucas
Director of Program Development
Ontario March of Dimes**

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REPORT ON CONDUCTIVE EDUCATION

The Ontario March of Dimes first became aware of the Conductive Education program at the Peto Institute in the fall of 1990. Subsequently, we became aware of two BBC films about conductive education, which were secured with the assistance of TVOntario.

The films and print literature about Conductive Education were shared with representatives from the Ontario government and various professionals and agencies serving persons with disabilities. With sponsorship from the Ontario March of Dimes, the Office For Disability Issues and the Ministry of Community and Social Services, the author attended the First World Congress of the International Peto Association in Budapest, Hungary in November, 1990. In addition, the Foundation for Conductive Education in Birmingham, England was visited prior to the conference.

The purpose of the trip was to:

- i) Learn about Conductive Education, as developed by the Peto Institute in Budapest, Hungary;
- ii) Investigate the value of conductive education in the treatment of motor disabled persons, particularly adults;
- iii) Assess the applicability of conductive education in Western society;
- iv) Consider the practicality of introducing Conductive Education to Canada and the action required to accomplish this.

The content of this report represents information from the literature, as well as conference presentations, site visits and interviews.

I. CONDUCTIVE EDUCATION

Conductive Education is an educational system which teaches children and adults with motor disorders to be functionally independent and self-sufficient. Motor disorders are problems related to control of body movements arising from brain or spinal dysfunction. Examples are cerebral palsy, spina bifida, MS, Parkinson's disease and stroke.

In Conductive Education, all mobility problems are considered to be problems of learning, with the ultimate goal of orthofunction (the antithesis of dysfunction). To maximize learning, Peto consolidated the disciplines into a single professional (the Conductor); utilized task series and rhythmical intention to teach individuals the required movements and skills; and created a compatible group environment to reinforce learning.

Conductive Education was first developed in 1945 in Hungary by Dr. Peto, utilizing his medical training and following 15 years of theoretical development in the field of Special Education. In 1950, a state institute for Conductive Education was established in Budapest to study applications of the system. In 1963, the Hungarian government adopted a policy to provide Conductive Education through the state educational system to all eligible children. To develop the labour force for this system, a college for training conductors was established as an adjunct to the Institute, with the first qualified conductors graduating in 1967. While there has been scattered interest in conductive education in the West since the sixties, serious international interest has only developed in the 1980's.

The physical and philosophical environment in which Conductive Education developed is very different from current western culture. Conductive Education was developed to assist children with motor disorders to become mobile in order to access the school system and the community at large. Facilities in Hungary are not accessible to persons with motor disorders. Some children who become orthofunctional attend special disability specific schools. Children who cannot become orthofunctional receive 6 hours of home tutoring per week or are placed in a residential Health Institution. This is contrary to Western cultures such as Canada, where the community is expected to adapt to the needs of its citizens and integration is a responsibility of the government.

Overriding these societal differences, however, is the tremendous success of the Conductive Educational system with orthofunction achieved by 70% of all participants. It is these results which have excited many and made Budapest a Mecca to professionals and persons with disabilities from around the world.

II. CONDUCTIVE EDUCATION VS. THERAPY

Conductive education differs from traditional neurophysiological approaches in a number of critical aspects:

1. Education vs. Treatment--Traditional therapy treats neurological deficits as independent dysfunctions. Conductive Education is not therapy and offers no cure. As a system of education rather than one of exercise or training, it attempts to transform the personality as a whole. Emotional and cognitive elements are addressed in the CE process, while therapy focuses narrowly on motor functions.

2. Conductor vs. Specialist--Conductors are specially trained facilitators of the learning process. They are trained as rehabilitators and assist the patients with functional tasks ranging from the most simple to the complex. During their four year educational program, conductors study such subjects as physiology, psychology, education, speech language pathology, and music, all of which are utilized in the educational process. While the specialist intervenes for a brief, specified purpose, the conductor works with the individual from assessment to program planning and throughout its implementation. In the process, the conductor fulfills the roles generally requiring trained specialists such as teachers, physiotherapists and nurses.

3. Intensive vs. Episodic--Traditional therapy tends to be sporadic and short term. The Conductive Education process is intensive. Children's programs are full day programs, often with the participants living together at the institute throughout their program. The conductor is thus involved not only continuously with the individual, but also with all aspects of their development toward 'orthofunction'--the ability to function independently physically, academically, socially and emotionally. The intensity of the residential program (13+ hours per day) allows time for both motor skill development and a full academic program. Approximately 70% of children who have taken the full time program at the Peto Institute enter the school system at the age appropriate academic level and with the use of few aids, adaptations or assistants. The average stay at the Peto Institute is 9-12 months, with some severely disabled children remaining up to 4-6 years.

4. Holistic vs. Specific--The intensity of the Conductor's involvement is only possible because the conductor is trained to provide a multi-disciplinary range of services. The conductor is involved with the child from the point of awakening in the morning and getting groomed and dressed, facilitating both physical and educational programs, meals, recreational time and all other activities throughout the day. Conductors work as a team and shifts overlap to ensure continuity. Routines, timetables and program planning are done jointly for the same reason. This all day, all activities approach greatly differs from western practice which rotates the child through a series of specialists who only interact in relation to a narrowly defined deficit.

5. Group vs. Individual--An essential element of Conductive Education is group work. All activities (including toileting for young children) are performed in a group environment. The group serves as a supportive community for the participant, offering socialization and stimulation, competition and motivation, security and support, and reinforcement. A common comment when assessing graduates of Conductive Education is that they have different personalities--happier, more confident and self-assured-- than similar individuals participating in more traditional programs. The foremost reason given for this difference is the group environment.

6. Action vs. Reaction--Much of traditional therapy involves therapist facilitation by handling. While the conductor does provide some assistance, C.E. focuses on self-initiated action. This is consistent with C.E.'s emphasis on teaching problem-solving. Peto believed in the 'plasticity' of the mind, the numerous routes offered by the spinal cord and the high level of modifiability of the human mind. Therefore, the process is designed to allow the individual to find the route from brain to limb which will best facilitate motor control.

Rhythmic Intention, a key element of this educational process, involves the individual's spoken intent or movement just prior to a self-initiated motor task. Rhythmic Intention provides a positive 'visualization' of the goal while focusing the actions and energies of the individual. Conductive Education provides a framework for each participant to explore a variety of strategies for accomplishing a task, adopting the methods which best work for the individual.

7. Attitude--A common observation by foreign participants at the Peto Institute is the positive goal-oriented attitude of the staff and students. Achievement of the goal of orthofunction is assumed and interaction consistently focuses on this goal rather than on the physical limitations of the participant. This drive and mental attitude is apparently transmitted to the child. Despite the high goals set for the participants, learning is promoted in a warm, reinforcing and non-threatening manner. This has been cited by Peto supporters as a significant factor contributing to the success of C.E. In fact, Maria Hari, Director of the Institute, cites the need to achieve this attitude as the primary reason for the considerable length (4 years) of conductor training.

III. THE PETO METHOD

While the conference did not focus on the elements of Conductive Education, I have highlighted a few points for illustration.

ELIGIBILITY AND ASSESSMENT

As a teaching method, eligibility for the program is based upon one's ability to learn. Children with profound intellectual limitations or progressive neurological conditions are not accepted. Other reasons for rejection may be visual or hearing impairments or poorly controlled seizures. Severity of physical disability does not limit eligibility. One criterion is the child's ability to establish contact, defined as active participation and verbal or non-verbal communication with the conductor or parent. Where an individual has spinal cord lesions, Conductive Education requires that at least some motor pathways are intact. The child must be able to perform some intentional function.

The ideal age for a child to begin the program (working in a mother and baby group) is between 6 and 9 months.

GROUP STRUCTURE

All education takes place in groups of children selected for similarity of age, physical functioning level, social and intellectual development, as well as personality and culture. Younger children work in groups of 8 with 2 to 3 conductors. Older children are in larger groups of 25 with 5 to 8 conductors. A team of 16 conductors (4 staff and 12 students) will rotate throughout the 13 hour per day routine. Planning is done in a group to ensure continuity. Ideally, the children selected have the same functional level. This permits group activities and goals. Within these activities, individuals are encouraged to find the method which works best for them.

MOTOR SKILL PROGRAM GOALS

The overall goal of motor function focuses on a number of elements:
Hand function, walking, speech, writing, body symmetry, and daily living functions.

Hand Function

Great emphasis is put on the the hand functions of grasping, holding and releasing. This is true even in activities primarily oriented toward sitting, standing and walking. The theory is that grasping improves fixation, balance and stabilization. Therefore, it is common to see a child holding a stick or ring unattached to any surface, while learning to walk.

Walking

The progression of activities from sitting to standing to walking all assume this ability as a primary goal. Much of the day is planned to teach and promote walking. These skills are practiced daily and the furniture in the program is geared toward facilitating this. With older children, much emphasis is placed on extending this skill to other surfaces—ice skating, stairs and rough terrain. Aids and devices which provide alternate mobility, such as wheelchairs, are prohibited both in-house and for out-patient participants.

Speech

As with walking, communication aids are not permitted in order to facilitate speech development. Considerable emphasis is placed on strengthening facial muscles and breath control through exercises. The result not only leads to improved speech, but observers have noted little dribbling and facial distortion among Peto students and graduates.

Writing

Training in this area is not only to develop the basic skill, but to emphasize quality and speed (both needed to integrate).

Symmetry

Much emphasis is on body symmetry as a means to achieving orthofunction. Symmetry relates to centering the body over the 'mid-point' so that the body posture is symmetrical. This is applied in all program components. For example, a stick might be grasped in the non-dominant hand by the child learning to write. This focus is one of the reasons for the success of the mobility training.

Daily Living Functions

While the above may justifiably be classified as daily living functions, I have separated this as a category to mean such skills as toileting, dressing, and feeding. These are practiced throughout the day, especially with children in the residential program.

AIDS AND DEVICES

The aids and devices policy of the Peto Institute is one of the more obvious areas of difference between the Hungarian system and Western societies. Aids which facilitate the learning of orthofunction are approved. These include canes, special shoes, and symmetry-enhancing tools such as non-anchored sticks. However, devices which serve as alternatives to skill development--wheelchairs, letter boards-- are prohibited. It is believed that such devices make the individual lazy and unmotivated to work toward orthofunction.

PROGRAM STRUCTURE

Programs are structured around age and function. Babies are served through parent and infant groups and older children are grouped by age, disability and level of functioning. Program content and pacing is geared to the attention span and is adjusted by the conductor to ensure continued focus and attention to task.

As well, programs are provided in different formats. Out-patient education is available for persons wishing to live in the community. In the residential program, children live and learn in the same groupings. Most children in the residential program go home every weekend or on alternate weekends. A summer break of two months and shorter breaks throughout the year are also incorporated.

Due to cost and distance, many foreign children are not able to remain in the program on a continuous basis. This results in a program which starts and stops every three months or so and limits the value of the program. The program value is also compromised by groups of foreign children from a host of different cultures and languages. Training is in Hungarian, a language initially unintelligible to all but a few outsiders.

The entire day's activities are considered to be components of the program, from getting out of bed, toileting and dressing, to getting ready for bed at night. However, the emphasis by the conductor is on keeping things interesting and the integration of play, recreation and music into the program appears to keep the children stimulated and attentive.

TASK ANALYSIS

Conductive Education is goal oriented and anticipates achievement potential and learning methods through trained observation. Using task analysis, the goals leading to orthofunction are divided into simple steps within a series of tasks. This process of task analysis provides focus while promoting more frequent goal achievement. To anticipate learning styles, the task analysis and program planning process requires extensive observation and documentation of progress. Recently learned, but unmastered tasks are repeated until mastery is achieved. Merit awards are provided to reward learning. In addition, the next task is added at the point of the most recent successes and therefore reinforces the persons abilities, builds self esteem and encourages further learning.

RHYTHMIC INTENTION

The Peto method requires the child to initiate the activity on his/her own. To promote the action, Rhythmic Intention is used. Speech focuses attention and may assist in coordinating and triggering actions through repetition. Rhythmic Intention is a method of verbalizing what one is about to attempt to do in order to direct conscious purposeful action and promote the visualization of the action. Music is used extensively in Rhythmic Intention both for retaining focus and enhancing memory. When the movement is learned and becomes automatic through habituation, the verbalization is dropped and the individual goes on to the next step. This process builds the continuity of the learning process.

SELF INITIATED MOVEMENT

Self initiated and continual movement is an important component of learning. Movement helps the individual's perceptual development. Visual and verbal information linked to spatial actions helps to develop coordination and motor planning. Consequently, the lack of such movement inhibits the learning of such essential concepts of space and distance.

ROLE OF THE PARENT

The Peto method relies on intensive and continual learning and reinforcement. Therefore, the system encourages the involvement of the parent in the educational process. The parent attends the class with the infants and learns how to continue the process in the home.

The Hungarian social system contributes substantially to the intensive involvement of parents. Mothers in Hungary are granted 3 years maternity leave and are eligible for 6 years if the child is disabled. While many women return to work prior to this, the opportunity is available.

In the school for parents, mothers are given the opportunity to discuss their concerns. Mothers are taught to encourage their child to react to stimuli, respond to their voice with eye contact, and to play. Parents install ladder bars in the child's room to continue work at home. Parents are taught about symmetry and muscle tone. The extended family network is also encouraged to get involved in the process. As the child moves to kindergarten, the mother and child are taught to accept separation to facilitate transition into the residential program.

The parents groups also provide a support network. Many new participants learn from parents who have been involved in the program for some time.

CLASSROOM

Much has been written about the room and furnishings used in Conductive Education. All functions are performed communally—sleeping, toileting, playing, eating, learning. The furniture is slatted, designed so that the individual always has something to grasp. These include desks, tables, beds, chairs and exercise surfaces.

FOLLOW-UP

All children preparing to leave the Institute learn the skills necessary to function in the community, such as how to use the transit system. Progress is monitored throughout their adult life. Out-patient groups are also available. All graduates are reassessed at the ages of 6, 10 and 14 to determine their ability to progress to the next educational level. Where integration problems arise, the Institute may intervene with teachers around problems.

CONDUCTOR TRAINING

Conductor training began in 1950 and accelerated in 1963 with the founding of the college. Students are selected for their dedication, personality and intellect. The students study for four years at the institute and prepare a thesis. Curriculum includes medicine, psychology, education, speech language pathology, music, physical therapy, group dynamics and child care. 45-50% of the curriculum is on the educational process. Students must develop strong skills in problem solving and knowledge seeking. Practical training, which accounts for 33% of the program, is initially highly structured and gradually becomes more flexible and self directed. As the program progresses, the conductor may specialize by disability and age group of interest.

The structure of the practical component of the curriculum is outlined below:

- Term 1: Basic learning of self help practice
- Term 2: Problem solving
- Term 3: Goal setting with children
- Term 4: Basic organization of a group session
- Term 5: Plan complex session with group and individual
- Term 6: Organization of group sessions (advanced)
- Term 7: Preparation of children to leave Institute
- Term 8: Overall program planning and skill integration

Considerable emphasis is placed on development of observational skills. The conductor must be able to assess the individual, observe him in normal life situations and in a group environment. Conductive Education is based on the concept of the modifiability of the mind. However, exposure to stimuli does not ensure learning. The conductor's role is to relate the experience to learning.

Less tangible but of primary importance is learning to believe in the method. The key to the entire system is the conductor's unwavering faith that orthofunction will be achieved and the transmittal of this belief to the student.

Due to the uniqueness of the Peto program, all Peto faculty are graduates of the Institute. Qualifying as an instructor requires a minimum of 5 years of experience as a conductor and demonstrated teaching skill. Instructors must be supervised by a professor. A number of assistant and associate levels must next be achieved to reach the level of professor.

TEAM SUPPORT

Although program delivery is in the hands of the Conductor, specialists in medicine, psychology, physiotherapy, and other disciplines are available for support and consultation. Conductive Education is presently incorporated into the curriculum of nursing, medical, and teachers programs in the Hungarian post-secondary school system.

IV. ADULT PROGRAMS IN CONDUCTIVE EDUCATION

The Peto Institute has been working with adults for at least ten years. Parkinson's Disease, Multiple Sclerosis and Hemiplegia are the most common conditions of the adult participants in the Peto program. Adult programs are delivered on an out-patient basis, two or more times per week. In addition to hearing conference presentations and viewing video case studies, the author spent some time observing adult groups in both Budapest and Birmingham.

Parkinson's

Since 1980, the Peto Institute has worked with 260 Parkinson patients. Currently, 60 people are enrolled in the program.

The progressive nature of this disability, the loss of movement and lessened abilities related to life skills, result in changes in the individual's lifestyle and a correlative loss of confidence.

As with children, Conductive Education for adults has both group and individual components. The individual is assessed for learning style and level of functioning. The program goal is to develop will power and identify abilities required to control movement.

The program uses a group environment which provides social support, friendly competition, and perspective. Task series work on facial muscle control, speech and breathing; symmetry; writing (speed, size and quality) and fine finger dexterity; lying, standing, walking and maintaining movement; lifting arms(with support and independently); limiting tremors; living skills such as drinking from a glass and using utensils; and problem solving.

Task series begin before action. For example, walking begins with 'preparing to walk'. Tasks may include posture, length of steps, raising legs, walking in place, changing rhythm, balance, coordination, up and down stairs, hills and ladder rungs, continuous walking (stamina), and avoiding contact with each other. Tasks are built slowly and the progress is well documented. The use of Rhythmic Intention and music has very obvious benefits. One observed individual displayed considerable dexterity during the structured exercises but reverted to severely impaired mobility upon stoppage of the music and Rhythmic Intention. Individual limitations are acknowledged and variations were permitted within the group exercises.

The Foundation for Conductive Education in Birmingham, England also serves adults with Parkinson's, operating 2 groups of 6 adults each. The cost of this program is co-funded by the Parkinson's Foundation.

Both Peto and the Birmingham, England program are demonstrating significant progress within 3 to 4 weeks in both the individual's abilities and self image. The Birmingham Director cited enhanced harmony of movement and reduced "freezing" as key benefits for this population.

Multiple Sclerosis

295 MS patients have participated in this program, with 34 currently enrolled and divided between two groups. The MS group meets twice per week. As with the Parkinson's patient, the conductor reviews neurological information and sets short and long term goals.

The MS groups were selected by functional level. The lower functioning group worked on different methods of turning, changing activities, tremor control, and progressing through lying, sitting and standing.

The higher functioning group members were more mobile, but had some dysfunction related to walking. The elements of their program were more complex, utilizing faster rhythms and pacing. Tasks included walking on a line (some required a chair for balance), target shooting, stepping up, as well as fine finger work such as embroidery. While tasks should not be unachievable, they should take the individual beyond their current functional level. The goal in this group is for each individual to achieve satisfaction with their progress and the ability to perform daily life functions (e.g. personal care, life skills).

Hemiplegia

The Peto Institute currently works with 225 hemiplegic patients. Functional levels of the groups determine the speed of the Rhythmic Intention, the level of conductor assistance, and task complexity.

The key goals for the hemiplegic patient is to use both sides equally. The individual works on controlling spasticity; lying, standing and walking, lifting the affected arm, and hand control and dexterity. Through observation, the conductor determines which words and task series work (e.g., stretch elbows vs. push out hands). Tasks are also geared toward relearning body image and the symmetry of positioning.

A videotaped case study from Peto showed major improvements in strength and function with 2 months. Literature on this subject substantiates this.

Brain Injury

While no programs for the brain-injured were witnessed, three conference speakers discussed the applicability of Conductive Education for this population.

The basis of Conductive Education, according to Professor Reuven Feuerstein of the Hadassah-WIZO-Canada Research Institute in Israel, is to seek alternative paths between the limbs and the brain. This, along with the process of repetition and Rhythmic Intention, fits the needs and learning methods for persons with brain injuries. Dr. Joseph Lebeer of the University of Antwerp echoed these statements, citing cases where normal function exists despite the absence of related brain tissue. The lack of predictability of brain function, along with the proven benefits of positive attitude and the intensive stimulation makes Conductive Education a natural program for this population.

Dr. Miklos Feher of the TBI Unit of the National Institute for Medical Rehabilitation in Budapest discussed the failure of the traditional multidisciplinary team with this group. Problems include discontinuity of program, randomness of therapeutic sessions, infighting by team members related to professional status and the overall professional-centredness of the treatment. In a comparative study of treatments, Dr. Feher found that Conductive Education resulted in more rapid progress for the more severely brain injured than the traditional team approach.

BIRMINGHAM INSTITUTE FOR CONDUCTIVE EDUCATION

PARKINSONS GROUPS

DAILY ROUTINE

GROUP A1 AND A2

Times: Monday, Wednesday and Friday

A1: 9:30-11:30 am

A2: 11:30- 1:30 pm

**Sitting tasks for writing preparation
Writing on the board
Playing various games
Mimicry tasks
Playing a game in a group
Postural tasks
Preparation for walking
Walking tasks for changing place and direction
and for weight bearing
Playing with a ball**

GROUP B

Times: Tuesdays and Thursdays

**9:30-11:30 Sitting tasks at the table
Table tasks for the preparation of writing
Writing in books
Postural tasks
Preparation for walking**

11:30-12:00 Coffee/tea break

12:00- 1:00 Speech programme

**Breathing tasks
Mimicry tasks
Voice strength and change of rhythm
Word practice
Spontaneous speech**

V. CONDUCTIVE EDUCATION OUTSIDE HUNGARY

The spread of Conductive Education internationally has been surprisingly slow. It took twenty years for the system to gain any attention in the West and another 15 years to begin to gather broader recognition and interest.

Since the mid-1980's, international interest in Conductive Education has accelerated and with it, a burgeoning demand for both service and training. The Peto Institute serves approximately 1400 Hungarian and foreign children and adults annually. In 1989-90, over 1250 foreign applications were received for service. 85% of this demand came from the Soviet Union (35%), Britain (29%) and other European countries (21%). The remaining demand came from numerous countries throughout the world. While 40% were admitted for service, the waiting time for assessment is now close to 2 years.

During this same year, approximately 700 professionals expressed interest in studying the Peto Method. Nurses, educators and students accounted for 82% of the expressed interest. It is noteworthy that only 4% of interest came from physical and occupational therapists.

The conference attended by this author was the First World Congress of the International Peto Association. While many attendees came to learn more about Conductive Education, the primary purpose of this conference was to review the international picture and address the problems arising from this increased demand for the system.

The following pages review the status of conductive education in many countries participating in the conference. In all cases, the initiation of Conductive Education was the result of the efforts of either a few interested parents or professionals, or even a single individual. Particular emphasis in this report is on the British experience as this is both the most developed Western system and is comparable in many ways to the Canadian situation. As well as literature and conference presentations, content on the British experience is also developed from discussions with organizers of RACE, staff and volunteers with the British Institute for Conductive Education and the independent research team evaluating the Birmingham program.

BRITAIN

History

Much of the early spread of Conductive Education outside of Hungary is the result of the work of Esther Cotton, who first began to write and speak about Conductive Education in Britain and other countries in the mid-1960's. During this period, small attempts to replicate the system were undertaken in England, Australia and the United States. None of these programs were very successful due to scale, efficacy and limited resources.

In 1986, the British Broadcasting Corporation aired a show about Conductive Education entitled "Standing Up For Joe". The response to the show was dramatic and parents of motor disabled children in England began to seek information and demand service. The British Spastic Society (BSS), which was the brunt of much criticism in the program, initially responded by opposing the Hungarian system. Parents formed the advocacy group RACE (Rapid Action for Conductive Education) to counter the BSS reaction and to lobby for Conductive Education in England. Activities included lobbying Parliament, picketing the BSS, orchestrating a media campaign and organizing a major conference of 1000 in Coventry.

In 1986, a national charity, The Foundation for Conductive Education, was created "to establish the science and skill of Conductive Education in the United Kingdom". The goals of the Foundation were to generate and disseminate information and to accurately replicate the Peto system in England for the purposes of research and service. The Foundation is located in Birmingham, England and is affiliated with the University of Birmingham. In 1987, the Foundation entered into a formal agreement with the Peto Institute to train British conductors while utilizing Hungarian staff to develop and initially oversee the operation of a conductive education program.

By 1988, the British Spastic Society, which operated over 100 educational institutions and 200 parent support groups, had come to support the Conductive Education approach. However, the debate continued over the definition of Conductive Education. The BSS developed programs in two of its facilities which it claims are "inspired by" Conductive Education. These programs utilize specialists in a team approach. Salary differentials between professionals have been eliminated to break down status-related barriers. RACE and the Foundation oppose these programs as misrepresentations of 'true' Conductive Education. As well, they fear that such programs threaten to divert resources from the Birmingham Institute.

The Foundation estimates that over 30 conductors currently live in England, but their practice is neither coordinated nor focused. Some have been recruited by one or more families to provide private service. Others have set up private practices, trading on their training. A number of persons who have taken limited training (2 to 6 weeks vs. 4 years) are also establishing themselves in practice as conductors.

To date, primarily through the efforts of RACE, the Parliament has passed legislation permitting municipal school boards to fund British children to attend the Peto Institute. The British government has provided some funding to the Foundation and has committed five million pounds to the formation of a National Institute in England and an International Institute in Budapest. At the present time, approximately 200 British children are participating in the Budapest program. The BSS assists with funding the children's education and the training of 12 conductors.

According to members of RACE, many problems confront parents hoping to take their child to Peto. The first problem is obviously the waiting period, estimated at 2 years between application and acceptance. Once a child goes to Hungary, the new environment, program and language create a long period of adjustment, often months in length. For parents who, for economic reasons, can only participate for three to six month periods, almost the entire program is spent in this adjustment stage. Further compounding these problems is the less than ideal group matches in the international program and the changes in group mix when treatment is episodic rather than continuous. Finally, while the large number of British participants has created a community of sorts in Budapest, the long struggle for service often fosters a competitive rather than a cooperative spirit among the members.

Birmingham Institute for Conductive Education

The Institute was formed in 1987 with an initial goal of educating 10 children and training 10 conductors. The classes at the Institute are conducted in English. Both conductor training and the international children's programs in Budapest are taught in Hungarian. By November, 1990, the students served by the Institute had grown to 18 while the conductor trainee group had shrunk to 6.

The Institute is part of a campus of special education schools outside of Birmingham. While the British school system ensures the right to an education, it does not enshrine the right to an integrated education. Local school boards have the right to educate a disabled child in a regular school, a special school, or fund education in Budapest. One of the foremost reasons for the criticism of the Peto program adaptations, such as those run by the BSS, is that they are cited by school boards when justifying the rejection of funding requests for the Peto option.

All 18 children at the Institute are full time students, age 3 to 7, and all have cerebral palsy. To date, 3 of the children have been mainstreamed into integrated schools, 1 awaits placement and 1 returned to a special school. In September, 1991, a Mother and Baby group will be formed.

As noted previously, the Peto system invests considerable resources in follow-up services for program graduates. Although only a few years old, the Birmingham Institute is already finding that a considerable portion of their efforts are now in the community.

The program is run by a head conductor and 6 other conductors, operating in two shifts with an overlapping lunch period. To meet the British educational requirements, two certified teachers oversee the academic program.

RACE is heavily involved with the Institute and the school maintains a close liaison with the parents. While the program is not residential, the child's chart goes home each night and the parents continue the program at home.

Parents do not pay tuition to the program, nor does the school board. The only expense which the school board will cover is for the child's transportation to and from school. Many parents participate in Foundation fundraising activities.

The Birmingham Institute also operates two adult Parkinson groups with 6 participants and one conductor in each. The groups meet twice per week. The cost of these groups is cost shared by the Parkinson Association.

The operating budget for the school is one million pounds. The conductors are paid between L12,000 and L19,000 per year, which is comparable to British teachers salaries but far more than conductor salaries in Budapest. The cost of supporting a child at the Peto Institute is L20,000 per year and a student conductor L25,000.

When the Institute first advertised for applicants for conductor training in Budapest, it received over 600 replies. One of the initial selection criteria was to choose young, motivated applicants. This decision was based in the assumption that such persons would not be encumbered by previous professional training and practice which could negatively influence their acceptance of the conductor philosophy. In retrospect, this decision is being questioned. In the future, independent, older applicants will be sought. It is hoped that the added maturity and career direction will reduce the program drop out rate.

The original arrangement with Peto was to split the training between Budapest and Birmingham. In the fall semester, the students would work in Birmingham, under the direction of a Hungarian conductor. In the winter, the students would receive training in Budapest and the Birmingham school would be staffed by Hungarian staff and trainees. Eventually, all training would occur in Britain.

This has not worked out as planned. The Peto Institute is insisting that the full first 10 months be spent in Budapest. The agreement has been revised for future classes with a return to a split training/work experience program.

The Institute's Executive Director, Andrew Sutton, acknowledges that the development of 'true' Conductive Education in Britain will be a long procedure. The first commitment is to training British conductors, with the eventual goal of developing training in Britain. However, this could be more than a decade away. Juxtaposed to this is an estimate that England could use 2,000 conductors if this program is to be widely accessible.

The second step in the process is an accurate documentation of Conductive Education. This process will include defining the essence of the system, its applicability and relationships between inputs and outcomes. This is essential for a variety of reasons. Documentation forms the basis of research and system validation. As well, there will continue to be disputes over the definition of 'true' Conductive Education until such documentation is in place. Without this, the system cannot be regulated to avoid abuse and misrepresentation. Finally, documentation will permit analysis of the system from the perspective of cost effectiveness. To accomplish this, Mr. Sutton hopes to establish a National Institute as a "Centre of Excellence".

The evaluation of the British Institute is the responsibility of two University of Birmingham researchers, Dr. Raymond Cochrane and Dr. Phillip Bairstow. The initiation of the research project, funded by the British Department of Education and Science, was designed to coincide with the beginning of the Institute. The project has four objectives:

1. To determine the extent to which the Birmingham project accurately replicates the Peto system.
2. To attempt to define the principles upon which Conductive Education operates and which are critical to its success.
3. To define the limits of the applicability of Conductive Education.
4. To subject Conductive Education, as established in Birmingham, to a comparative evaluation of effectiveness with other special education programs in England.

To date, progress has only been achieved on the fourth objective. Lack of co-operation by the Peto Institute has hampered progress on the first two objectives and the small size and homogeneity (18 children, all with cerebral palsy) of the students in Birmingham has precluded efforts on the third. While no results have been published on the last item, a comprehensive battery of tests are being regularly administered to both the Institute students and comparable students in other British special education programs. The major concern to date, expressed by the Department of Education, relates to the comparability of the test groups. This will limit the level of interpretation of results.

AUSTRIA

The Austrian experience with Conductive Education is the result of the interest of a single professional, Ms. Helga Keil. Ms. Keil first met Professor Peto in 1963 and both trained and worked at the Peto Institute for many years. In 1973, Ms. Keil formed a private institute in Vienna for small children, under the supervision of Hungarian conductors. In 1984, a group for adults was formed and a contract with the Peto Institute was established to train conductors. In 1984, the Austrian children's program operated:

1. Two residential children's groups and two day programs for children.
2. Family Integrative Conductive Living and Training Groups for children 1-6 years of age and 7-14 years of age. These groups include the families in the training program and are more individualized than the other programs.

By 1988, there was a continuum of programs available:

Two mother/baby groups, two pre-school groups, two for kindergarten age children, and two groups for older school age children. In addition, a summer course has been added. There are now 20 trained conductors, whose education is funded by the Austrian government. Unfortunately, attempts to integrate Conductive Education into the government funded school system has failed, due, according to Ms. Keil, to the resistance of the existing organizations for health and education professionals.

BELGIUM

Conductive Education does not exist in Belgium at this time. The speaker, Dr. Joseph Lebeer, who is both a physician and a parent of a disabled child, expressed concern that Hungary-based training is unrealistic if the system is to gain any meaningful foothold outside Hungary.

NORTHERN IRELAND

In 1988, the Buddy Bear Trust was established as a charity to fund the establishment of a Conductive Education Centre in Dungannon. In 1990, the Trust funded 170 children to attend the Peto Institute. They will fund 200 in 1991. The cost of this is 1.2 million pounds annually. A summer school program was also organized in Northern Ireland in 1990 for 75 children. 25 conductors were brought from Hungary for this program.

The Trust is trying to convince the government in Northern Ireland to fund Conductive Education. The government has refused to act until the Birmingham research is completed.

WALES

The organization spearheading this movement is the Welsh Institute for the Motor Disabled, which claims 10,000 supporters for Conductive Education. The goal of the Institute is the establishment of a Centre of Excellence for CE in Wales, true to the Peto method. In 1991, the Institute is organizing a summer children's program for 4 weeks. It is also funding the training of conductors in Budapest.

The major concern expressed by the Welsh delegate was that the Peto Institute is becoming stretched by growing international demand.

GERMANY

Interest in Germany is coming first from parents. In March, 1990 a project was set up at the University of Siegen and the Taunsklinik Falkenstein. Funding for the two year project is from the Federal Ministry of Labour and Social Affairs. Project objectives are:

1. Documentation of the theoretical foundations of Conductive Education.
2. Testing of Conductive Education in a group of CP children, ages 3-6, based on a German curriculum.
3. Establishment of a university-level conductor training program in Germany, according to German educational guidelines and under conditions established by the Ministry of Education.

The German government will not accept the alternative of Hungarian training and will not cover practice under the Government Health Insurance.

ISRAEL

Tsad Kadima (A Step Forward) is an organization of parents and professionals committed to bring Conductive Education to Israel. The organization is funded by both government and private sources.

The philosophy of Tsad Kadima is that CE is a "total life culture" and requires internalization of the system, not mechanical replication. Founded in 1987, the organization has the following goals:

1. Adoption of CE by the Israeli educational system.
2. Training of Israeli conductors at Peto.
3. Gradual transference of CE to Israel through nurturing, growth, and development.
4. Emphasis on the family rather than the institution as the centre of conductive culture.

The organization began this program by first examining the Hungarian method, particularly focusing on the process of internalizing the culture. This requires immersion, total socialization and self-discovery. For this reason, the Israeli approach will be a long term investment in the Peto Institute.

In 1987, 10 students were chosen from 600 applications for conductor training. The Tsad Kadima pays the full cost. At present, 16 students are enrolled, 9 in their third year. As the preference was to integrate these students with the Hungarian trainees, they were provided with a ten week preliminary course in Hungarian.

The Organization also funds the participation of children in the Peto program. 100 children have attended the Institute and a follow-up program has been developed for the families back in Israel. Children and parents trained at Peto participate in a morning program prior to the school day. This helps focus their physical strength and coordination prior to each day.

The Tsad Kadima has also operated 4 residential camp programs in Israel using Hungarian conductors. These programs, held at a kibbutz, are integrated with kibbutz life. The teachers of the participating children for the coming school year also attend to become acquainted with the children and the system.

In 1992, the first 9 Israeli conductors are scheduled to graduate. A pilot educational program is being designed to introduce CE to Israel.

The major problem with this approach is that it is slow. There are many parents who want the system now, for the benefit of their children. The organization is resisting this pressure, but acknowledges the sacrifice which accompanies this approach.

JAPAN

Japan was one of the first countries outside of Hungary to introduce Conductive Education. Dr. Masanao Murai, a physician, began working with cerebral palsied children in the 1960's and taught judo at the Warashibe Institute for Children. Through this undertaking, Dr. Murai became aware of Conductive Education and began to integrate the CE approach into his judo training in 1970.

In 1978, 10 children and 10 students were sent to the Peto Institute. One conductor student has been sent in each subsequent year. To date, 19 students have received training, but only 6 remain with his program. All but 3 participated in the short (6-7 month) course and are not considered to be conductors by the Peto Institute.

HONG KONG

Special education in Hong Kong is through special centres and schools which accomodate 50-60 children each. Conductive Education was first introduced to these centres by Esther Cotton during a visit in the early 1980's. The group-oriented approach of the Peto system was seen to be very compatable with Chinese culture.

The impetus to bring CE to Hong Kong came from the professionals rather than from parents. A training agreement with Peto was subsequently established and 9 conductors have been trained to date. To change the culture in the special schools, physical as well as professional barriers were eliminated and all activity takes place in a physically open environment. In 1986, a Working Group on Conductive Education was formed and a national association is being developed.

The greatest need at this point is for more flexible training, particularly in light of the cost of travel from Hong Kong to Hungary.

AUSTRALIA

The impetus for CE in Australia is the National Association For Conductive Education. NACE was formed in 1986 by professionals and parents interested in the system. The association provides information, but lacks the resources to deliver or fund either service or training.

While five conductors reside in Australia, there is no national strategy or coordinated programs. Two private services are in operation. In Brisbane, there is a holistic residential program for 70 children. In Melbourne, a mother and child program operates using Hungarian conductors.

The biggest barriers to bringing CE to Australia, according to the NACE delegate are:

- The lack of system documentation
- Professional jealousies
- Distance (12,000 miles to Budapest)
- A lack of government support
- No national strategy regarding special education
(6 states, each with its own mandate)

The goal of NACE is to establish a national centre with trained conductors and a range of services. However, judging from the report, this is far off.

NEW ZEALAND

The Parents Association for Conductive Education was formed in 1987 to promote availability of Conductive Education. That year, PACE funded the first child to attend the Institute and has subsequently funded the participation of 21 children. PACE also offers information about CE and operates a library service. In 1991, there are plans to operate a summer camp program.

The problems faced by New Zealand are similar to those of Australia: distance and a highly decentralized governmental system. To date, only privately run CE and modified programs using specialists exist.

SOVIET UNION

The Soviet Union is the source of the most foreign applicants for service in Budapest. According to Professor Margarita Ippolitova of the Institute of Defectology in Moscow, CE is not available in the Soviet Union. Disabled children are placed in residential schools based upon their disability and its severity. These schools combine general education with cognitive and motor skill development.

UNITED STATES OF AMERICA

Suprisingly, Conductive Education has gained little recognition or foothold in the U.S. The majority of knowledge and activity appears to be in the New York City area. Frieda Spivak of Lehmann College operates a private program using Conductive Education principles as does the United Cerebral Palsy Association of New York.

Ms. Spivak employs one conductor working in a day program with 15 CP children aged 0-5 years. Spivak noted that should CE catch on, an additional 10,000 conductors would be required.

The barriers to CE in the U.S. mirror those in other countries:

- Distance, cost and language precludes mass conductor training
- Special education legislation requires state certification
- ✓ -Government is not likely to support both the traditional professions (physiotherapy) and conductor training
- ✓ -Professional territoriality
- ✓ -Lack of parental participation (working, lack of appreciation)

One group for which Ms. Spivak felt that CE is highly applicable is children born with drug dependencies.

As a first step, the speaker recommended an American Association for Conductive Education, focusing on information and public education.

VI. APPLICABILITY OF THE CONDUCTIVE EDUCATION MODEL TO CANADA

The issue of transferring the Conductive Education system to Canada is a difficult one to address. Despite, or perhaps because of, the efforts and experiences of other countries, this goal should be approached cautiously. A number of barriers hinder the mobility of the Peto system to Canada:

Cultural--CE is based in a culture which is inaccessible and requires the adaptation of the individual to the environment. This is in philosophical opposition to the Canadian 'mosaic' which requires the society to adapt to the needs of its citizens.

Technological--The Peto system was developed for a society which had minimal technology or resources and could therefore not provide assistive devices to its citizenry. The Canadian approach has been to develop and provide increasingly more sophisticated technology to assist persons with disabilities to overcome environmental and physiological handicaps.

Philosophical--A strong trend in Canadian society is the integration of persons with disabilities through mainstreamed education and deinstitutionalization. While the goal of the Peto system is integration, the segregated environment in which the program takes place and its residential component is contrary to this trend.

Professional--As with most professions in Canada, specialization, certification and licensing form the basis of practice, power and status in the fields of health and education. This is likely to continue, if not increase. The generalist focus of Conductor training and practice defies this trend. A major barrier to the acceptance and application of CE in Britain and the U.S. relates to this professional and legislative infrastructure.

Methodological--As noted, despite nearly a half century of practice, little documentation and research is available about the system. As a result, accurate replication is difficult. Further, justification for system development is hampered without academically reliable data to substantiate the time and effort which will be required to develop a Conductive Education program.

Financial--Assuming that the above barriers could be overcome, an enormous financial and logistical hurdle remains. Supporting a child in Budapest costs \$50,000 per year and is an unrealistic approach for addressing Canada's needs. Conductor training is a similar problem. In its current form, Conductor training is only available through and at the Peto Institute. At current costs, the training of a single conductor requires the individual to learn Hungarian, invest four to five years (depending upon language facility) and \$200,000 in tuition and living expenses. This does not take into account an anticipated drop out rate nor the physical and professional infrastructure required to deliver the program. Hiring already trained Hungarian conductors would be more expedient. However, increased foreign recruitment diminishes the pool of conductors in Hungary and will, if not controlled, place the Peto program at risk.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. VALUE OF CONDUCTIVE EDUCATION

After attending the Conference, visiting the British and Hungarian programs and reviewing the literature, the overriding conclusion is that Conductive Education is highly successful as a means of developing orthofunction in persons with motor disorders.

Although I have encountered written and spoken criticisms of the program—e.g., that it is nothing new, it has limitations, it is not applicable in the West—few deny the benefits received by those individuals who have participated in the program. In fact, its theoretical basis that learning is best when interesting, self-initiated and in a supportive environment, is in line with current Western educational theory.

The strengths of the Peto system have been mentioned, but are worth repeating in summation:

Attitude—The most commented upon aspect of this program by those presenting and writing about Conductive Education is the positive attitude of the program staff. This says as much about Western treatment as it does about the Hungarian model.

The positive approach of CE is evident throughout the program, from assessment through follow-up. In fact, one criticism of the program—the lack of screening of children prior to their participation in some program elements (e.g., bladder control for children with Spina Bifida)—may in fact reflect our tendency to screen children out too readily.

Education—The classification of the program as educational rather than therapeutic changes the nature of the approach from one of treatment to one of learning. The group environment further enhances the program by adding both a supportive and competitive element.

Conduction—The facilitation of the learning process is based upon observation, well planned task series, Rhythmic Intention, reinforcement and repetition. The process is self-initiated and designed to maintain interest in the process.

Holistic and Coordinated—Two elements which contribute to the success of the system are the holistic approach, achieved through the use of transdisciplinary conductors and considerable joint planning and coordination by these conductors in developing and facilitating the program.

Intensiveness—The scope of the program goals—physical, academic, social and emotional independence—could not be achieved without the intensity of the program. Operating 13 hours per day (8 for the non-residential program), this permits both a full academic program as well as an extensive motor skills development program.

B. CONDUCTIVE EDUCATION IN CANADA

While the obstacles to transporting Conductive Education to Canada are both clear and daunting, its value is equally evident. Rather than dismissing this goal, we should consider the options available and the actions required.

1. GENERATING INTEREST AND SUPPORT

Both prior and subsequent to the November Conference in Budapest, the BBC films have been screened for a select group of representatives of disability organizations; Ontario government Ministries of Health, Community and Social Services, Education and the Office for Disability Issues; as well as individuals who have expressed a knowledge or interest in CE or related approaches. The result has been a mixed level of interest and support for the system.

It has been noted that in a number of the countries developing CE programs, the initiative came from a small group of parents and professionals. A major role of most of these groups has been public education. In Britain, for example, the BBC publicity proved to be the catalyst for the movement. However, it is important to recognize that while this information undoubtedly accelerated interest and support, it also accentuated divisions and created service expectations which have not been and will not be met in the near future. Therefore, the management of information is a crucial issue.

It is also essential to determine the desired role of CE in Canada. The realities of professional practice and culture dictate that the Hungarian environment will not and should not be replicated. As a society stressing choice and integration, CE can at best be but one service option available. More relevant, however, may be the application of CE theory to existing structures and practices. This will be explored later.

One lesson in reviewing the international experiences is the importance of government involvement and commitment to CE if it is to gain any foothold in Canada. Government performs the critical roles of certifying practice and funding both skill training and the educational system.

2. PURCHASING SERVICE

Two services are being sold by the Peto Institute: Consumer education and conductor training. The option of purchasing service for disabled children and adults is costly. While beneficial to those participating, it is an expensive alternative and does not improve access to CE within Canada.

The key to establishing Conductive Education in Canada is, of course, the hiring or training of qualified conductors. Many of the international speakers emphasized the need to alter the current training approach due to the staggering time and financial investments required to train staff and to establish a program. The alternative expedient approach of hiring Hungarian conductors will place the Peto Institute in jeopardy if adopted extensively by the international community.

What is needed is a new approach to training which will maintain the integrity of the program while encouraging and facilitating its spread. Some of the Peto leadership are resistant to such change, fearful of program dilution and loss of quality control. However, it was obvious during the course of the discussions that many of the Peto staff realized the need to adapt content and methodology and were willing to negotiate.

The Peto Institute, therefore, is establishing an International Peto Association to improve training for foreign conductors. The aims of the IPA will be:

1. To develop a modified method of conductor training;
2. To improve the Peto method for adaptation and application; and
3. To communicate the Peto philosophy.

There is an \$800 fee to become a member and a \$500,000 fee to purchase a permanent training spot for conductors.

This is a positive step, but does not go far enough to warrant support. For Conductive Education to become established in Ontario, training must take place here. We should consider membership in the IPA to keep abreast of the movement and influence its development. However, further investment should be contingent on a more reasonable approach to this issue.

3. DOCUMENTATION

The other major concern with Conductive Education is the lack of formal research and methodological documentation. It is curious that a system which has been in operation for so long and which is generating extensive international interest should be so poorly validated.

The British initiative is worth monitoring for both its diligence in system replication as well as its commitment to evaluation and documentation. Links with the British Institute should be maintained and their progress monitored.

4. PILOT PROJECT

One of the frustrations of promoting Conductive Education will be to establish its value in the absence of solid data or Canadian experience. Consideration should be given to the establishment of a pilot project, using trained conductors, which would provide service and which could be used comparatively with existing program approaches.

Most international initiatives have initially served children. These programs require extensive staff and resources to establish and operate and require coordination and cooperation with the educational system. However, a pilot could more easily be undertaken if serving adults. Adult programs are less intensive and require fewer resources. Further, evaluation might be simplified by working with an adult group. In the British experience, despite the care and scope of the program, results are being questioned because development in very young children cannot clearly be attributed to teaching methodology. Finally, as the Ontario March of Dimes is mandated to serve adults with disabilities, such an initiative would be clearly within this organization's domain.

5. MODIFYING CANADIAN PRACTICE

Whether or not Conductive Education ever comes to Canada, there is much about the approach which is worth integrating into our health and educational systems. The intensity of the motor skills program accelerates development. A positive, supportive environment, coupled with self-directed education promotes learning. The transdisciplinary approach works. Programs such as the Integrated Treatment Unit at the Hugh MacMillan Centre in Toronto have adopted some of these concepts. Yet this program is relatively unique and serves only a few of the many disabled children who could benefit from this approach.

Substantive change in Canadian practice will require a revised approach to the training of the health professionals and a restructuring of delivery models.

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INTERNATIONAL DELEGATES

ISRAEL - Udi Lion, TSAD Kadima - The Association for the Advancement of Conductive Education

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BELGIUM - Joseph Lebeer, University of Antwerp

Canada

Israel adapts treatment to fight cerebral palsy

By RON CSILLAG

TORONTO — Udi Lion recalls that when his son Yoel was diagnosed with cerebral palsy as an infant, experts in Israel recommended what he calls the Western approach: treating the disorder as medical and having several experts work with the child, each on a different skill, while the child is strapped into a special chair to hold him upright.

He didn't know it at the time but Yoel Lion became a pioneer, for he was the first Israeli child to undergo the so-called Peto method, a psycho-educational approach to treating children with motor control disorders that has become known around the world as conductive education.

Considered quite radical when it was developed after World War II by Andreas Peto, a Hungarian Jewish doctor, the method was literally kept behind an iron curtain until around 1987, when Udi Lion first travelled to Budapest with Yoel.

When he arrived at the Peto Institute, Yoel could not keep his balance while seated; standing up was impossible. What's more, he was deaf. His hand movements were jerky and everyday tasks, like eating and getting dressed, were tortuous.

After one month at the institute, Yoel was able to sit still by himself and showed dramatic improvement in self-confidence and morale.

And he wasn't alone. Hungarian officials estimated that fully 70 percent of children who receive conductive education at the Peto Institute improve to the extent they are able to function independently.

Conductive education intrigued Udi so much that he negotiated with the institute to reserve space there for Jewish and Diaspora children. At the same time, he gained the institute's agreement to train professionals in the method for export and bring the Peto approach to Israel.

Thus was born Tsad Kadima (A Step Forward), the Association for the Advancement of Conductive Education in Jerusalem, with Udi Lion as its current director.

The method is attracting more and more converts around the world, says Lion, who was in Toronto last week for a two-day conference on conductive education presented by Ontario March of Dimes and to feel out the feasibility of setting up a Canadian Friends of Tsad Kadima.

There are roughly 3,000 children in Israel who suffer from cerebral palsy and associated motor dysfunctions like spina



Udi Lion

bifida, Lion points out, as well as thousands of adults with Parkinson's disease, multiple sclerosis and head injuries.

Today, there is hope for them because of conductive education. The method differs from conventional treatment of motor disorders in that the child spends the entire day with a single professional, known as a conductor, instead of with several different experts. The conductor seeks to stimulate the child to rely on his own resources. Emphasis is on socialization skills and since the child is with his peers, support from them is encouraged.

The method is by no means a cure or treatment, Lion stresses, but it does go a long way toward improving motor skills.

"The disabled child gets frustrated early," Lion explains. "He cannot grab a toy or sit up. So he cries. The parents respond to the crying so the child learns to be dependent. He stops trying and becomes passive."

Conductive education is designed to check and rectify that personality impairment. Self-image and motivation are restored with a view to integrate the child into mainstream education.

Today, there's a long waiting list at Tsad Kadima, which has 200 students. Half of all applicants must be turned away. Fees, about 400 sheckels a month, are subsidized, but only up to 10 percent of the total, by Israel's health ministry.

The bright side is that Israel is now turning out its own conductors, who undergo five years of training.

However, spiralling costs and more applicants mean Tsad Kadima will be squeezed. That's a shame, Lion notes, especially when one can see the faces of its "graduates."

For more information, call Albert Gellman at (416) 485-4448.

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Cerebral Palsy and Conductive Education

Cerebral palsy is a complicated condition caused by an injury to the brain before, during or after birth. The common classification, spastic, athetoid and ataxic is based on the main disorder, i.e. that of movement and posture. The children may also suffer from associated handicaps such as speech, hearing, visual and sensory defects.

In the period since the Second World War great efforts have been made to improve the quality of life of the cerebral palsied child. Treatment and education have been organised in centres and schools and much help has come from modern technology. Today, teachers and therapists can participate in training which will familiarise them with the many special problems of cerebral palsy. The techniques may vary but the practical application is the same. The various symptoms are treated individually by the appropriate therapist in specific, episodic sessions. Integration amongst teachers, therapists and care staff consists of verbal communication and co-operation within this essentially multi-disciplinary team.

Conductive Education

Instead of this fragmented approach, conductive education exposes the child to a learning programme which is understood in its entirety by all staff and persistently pursued by everyone.

Professor Peto, originator of conductive education, emphasised that the growing child develops as a whole. If the central nervous system has been impaired, the child's primary need is, more than ever, to be treated as a whole, not in parts, his symptoms being handed out to successive professionals in a fragmentary manner.

Peto defined the cerebral palsied child as a dysfunctional child. Function can be observed and analysed and is also learnable. Turning dysfunction into function opens the door to a learning programme which can be adapted to any level of dysfunction.

Peto made no claims of a cure, but he maintained and demonstrated that all children can learn, provided they are systematically educated in the right environment.

The learning starts in the Mother and Baby groups. Here the mother (or father) will learn to stimulate and activate her child. She will learn how to observe her child, how to judge and enjoy even the smallest achievement and how to step back and give the child time to do things for himself.

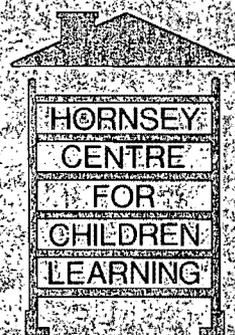
The learning progresses into the nursery and pre-school classes where the children will learn the skills they need when moving into their next school.

The beauty of conductive education lies in the unity created by the concept of the one educator, the conductor. She will be able to observe the children in all situations during the day, to note their abilities and to guide them from one stage to the next, continually using their newly learnt skills in varied and progressive combinations.

This continuity is only possible in conductive education and is one of the main reasons why the children progress so well.

When asked how we might learn to use conductive education, Professor Peto answered: the children will teach you. The children will teach us if we can learn to observe them. Herein lies the art of conductive education.

Ester Cotton FCSP



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Program: Conductive Education

Enclosed: Conductive Education

Subj: Toward A More Active Life -

Philosophy and Principles of
Conductive Education

Letter from a Parkinson's patient.

CONDUCTIVE EDUCATION

A Way Toward A More Active Life

Dr. Mary Sullivan and Dr. Frieda Spivack

Conductive Education is a system of special education for children and adults with neuro-motor disorders. Conductive Education teaches children and adults to develop greater bodily control. Even more than this, however, Conductive Education focuses on development of the whole person, encompassing not only physical, but also emotional and intellectual aspects.

The goal of Conductive Education is to develop independence and self-sufficiency despite the degree of disability as a result of a neuro-motor disorder. Neuro-motor disorders are problems of controlling bodily movement due to certain conditions of the brain or spine. These include, in childhood, such disorders as cerebral palsy and spina bifida, and, in adulthood, Parkinson's disease, strokes, and multiple sclerosis. The needs of these disorders are directly addressed by Conductive Education in order to help individuals develop to their full potential.

The Meaning of Orthofunctioning

The central aim of Conductive Education is an "orthofunctional personality". Conductive Education strives to enable children and adults to change their outlook and approach to problem solving. By experiencing success, they discover that they can find their own solutions to many problems of daily living. As a result, they not only develop greater bodily control, but also become more active and self-assured generally.

Areas of learning include daily living skills, academic competencies, and recreational abilities. Independence means performing without the use of aids, wheelchairs, or walking frames, because the person has become orthofunctional. Individuals are able to handle themselves in as personalized a way as possible. Therefore, orthofunctional ability allows individuals to have an active lifestyle of their own choosing.

The process of growth attained through Conductive Education enables individuals to choose themselves to be included in a more active and wider framework. This inclusion is a basic goal of Conductive Education. Conductive Education allows individuals with a neuro-motor disorder to solve their own life problems through developing an intention to use themselves and to make their lives purposeful.

The Conductor Educators

The special practice of Conductive Education relies on a single professional, a specialist teacher who is called a conductor. The conductor takes responsibility for all aspects of physical, intellectual, social, and personal development of the children and adults with whom they work.

This conductor has studied at the Peto Institute in Hungary and has integrated knowledge across various disciplines, which include speech, occupational and physical therapies, special education, and psychology. Having such a comprehensive training program, the conductor educator is able to provide a comprehensive and cohesive program that meets both the therapeutic and educational needs of the individual.

It is the conductor's responsibility to ensure that the children and adults meet with success and feel that their work is worthwhile and has purpose. They are trained to offer guidance and to support a sense of clear direction.

The Conductive Education Program

Conductive Education is a less complicated and less expensive method than present methods and procedures, because it relies upon one person who has the expertise in different disciplines instead of a transdisciplinary team. In addition, equipment such as wheelchairs are not used. Simple and inexpensive furniture is utilized. Durable wooden plinths (or slatted benches) and differently weighted wooden chairs and boxes are used in numerous ways and exercises. The individual is expected to walk and function without artificial devices.

Although Conductive Education takes place in a class grouping, individuals have their own task series and individual expectations are developed for each person. In the beginners program, parents and babies (the infant can start a program at 6 months of age) learn together in a parent/baby class. In effect, the parent, usually the mother, learns how to rehabilitate her child under the tutelage of the conductor educator. In this way, the parent is fully aware of the child's needs and program and can work with the child at home. Patterns of special movement are practiced, not only separately, but integrated into functional activities. Having the parent understand the rationale for her child's task series is essential for the child's easy progress.

Praise and encouragement are generously used to facilitate learning. Rhythmical intention also is utilized to enhance instruction. Through song the child and conductor sing the verbal statements which are used as

tables

prompts. Musical rhythms help create in the child more fluent movement. Specific modeling by the conductor is employed to clarify directions and to support progress. However, as the children grow older their successes motivate them to set their own goals in their own way.

The job of the conductive educator is to use creative motivating approaches to help the child become more self-sufficient and to move more effectively. The earlier the program is started, especially with co-training of the parents, the greater the improvement and progress as the result of Conductive Education.

The Practice of Conductive Education

Conductive Education was developed in Hungary in 1945 by Dr. Andras Peto and has been increasingly recognized in professional circles. Conductive Education is now practiced worldwide. In the past ten years an extraordinary growth of Conductive Education outside of Hungary has taken place, and centers may be found in America, Europe, and Asia. Great Britain, Israel, Japan, Australia, New Zealand, and Canada have established bridges with the Peto Institute in Hungary.

Conductive Education was brought to the United States by Dr. Frieda Spivack who went to Hungary in 1985. Continuing from that time, she has been Director of the Conductive Education Program at HCHC Inc., an agency for children under age 5 with different disabilities.

Dr. Spivack has worked to disperse information regarding Conductive Education and to increase awareness of its capabilities. United Cerebral Palsy of New York City with her help has developed Conductive Education classes. However, only HCHC Inc. has conductors trained at the Peto Institute in Hungary. At HCHC Inc., Conductive Education classes for babies and young children are on-going.

Dr. Spivack was a professor at Lehman College, City University of New York for 20 years and received grants for studying and teaching Conductive Education. She is currently the President of the American Conductive Education Association for the Motor Disabled. This Organization has grown to over 300 members who are actively and earnestly involved in bringing the benefits of Conductive Education to this country.

**THE AMERICAN CONDUCTIVE EDUCATION
ASSOCIATION FOR THE MOTOR IMPAIRED**

GOALS

- 1) To make known the principles of Conductive Education in the United States.
- 2) To facilitate the provision of Conductive Education to all children and adults in the United States who need this method to overcome their disability and help make them independent.
- 3) To help and support the training of conductors and the certification of conductors.
- 4) To encourage and develop a Conductive Education Library, Media Center, and Resource Center.
- 5) To encourage research into and evaluation of Conductive Education.
- 6) To maintain links and exchanges regarding Conductive Education within the Americas.
- 7) To maintain links and exchanges with other Conductive Education groups worldwide.
- 8) To develop a network program with Hungary and Great Britain and other countries to develop preservice, inservice, training programs, conferences, and workshops for professionals and parents.
- 9) To enlist the aid of our government to help bring Conductive Education to all United States citizens.
- 10) To enlist the aid of our government to help establish national and international resources for Conductive Education.

RECOMMENDATIONS

What can the Clinton Administration do to help individuals with disabilities who need Conductive Education?

- 1) Establish a national policy which promotes independence and self-sufficiency for children and adults who have disabilities.
- 2) Enable individuals who need Conductive Education to utilize Medicare, Medicaid, and other health insurance for Conductive Education.
- 3) Establish a new profession for high school graduates, a four year baccalaureate which trains educators in a conductor profession to help individuals with neuro-motor disorders to become self-sufficient and which combines special education with different therapies.
- 4) Give grants to colleges and universities who will establish a baccalaureate Conductive Education program.
- 5) Establish certification for conductors as therapists and teachers.
- 6) Establish programs of preparation for American conductors to receive training at the Peto Institute in Hungary.
- 7) Help children and adults without a close Conductive Education Center to go to Hungary or Great Britain for their Conductive Education program.
- 8) Support programs which are beginning to utilize Conductive Education principles and methodology for children and adults with disabilities.
- 9) Fund institutes, conferences, workshops, and inservice training programs in Conductive Education.
- 10) Establish national resource centers to house a library of Conductive Education and related publications, videos, and other materials in various sections of the United States.

M.A. SUPPLY CO., INC.

2100 Union Street, Brooklyn, New York 11212

Telephone (718) 756-7777

September 20, 1993

To whom it may concern:

I am a patient with Parkinson's disease who has been fortunate enough to have been given therapy in Dr. Frieda Spivack's conductive education program for adults. I also gave testimony with Dr. Spivack before the New York City Council, Committee on Health Alternatives, chaired by Councilwoman Julia Harrison.

My testimony then and my letter to you now is an attempt to make public officials aware of the terrible plight of Parkinson's patients, and patients with other neuromotor disorders, like multiple sclerosis, who are unable to take part in a conductive education program. There are only experimental drugs and surgery, but they do not address the problem of how we can live our lives, walk about and care for ourselves.

Dr. Spivack's ten-week pilot program in conductive education was so helpful that it had to be extended to 25 weeks. But without funding and without third-party insurance eligibility we had to pay for the therapies and transportation out of our own pockets. It was too much of a hardship for most of us who are retired or unemployed.

We need government sponsorship and support. I found myself more capable of working at my job while participating in the conductive education program.

Sincerely,



Kent Tannonbaum

P R E S I D E N T ' S R E P O R T

I am indeed honored to serve as the first president of the American Conductive Education Association for the Motor Disabled. This being our first year, we look forward to making great strides in strengthening our organization and in promoting quality conductive education in the following ways:

1. Recruiting interested and able members and supporters
2. Excellent programming, with our first conference in March, 1993.
3. Strong links with related organizations, e.g., working with DEC.
4. Developing a conductive education resource.
5. Encouraging the dissemination of conductive education ideas throughout the Americas. We are in touch with interested members in South America and Canada. Our Canadian members will be having their first conference in May, 1993.

We are eager to promote high quality conductive education for all children with neuromotor disorders and their families. However, the concepts developed by conductive educators can be applied to children with other handicapping conditions. These concepts include:

1. Orthofunction - the principle that the child can achieve a close to normal function through overcoming his sense of purposelessness and immobility. The primary aim of conductive education is to promote maximum independence and function as close to normality as possible. This is what is meant by

orthofunction.

2. Conductive education is delivered in a group program, not in individual, separate sessions, but with peers to support, reinforce and encourage all participants. Conductors are given special training in psychology, speech therapy, occupational and physical therapy and special education in an integrated way.

3. Parents and caregivers are directly involved from the start. Adaptive equipment is brought home. Parents start in parent/child classes.

4. Learning is stressed rather than treatment. The children teach themselves to walk by means of learning how to manage their bodies through space. The learners are in control of their own programs. When they succeed they know that they are primarily responsible for what they can do.

In the past, special education was dominated by teachers and therapists. Conductive education allows the child to participate in rehabilitation together with the parent as they both learn to understand and develop the orthofunctional process.

Dated: January 24, 1993

Respectfully submitted,

Frieda Spivack, Ph.D.

What is Conductive Education?

Dr. FRIEDA SPIVACK

Conductive Education is a relatively new approach for helping people with movement disorders overcome their physical limitations. This therapy has experienced a remarkable success rate in rehabilitating an estimated 70% of those with movement disorders compared to traditional rates of approximately 20%. This includes children with Cerebral Palsy, Spina Bifida, and other neuro-motor disorders. In addition, there has been success with adult stroke victims, who are hemiplegic and those affected by Muscular Dystrophy, Multiple Sclerosis, Spinal Cord Injury, and "Plegias" Parkinson's.

The concepts and principles of Conductive Education were first proposed by Dr. Andras Peto almost 40 years ago in Budapest, Hungary. Dr. Peto studied the Neuro Developmental approach (NDT) with Karel and Perta Bobath in London. The work of Luria in language and Piaget, in psychology has also had a major impact on the development of the Peto approach. The Peto Institute currently serves over 1,800 children and adults each year from over 42 different countries.

Traditional treatment by physical, occupational, and speech therapists occurs on sessional basis generally provided only once or twice a week. This kind of program does not assure quick progress and as a result some neuro-motor disordered children begin to lag behind in other areas of development.

Conductive Education, on the other hand, is a comprehensive system of educational intervention. The primary aim of Conductive Education is to "stimulate a developmental process that would not come about spontaneously, and which would continue subsequently". The philosophy of this approach stresses "learning" rather than "treatment".

Conductive Education is based on four principles.

1. The Conductor is a specialized teacher trained in occupational, physical and speech therapy, as well as, psychology and special education. The Conductor orchestrates all of the individuals learning by integrating movement with communication, sensory and cognitive learning while teaching self-sufficiency. The role of the Conductor has been likened to that of an orchestra conductor, a person responsible for the total effect produced by a variety of individual musicians. This prevents the "fragmentation of the child" that can occur when one member of a multi-disciplinary team focuses on only one developmental aspect.
2. Orthofunction is the principle that the child can achieve a close to normal function through overcoming his sense of powerless and immobility. The primary aim of Conductive Education is to promote maximum independence.

What is Conductive Education? (Continued)

This independence is termed Orthofunction.

This is achieved through an intensive program (in Hungary, it is a 12-hour day) and setting functional goals which are broken down in component parts, practiced and combined in a systematic manner.

3. Conductive Education is delivered in a group program. Children and adults learn best in groups, with peers to support, reinforce and encourage all who participate. The cost of providing this kind of program is much less than the same kinds of services provided individually.
4. Parents and care-givers are directly involved from the start. Rather than Conductive Education being considered an esoteric discipline to be practiced strictly by professionals, parents are brought in and taught to help their children at home. Thus, the individual is helped towards independence and self-sufficiency.

Observers are often surprised to find a lack of wheelchairs, crutches, and other adaptive equipment in the conductive environment. Instead, simple equipment, such as, ladder-backed chairs, ladder frames, and plinths, which are simple slatted tables of varying heights, are used. The slats of the plinths and the rungs of ladder-back chairs allow the child to pull him/herself along the top of the table or to hold on to the back of the chair.

The British Broadcasting Corporation (BBC) has done two excellent videos, one hour long each, on Conductive Education entitled Standing Up For Joe and To Hungary With Love.

The only center for Conductive Education in the United States is run by Dr. Frieda Spivack at the Kingsbrook Jewish Hospital in Room 219C, 585 Schenectady Avenue, Brooklyn, New York, 11203. Telephone (718) 604-5283.

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*Conductive
Education*



*The Hornsey Centre
for Children Learning*

CONDUCTIVE EDUCATION

**AS OBSERVED IN
AUSTRALIA AND HONG KONG**

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CHAPTER 1

WHAT? WHERE? WHY? WHO?

1.1 Introduction.

This report will describe what a pair of team fellowship members learned about Conductive Education in the Pacific Basin, and how we hope to utilize that knowledge in our home base. We hope to share this information with policy makers, administrators, teachers and therapists who serve children with developmental disabilities. We would also like to address this information to concerned parents who are seeking new ideas in the education and therapy of their children.

1.2 Fellowship Purpose and Goals.

The purpose for this team fellowship visit was not a singular one. Both members of the team felt that each would bring possibly differing and unique viewpoints to the process of learning about Conductive Education -- as a physical therapist and as an educator/administrator. It was felt that this would prove beneficial as formulation of plans to implement a pilot program using Conductive Education principles in a pre-school classroom for children with disabilities was occurring. It was also felt that team members from different professional disciplines would also provide a wider audience for dissemination of information concerning Conductive Education.

Conductive Education was not viewed by either member of the team as a magic cure-all nor as a learning approach suitable for all handicapped children. It is hoped that Conductive Education can become a reality and more widely known in the United States. It is also hoped that Conductive Education will prove beneficial to a significant number of handicapped children and facilitate a smoother transition to the public education system.

1.3 Background of Team Members.

Judy Ferren -

My training and experience in working in the fields of early childhood and in special education have given me insight into both normal and abnormal development. As a teacher of young, normal children I was able to see and experience normal child development in all areas. When I began my work with young handicapped children in 1969, I began searching and I continue to search for methods to enable the child with cerebral palsy to achieve and develop as much as possible as normal children do. Children with cerebral palsy also need to achieve one of the hallmarks of early childhood development -- namely, growth toward independence and self reliance.

In my present position as an assistant director of a pre-school for children with disabilities I function in a supervisory/administrative capacity. Part of my responsibility involves guiding teachers in writing and implementing individual goals within a classroom setting where therapy treatments are done individually out of the classroom.

In the past I also directed a small center for handicapped children in the midwest. My duties there were much broader -- teacher, staff trainer, liaison between therapists and parents. As the liaison person, I took the children for therapy treatments, received instructions from the therapist and then taught staff and parents these therapy techniques.

With this background I viewed Conductive Education as a realistic, dynamic approach to learning worthy of further study.

Marion Marx -

Having worked with children with cerebral palsy in both clinical and educational settings in New York City since 1965, I have a good overview of physical therapy treatment methods and results obtained. Of course every child is different in neuromuscular involvement; every family varies in how much effort they expend in working with their child to achieve better movements and more normal postures; every clinician varies in treatment techniques and teaching skills.

Among the various therapeutic approaches that have been used with children with cerebral palsy in the United States (developed by Bobath, Kabat, Rood, Fay, Phelps, etc.) the common feature is to manipulate the child's head, trunk and limbs. This manipulation of the sensory/motor patterns is intended to give the child the feeling of correct posture and movement. We have also relied heavily on adaptive equipment (i.e. wheelchairs, supportive classroom chairs, scooter boards, prone or supine standers) to help maintain children with motor disabilities in correct and varied positions.

Therefore, the current generation of children with cerebral palsy is growing up in the United States with heavy dependence on the hands of their therapists and on the adaptive equipment that has been supporting their bodies. It has been my impression that the currently used physical therapy treatment methods are not leading to maximum independence on the part of children with cerebral palsy, especially in the areas of gross motor and self-care performance.

CHAPTER 2

AN OVERVIEW OF CONDUCTIVE EDUCATION

2.1 Definition.

Exactly what is Conductive Education? Conductive Education is structure, intensity, consistency, rhythmic intention, motivation, child centered, goal oriented, a holistic approach. It is head, body, arms, hands, fingers, legs, feet. It is a method of education. It is an approach to life. It is total involvement with an ultimate goal of orthofunction rather than dysfunction. It is directed by a conductor.

2.2 History and Philosophy.

Conductive Education originated in Budapest, Hungary. It was developed by Professor Andras Peto, trained in Vienna in neurology with work in physical medicine and psychiatry. Peto's method (Conductive Education) leads one to believe that he first saw a child and secondly he saw a child with a disability. His method was so interconnected and the child and his/her desire for learning and movement were at the center.

Conductive Education affords the child with disabilities the opportunity to be active, not to be merely acted upon. Guarding and respecting the child's dignity is always a vital concern. This seems to be accomplished through tasks and activities that ultimately motivate the child and instill in him/her a sense of responsibility in movement and actions.

Professor Andras Peto founded the State Institute for the Motor Disabled in Budapest, Hungary approximately 40 years ago. The Institute's motto became "Not because of, but in order to". The ideas and premises of Conductive Education and the Conductor came as a result of Peto himself working with groups of children with disabilities. It would seem that Peto concentrated so intently on his practical aspect of his work with children with disabilities that he never committed his developing theories to paper. Dr. Maria Hari, the current director of the Peto Institute, was a medical student who worked with Peto himself. Having this advantage, she continues the work he began and writes and teaches concerning Conductive Education based on child developmentalists such as Luria and Piaget.

Conductive Education is referred to as a system of education, not a method of therapy. Maria Hari and Thomas Tillemans define Conductive Education as organized by the Conductor who is a generalist. Hari and Tillemans (1984) also say that "Conductive Education is also conducive to a desired goal." (p. 19) Included in one occupational therapist's report (Cotter) after three months of study at the Peto Institute were the words attributed to Dr. Hari: "Conductive Education is more than a method. This system is open to many methods in its structure, the organization of the work, and the 'conduction' in its teaching that its principles, and its result, social integration, is its fundamental characteristic." (pg. 9) Conductive Education is futuristic in its approach.

The Conductor is not unlike the conductor of an orchestra who is responsible for the total effect, but each member of the orchestra bears responsibility for his/her own playing. With the Conductor "at the podium" all elements of Conductive Education converge into a homogeneous unit. All motor problems are approached as learning problems. Jim Ferris, (1987) Headmaster of the Percy Hedley School states: "Once you understand it, it [Conductive Education] becomes intuitive, you naturally reinforce the right things, so it is not just a series of techniques, it is a rolling day." (p. 74)

Maria Hari has stated that "Conductive Education as an educational system differs mainly from all other systems in that the rehabilitation treatment and educational work concerning the cerebral palsied children are a homogeneous inseparable unit." Built into this approach is the idea that the central nervous system must find alternatives for connecting what the disabled person does with what he/she wants to do. Following this mode of thinking Conductive Education cannot and does not merely rely on practice and repetition.

2.3 The Necessary Components of Conductive Education

The Conductor in Hungary receives four years of intensive training at the Peto Institute. She is trained as a kindergarten teacher and at the same time she also studies all allied brain injury problems. The Conductor is coordinator, integrator, and educator. The system in which she functions is not regimented but flows through every aspect of daily life. The Conductor observes, plans, teaches, guides, encourages, praises, provides security within the group setting.

Ideally the Group is homogeneous. Group work stimulates and motivates. The group works to overcome similar difficulties but each one within the group works at his/her own pace. Seeing one group member achieve the long range goal which they all strive to accomplish motivates others to persevere until their goal attainment is achieved. Within the security of the group many possible solutions will be presented. The child ultimately chooses the one which can be best used.

Within this framework independence is achieved. Since the Conductors rotate as "first conductors" the child does not become dependent upon one Conductor. He/she learns to rely on himself for his achievements. The Conductor using her skills and knowledge prevents fragmentation of the child as so often happens in Western schools.

Rhythmical Intention is a method whereby children use speech to regulate their movements. Their inner speech expresses an intention to move which is then manifested in a motor act. This is done rhythmically while counting or using simple songs for words--up, up, up. This idea of rhythmical intention is based on the writings of Luria and Vygotsky.

The furniture used and developed by Peto consisted of flat slatted tables called plinths and tall ladder back chairs to facilitate moving and learning. Hands can grab and hold onto the slats and to the rungs of the ladder back chairs to support and stabilize the children as they move through tasks leading to the ultimate goal of orthofunction. These plinths are also used in residential programs as beds when mattresses are placed upon them.

The work in Conductive Education is referred to as task series. The Conductor plans and selects the methods to be used so that the children are stimulated to develop in such a way that what he achieves will remain with them even when they are no longer in the program.

2.4 Three Important Elements.

Active exploration of the world through movement produces learning. This movement should be purposeful and rewarding so that the child is successful.

Underlying abilities (i.e. attention, ability to translate intention into desired behavior, coordination etc.) are necessary in a "functional sense". Tasks incorporate training in which these underlying abilities are embedded. Again a holistic approach is employed.

Task Analysis can be employed to plan the individual steps to be taken toward an achievement of a goal. Goal achievement can be viewed as an ascending spiral whose elements are constantly reviewed and developed.

2.5 Conductive Education in Hungary.

Conductive Education as practiced at the Peto Institute in Budapest, Hungary as well as three other sites is done with great intensity under the direct of a Conductor. Children served by the Peto Institute are in the following general groupings:

- (1) Mothers and babies outpatient group
six months--3 to 4 years old.
- (2) Residential mother/parents group
1 - 4 years old.
- (3) Athetoid kindergarten groups-residential
3-8 years old.
- (4) Spastic kindergarten groups-residential
3-6 years old.
- (5) Spina Bifida group-residential
3-6 or 7 years old.
- (6) Spastic school groups.
- (7) Athetoid school groups.
- (8) Follow-up outpatient programs.
- (9) Adults.

It appears that there are some very severely physically and intellectually involved children at the Institute but generally the students function on a moderate to normal intellectual level.

The Institute has specific criteria for admission which are listed below:

- (1) No degenerative disability.
- (2) No uncontrolled epilepsy.
- (3) Age - 6 months-14 years.
- (4) No severe hearing or visual impairments.
- (5) If spina bifida - no severe kidney infections.
- (6) Not severely intellectually disabled.
- (7) Child/baby must be able to establish "contact" with parents and environment.

*Note:

All the information concerning the Peto Institute comes from an unpublished report prepared by Claire Cotter, an Australian occupational therapist, who studied for three months at the Institute in 1987.

CHAPTER 3

REPORT FROM A CONFERENCE BY THE SPASTIC SOCIETY OF VICTORIA NOVEMBER 5-8, 1988, IN MELBOURNE, AUSTRALIA

The fellowship schedule for the two recipients (Ferren and Marx) began with attendance at an International Conference on Severe and Multiple Disabilities.

A full day was devoted to a pre-conference workshop on Conductive Education in Australia. The principles and main features of Conductive Education were described by Rita Takacs, who is a fully trained conductor from Hungary. She speaks excellent English, and has contracted to spend several years in Australia. After she outlined the main components of Conductive Education (see previous chapter of this report), two current Australian Conductive Education programs were described by their staffs (see subsequent chapters on the Knox and Tongala Centres).

In the afternoon of the pre-conference day, several parents of children with physical disabilities spoke to the audience. One mother spoke of a parent support group that has been set up for children who have not yet been accepted into a formal Conductive Education program. Those parents and their children meet together twice weekly, and share whatever they have learned of Conductive Education principles. They invite therapists who have had some experience with developing task series, to come and teach the whole group. Some parents have applied to have their children admitted to the Peto Institute in Budapest. All are working hard to petition their government to provide more funds and efforts to increase the available Conductive Education resources in Australia.

Several parents spoke, whose children are at present in the Knox and Tongala programs. All have had to make considerable sacrifices. Some families have had to split up, so that the mother could take the child with a disability to the Conductive Education program far away from home, while the father had to continue earning a living. All have struggled with the effort of carrying out a home program of Conductive Education. They all agreed that Conductive Education requires very intensive efforts on the part of parents and children. They all liked the heavy

stress that Conductive Education puts on language and on functional skills. They all seemed to believe that the efforts were paying off in the improvements they noted in their children. The audience was left with the impression that Australian parents were exerting remarkable efforts to bring Conductive Education to their children with disabilities.

The professionals appeared to be trying their best to fill this Conductive Education need. Some suggestions were made, at the end of the pre-conference workshop, to set up further conferences with the Hungarian Conductor, and also to use television as a teaching medium. It was recommended that professional schools, for therapists and teachers, add a Conductive Education curriculum to their training programs.

The Spastic Society Conference, which convened the next day, actually covered many areas of concern in the care of severely involved children and adults. The fellowship recipients focused their attention only on the Conductive Education presentations. A major speaker at the conference was Andrew Sutton, who is known for his writing on Conductive Education, and who is developing a Conductive Education program in Birmingham, England. Mr. Sutton outlined the history of Conductive Education outside of Hungary. He described some of the efforts of Esther Cotton, who first brought Conductive Education to England in the 1960's. He mentioned some of the other international programs that have been developed, using the principles of Conductive Education. He also described his own Birmingham project, and the close ties it has developed with the Peto Institute, as well as the media attention and fund raising successes it has enjoyed. Mr. Sutton, as well as several other speakers, stressed the importance of evaluating Conductive Education programs, before recommending them over other systems of training for children with disabilities. Since there is much vocal opposition in England, from professionals who feel threatened by the recent demand for Conductive Education, Mr. Sutton's goal is to conduct valid research into the efficacy of Conductive Education.

CHAPTER 4

CONDUCTIVE EDUCATION IN AUSTRALIA AND HONG KONG

4.1 Knox Project (Mother/Baby Group) Spastic Society Knox Centre 750 Boronia Road Wantirna, Australia 3152

The Knox Early Intervention Program in Melbourne, Australia was formed in response to Claire Cotter's report to the Spastic Society of Victoria after her visit to the Peto Institute in Budapest, Hungary. Ms. Cotter, an occupational therapist, spent three months in Budapest studying Conductive Education. The Knox Program, under her tutelage, is an early intervention program using principles of Conductive Education and its format is based upon the Mother and Babies Groups at the Peto Institute. One of the goals of the project is to research an intensive early intervention program incorporating the structure of the Mother and Babies Groups using Conductive Education.

This program has strong parent involvement with mothers accompanying their child to the program each morning on a one week on/one week off rotational basis. In addition, the program is staffed by an occupational therapist, a physiotherapist and a speech pathologist. Because research is an important component, the project is overseen by a senior psychologist with support and consultative service provided by a social worker and another psychologist.

The Knox Project exemplifies the team approach to "conducting" daily sessions. Conductor/therapists work on a rotational basis leading the daily activities.

A morning session at Knox incorporated play on mats, work on large balls to reduce spasticity, a plinth program, ADL skills, language skills, and hand functions.

Woven into the plinth program is sitting-standing-climbing onto the plinth - creeping - prone position - rolling - lower limb mobilization exercises in supine and then back to sitting - creeping - standing - climbing off the plinth. Of course all these activities are goal directed through the use of toys and activities. Since the children are young, the verbal intentions are directed to the mothers who then direct their children.

Songs are often used as a means of verbalizing movements that will be done. As in all Conductive Education programs which we observed, each child performs the movements at his/her own rate. In the Mother and Baby group each mother has become adept at facilitating her own child's movements.

The group experience seems to be motivating to the child as well as to the mother. Parents appeared confident and motivated in their interactions with their child. Interactions among the mothers themselves are part of the daily session.

4.2 Visit to the Tongala Conductive Education School for Parents
P. O. Box 163
Tongala
Victoria, Australia 3621

Having met some of the Tongala staff at the Conductive Education conference in Melbourne, this investigator accepted an invitation to visit the center personally.

Tongala is a small town in rural Victoria, situated about 150 miles north of Melbourne. The Conductive Education School for Parents was established in 1985 in a church building, and has a current enrollment of children and mothers (occasionally a father also participates). Parents come from all over Australia and some from New Zealand, to spend a few months in Tongala and learn to apply Conductive Education to their child's needs. The town has made some apartments and motels available for them, at a reasonable rate, so that they feel comfortable and welcome during the time they are spending away from their homes. At present, Tongala has a waiting list of many other parents who wish to enroll with their handicapped children.

The ages of the children range from 1 to 6 years. Most are cerebral palsied in the moderate range of severity. The program is divided into three groups: beginners, intermediate and advanced. The beginners group of parents and infants attends three days per week, while the more advanced groups attend once or twice weekly. One day per week is set aside by the staff for home visits, while a second day is set aside for assessment of new children, for planning, and for in-service training.

The staff consists of a Hungarian trained conductor (on a two year contract - 1988 and 1989) two physio-therapists, one occupational therapist, one speech therapist, one teacher, a nurse, an administrator and a program director. The conductor has developed task series for the groups, based on the assessments of the children made by the teacher and therapists. Each activity session is conducted by a rotating staff member, but they all participate in the planning and criticizing of the sessions.

Each parent works with their own child. The activities are done in lying, sitting, standing and walking - involving all body parts and developmental sequences. The purpose is to activate and motivate the children, to build their confidence, and to reduce their fear of space and movement. There is a great deal of propping, reaching and grasping, always accompanied by basic sounds or words. There's lots of blowing out of candles, and turning on and off of lights, and use of musical instruments. There is also frequent use of songs to make movements more rhythmical. The children are praised lavishly for their successes; and parents are assisted by staff members whenever they appear to need some help or support.

In the more advanced groups, children function with less and less help from their parents. There is more emphasis on self-care skills and on hand activities and finger play. The children interact more with one another. More concepts are taught, as well as shapes, colors and number facts.

Even though activities are carefully planned and constantly re-evaluated by the staff and the conductor, the atmosphere is informal, reflecting the small town warmth of rural Australia. The parents have regular tea-times, where they can chat with each other as they watch their children eat or play. Extra hands are provided for pampering the babies or washing up dishes, by volunteer ladies who come from neighborhood service organizations or churches. School children, from nearby, drop in at lunch time or after school to play with the babies. Everyone in town is proud of the Tongala Conductive Education School, and wants to help make it a success.

4.3 John F. Kennedy Centre
15 Sandy Bay Road
Hong Kong

John F. Kennedy Centre is a subsidized special school for the physically disabled providing resident care. There are also a few non residential students attendance. Children enter as young as 4 years old v classes ranging from preschool to secondary level. M of the students are cerebral palsied but there are ot disabilities represented in the school population.

Our observations were done in the two Conductive Education classrooms where the children range in age from 4-7 years old. Since John F. Kennedy Centre is primarily residential, we also observed these children in their dormitory during morning and early evening activities in order to enhance our understanding of Conductive Education as a "way of life".

In the dormitory during morning activities the children were awakened around 7 a.m. Their first responsibility was to get out of bed with as much independence as possible. Principles learned in other parts of Conductive Education programs were utilized the children moved down to the end of their plinth/be and rose to stand. Using their ladder frames or wall independently they moved to other plinth tables where they began to wash, toilet, dress and eat breakfast. Each child proceeded at their own pace with vigilant care givers always near and constantly observing and encouraging but not feeding or dressing the child.

When all the children were ready for school, each one walked to their respective class. (Note: The architectural barriers between the classrooms, dormitory bathrooms and garden area have been removed. It is now a self-contained, flexible unit with realistic distances. This makes it possible for the children to practice walking throughout the day.)

Academic lessons were conducted but within a Conductive Education format and using Conductive Education furniture. Teacher, therapists, child care workers, maids, etc. all worked together under the direction of the "first conductor" for a particular activity.

The Conductive Education classrooms used a thematic approach for many activities. "Fall" was one of them used. During one lesson the conductor/teacher and children sang a song about Fall and identified objects

associated with Fall. During the identification portion of the lesson the children were also practicing sitting and maintaining balance on small stools. No great amount of overt attention was given to the motoric component of activity but watchful staff could lightly touch a child needing reinforcement to self correct sitting posture. As the lesson proceeded the children were given cutouts of Fall objects to be attached to a large Fall picture displayed on a board at the opposite end of the classroom/ To attach their pictures the children walked through an appropriate obstacle course which required practicing movements needing perfection to enhance their independence of ambulation. The cognitive and motoric elements were so intertwined in the daily classroom activities that this observer rarely zeroed in on one element more than the other.

Movement was a major concern and component of each classroom. Children were not strapped into chairs for long periods of time but were actively engaged in movement throughout the day -- in the classroom and in the dormitory.

In addition to the two Conductive Education classrooms, a physiotherapist conducted a daily "task-series" for a group of older students who were from various higher classes. These students were all athetoids who were eager to harness and gain control over their own movements. Taking off/putting on socks and shoes, lying, sitting and walking tasks were components of each session of an hours' duration.

Evidence of a team approach to planning and implementing activities within the life of the children was clear at John F. Kennedy School. Planning sessions included all who worked with the children -- each one bringing their own expertise to the planning process. The conductor was not just one person but staff members rotated in this role. It was truly exciting to observe the Conductive Education classes at John F. Kennedy where all the components of Conductive Education -- conductor, group, rhythmic intention, tasks, furniture and the "Rhythm of the Day" became a reality and fragmentation of services no longer happened.

4.4 Visits to Preschool Centers of the Spastic Association of Hong Kong

A full day visit to each of three preschool centers was arranged for us by Sister Joan O'Conner a native of Ireland, a nurse by training, and at present is the Coordinator of Conductive Education for the Spastics Association of Hong Kong.

The children are assigned to each center, if the families live in the district. One center is partial residential and partially a day program:

Apleichau Preschool Centre -- 48 children
1-16 G/F Lei Yee House
Apleichau Estate, West (near Aberdeen)
Hong Kong Island

The other two centers are entirely day programs:

Shek Kip Mei Preschool Centre -- 60 children
116-126 G/F Block 23
Shek Kip Mei Estate
Kowloon

Shek Yam Preschool Centre -- 60 children
317-340 Block 7 Shek Yam Estate
New Territories

All the centers have some very severely involved children, as well as some with only mild physical involvement, and some with mental retardation and a few with muscular dystrophy. All the cerebral palsied children are at present receiving Conductive Education.

The class sizes average about 5-6 children, grouped by age and physical involvement. Each class is staffed by one child care worker, who has no teaching credentials but must complete a two year training course in child care and development. A child care worker attends a further inservice training course in rehabilitation at the Hong Kong Polytechnic. Each class also has a nursemaid ("Amah") who helps with clean-up and care of the children. Additional staff, in each center consists of a superintendent, a nurse, one physiotherapist, one occupational therapist, one speech therapist, a clerk, a cook and a driver.

Some parents participate in the program, and we met one grandpa who volunteered his time on a daily basis.

The daily schedules are based on very precise time tables.

The children take off their own outer clothes, and there are several potty times scheduled each day. There are also snack and lunch periods, with stress placed on self-feeding wherever possible. Task series are planned in lying, sitting and standing. The therapists plan the positions and movements in each

the task series, and the child care workers plan the game or theme that will enliven the movement tasks. Usually the child care workers act as conductors for each activity, while therapists and remaining classroom staff help the children that need assistance.

Walking is done routinely from one area to another, as the children move between activities.

We were astounded at the demands that were made of the children. Even those with no postural stability were stood and walked. Many required two people to assist them, and wore splints to keep elbows and knees from buckling. Those children who could not sit up without support, had their hands strapped onto bars of the ladder frames with velcro mits, and were surrounded by pillows in case they lost balance. If any child fell asleep during a task series, they were immediately wakened and kept to the tasks.

The staff also worked incredibly hard, and with full concentration on the children. We heard no social chatter between staff members, and no one ever seemed to take a tea or bathroom break. The atmosphere was not at all stern, however, but very cheerful and upbeat. Children were praised enthusiastically for good performances, and everyone in each group was made aware of every child's success. Songs were sung frequently to accompany the tasks. The games and activities were creative and age appropriate, and the props and wall decorations were colorful and attractive.

After the children were taken home (by bus) in the afternoon, the therapists and child care workers reviewed their lesson plans for the following day, while the "Amahs" scrubbed the floors and furniture. The administrators told us that with the recent advent of Conductive Education to the Spastics Association staff morale and work habits improved. They found the team effort to be a strong motivating factor, and they believed that the children were making good progress due to the structure and consistency of the program.

CHAPTER 5

LIKENESSES - DIFFERENCES - DIFFICULTIES OBSERVED IN CONDUCTIVE EDUCATION PROGRAMS OUTSIDE OF HUNGARY

5.1 Likenesses

There are some common features to all the Conductive Education programs we have visited.

1. They are all run by trans-disciplinary professionals, who understand the children's needs in all areas of development. They all seek the services of fully trained conductors (graduates of a 4 year program at the Peto Institute for Conductive Education in Budapest).
2. They all involve children in groups, to stimulate their motivation and provide social framework for achieving set tasks. They all praise the children enthusiastically for their good efforts.
3. They all use language ("rhythmic intention") to facilitate movement.
4. They all plan very carefully to breakdown the children's motor needs (i.e. sitting correctly, coming to stand, etc.) into task series, and to match the movements with functional activities (i.e. eating, playing with toys, reaching for clothes, pottying, etc.).
5. They all use the characteristic wooden-slatted furniture-plinths, foot stools, ladder-back chairs and/or walking frames.
6. They all believe that Conductive Education is not a series of exercises, but a system for teaching those with motor disorders to function normally in society. They all agree with Andras Peto's original notion that a motor disorder is a learning difficulty to be overcome, rather than a condition to be treated or cared for.

5.2 Differences

There are also some differences between various Conductive Education programs we have visited.

1. Some include very retarded children, and some exclude that group.

2. Some are quite structured and formal and some are very relaxed (i.e. in the small town of Tongala, in Australia, neighborhood school children dropped in to visit and play with the handicapped toddlers).

3. Some use parents as regular participants, others rely fully on school personnel.

4. Some have a staff ratio to children of one to one, while others use one staff person for 3-4 children.

5. Some schedule sessions daily; some schedule three times per week for three hours; some schedule one week on and one week off for three hours per day; some schedule one hour three times per week.

6. Some children are in residential placement, some live at home.

7. Some programs utilize a lot of music and singing, while others rely more on spoken language.

8. Some programs use adaptive equipment (i.e. flexi-standers, supported seating, communication boards, computer, etc.) during school lessons that focus on academic tasks. Others resist all postural supports or adaptive devices.

9. Some programs (mostly those dealing with children over 3-4 years of age) encourage children's individual initiative in solving problems of movement and functional tasks; some encourage the children to participate in developing task series for the group.

10. Some programs use rotational movements during transitions (in rising to sit, climbing into chairs); others stress more anterior/posterior movement planes.

11. Some programs encourage creeping and kneeling activities, while others stress stance and ambulation for all locomotion.

5.3 Difficulties

All programs which we visited and observed had unique individual qualities, however, common problems existed which will no doubt be found in the United States as well.

1. Resistance to "role release" and trans-disciplinary thinking by professionals.
2. Resistance to giving up the nice postural alignment provided for children with cerebral palsy by adaptive equipment.
3. Resistance to diminishing "hands-on" individual treatment of children.
4. Resistance by therapists and teachers who have been trained in different systems.
5. Resistance by staff who are afraid that children will fall and hurt themselves if they are not fully supported.

CHAPTER 6

IMPLICATIONS FOR THE UNITED STATES

Implementation of a pilot project classroom, using principles of Conductive Education, seemed possible to the writers of this report. The following is the working outline for such a classroom.

Plan of Action: To implement a Conductive Education pilot program with a small group of preschool children at the United Cerebral Palsy Bronx Campus.

We intend to set up a small classroom and begin a pilot program in April 1989.

1. Group -

Six or seven children already enrolled in our program with their parents participating as often as possible.

Ages - 2 - 4 years.

Disabilities - spastic quadriplegia, low tone, hemiplegia; moderate retardation ranges.

2. Staff Pattern -

One teacher and one classroom assistant. The fellowship recipients, Judy Ferren and Marion Marx will begin drafting class schedules and plans, task series and activities. The classroom teacher, assistant, and other therapists will join into that planning process and implementation, as the project proceeds. A consultant will be brought in to help set up and launch the project. This consultant was referred to us by the Coordinator of Conductive Education in Hong Kong. She has received six weeks of training in Budapest, the birthplace of Conductive Education. She is an Occupational Therapist, trained in Hong Kong, who is living in the United States at present on a short term basis.

3. Space and Furniture -
A Conductive Education room will be set up in the Bronx Children's Program for the pilot group.

Furniture will consist of:

- 6 slatted plinths
- 6 ladder frames
- 6 boxes for sitting (some with slatted tops, some with solid tops)
- 6 rolling stools (for staff and parents)

4. Permission -
To be obtained from parents and referring physicians.

APPENDIX: INTERNATIONAL CONTACTS
FOR CONDUCTIVE EDUCATION

I. BUDAPEST

Dr. Maria Hari
Director
Peto Andras Institute
Budapest XII
Kutvolgyi UT6
1125 Hungary

II. AUSTRALIA

A. Knox

Claire Cotter
Spastic Society Knox Centre
750 Boronia Rd.
Wantirna, Australia 3152
(03) 221 6222

B. TONGALA

Moira Pankhurst
P. O. Box 163
Tongala
Victoria, Australia 3621
(058) 5822950

III. JAPAN

Dr. M. Murai
Director
Warashibe Institute
Osaka
Hirakata, Japan

IV. HONG KONG

Mrs. Anita Tatlow
3 Felix Villas
61 Mt. Davis Road
Hong Kong

Sister Joan O'Connor
Coordinator for Conductive
Education Programs for
Spastics Association of
Hong Kong
1A Lomond Road
16-18 Lomond Court
Kowloon, Hong Kong

V. ENGLAND

The Foundation for Conductive Education
University of Birmingham
P. O. Box 363
Birmingham, England B152TT

Dr. Lillemor Jernqvist
Coordinator Ingfield Manor School
Five Oaks
Billingshurst
West Sussex, England RH 149AX

CONDUCTIVE EDUCATION ASSOCIATIONS

NACE

National Association for Conductive Education Inc.
(Australia and New Zealand), The Secretary, P. O.
Box 96, Toorak, Vic., Australia, 3142.

PACE

Positive Action for Conductive Education (NZ) Inc.,
The Secretary, P. O. Box 3826, Auckland, New Zealand.

RACE

Rapid Action for Conductive Education, 127 Earlsdon
Avenue North, Coventry, England, CV56GN.

Conductive Education Association, c/o Marueen Lilley,
West End Avenue, Pinner, Middlesex, England, HA5 1BH.

Working Group on Conductive Education, Hong Kong
Joint Council for the Physically and Mentally Disabled
(Rehabilitation Division, Hong Kong Council of Social S
11-13/F Duke of Windsor Social Service Building
15 Hennessy Road, Wanchai
Hong Kong

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AUDIO VISUALS

Slide/Tape Series from Graves Audio Visual Library

- 5 Series on Conductive Education and Cerebral Palsy (Esther Cotton).
- 1 Bedtime Routine (Esther Cotton).
- 1 The Teacher's Role.
- 1 Play and Cerebral Palsy (Dorothy Seglow).
- 1 Helping the Child to Feed (Dorothy Seglow).

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England

"Standing Up For Joe" - Video Tape made at the Peto Institute in Budapest, Hungary.
(Contact Marion Marx or Judy Ferren)

In drawing up criteria for class inclusion we relied heavily on our observations and study during the fellowship. We concluded that initially we would populate the classroom with children who had the ability to understand language and the possibility for great motoric growth. Their ability range was somewhat broad but most of the children were mildly to moderately retarded. Five of the six children were diagnosed with cerebral palsy/spastic quadriparesis with one of the five also having an athetoid component to the diagnosis. The group also included one child with hemiparesis. Parents/caregivers saw the furniture and how it was used and they had an opportunity to ask questions and to express concerns. Parents/caregivers were also encouraged to participate in the classroom as often as possible. To date almost all parents have at least visited the class and some have also participated in classroom activities.

A classroom schedule was designed that blended movement activities (walking, lying task series, sitting task series, standing task series) and Individual Education Program goals. Familiar melodies were attached to words that related to the activity the child was performing. Constant reassessment of the daily schedule occurred.

Early in the program it was felt motoric goals were addressed more intensively and successfully than language, cognitive, fine motor, social-emotional and self help goals. Group discussion and schedule adjustments rectified this problem.

Staff changes also occurred. Work in a classroom based on principles of Conductive Education is labor intensive and requires constant staff encouragement. We discovered that the Day Care staff which services normal, active preschoolers and the Conductive Education staff were the two groups who most displayed weariness at the end of the day. One could draw parallels between the two groups related to activity levels and energy requirements for the staff members.

Group planning that includes all who work in the classroom (classroom staff, therapists, director) is necessary and beneficial but difficult to schedule. We continue to strive for total staff involvement in planning. Visible invigorating changes in the paraprofessionals were noted when they actively participated in planning and implementing activities.

Our classroom which is based on principles of Conductive Education has been in existence for nearly one year and we have increased enrollment to nine. We've particularly noted growth in language and their rate of growth in motor movements is occurring more quickly than in other classrooms where children receive individual therapy treatments. Quality

of movement seems to be of a higher caliber than one usually observes.

It is quite possible these nine children would accomplish these gains individually but it is felt by the fellowship team that their rate of and quality of skill acquisition is improved in this classroom setting. Measuring is difficult but it is felt that the motivation and stimulation provided by the group work and the strong language component has definitely had a positive impact on these children. Structure also provides security.

Parental response has been positive.

As we continue to work we also continue to adapt. More transitional movements are incorporated into task series rather than working only in anterior/posterior movement planes. Creeping and kneeling activities are encouraged. Some further adaptation has also occurred (i.e. a pommel added to the sled for the child with athetosis).

Suffice it to say--Conductive Education is hard work both staff and children requiring great commitment and continued study. It is beneficial for some children but not for all.

ADDENDUM

Following the fellowship study, plans were formulated by the fellowship team, Judy Ferren and Marion Marx, and a small class based on principles of Conductive Education was opened May 1, 1989 at the Bronx Children's Program.

Primary concerns were furniture and trained staff. The furniture issue was addressed first by hiring a Hungarian carpenter to build a prototype set of furniture. Since the furniture that was chose was somewhat adapted from the original, the carpenter was hired to build a plinth, a ladder frame, and a low stool. It was felt by the team that separating the ladder back chair into a ladder frame and a low stool allowed for more functional and versatile usage. Using the prototype furniture as a model, the bioengineering department on the Bronx Rehabilitation Campus, then constructed an additional five sets for the classroom.

The staffing issue was a major concern since it was known from the outset that the class would not be led by a bonafide Hungarian conductor. It was also an acknowledged fact that this pilot class would not be Conductive Education in the purest sinse but the class would be conducted using principles of Conductive Education.

The fellowship team had observed Conductive Education classrooms in both Australia and Hong Kong and they knew that the staff would need to be extremely committed and hard working since their involvement called for great intensity and structure.

Initially a slide presentation on Conductive Education followed by a request for staff to express their interest in the pilot classroom to the two team members provided a small group from which a teacher and two paraprofessionals were chosen. This was the core staff along with a physical therapist and an educational director (the fellowship team). An occupational therapist from Hong Kong who had helped set up Conductive Education programs there and who had also participated for six weeks of training at the Institute in Budapest served as a consultant to the pilot classroom. Since she was now residing in the United States she was accessible as guidance was needed.

The children placed in the class were already in the Children's Program so that their participation necessitated only a classroom change. We began with a classroom enrollment of six children for the first three months to allow for "hands on" training and understanding of Conductive Education principles.