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A TRAINING PROGRAM  
WITH YOUNG CLEFT PALATE AND  
BRAIN INJURED CHILDREN

INTRODUCTION

This study reports on several children who were enrolled in therapy classes at Portland State Extension Summer Sessions, or at Buckman Center, Portland Public Schools, or who attended both.

Because the field of speech therapy is relatively new, many therapists have voiced the need for information on work being currently carried on in clinics and schools. This study was begun to draw together some of this current material, and as the task of organizing progressed, certain factors emerged. These are, the importance of early therapy in cleft palate training, the use of group techniques, the importance of parental counselling, and the need for a team work approach by rehabilitative agencies.

These clinics also included several brain damaged children, and two studies are included.

This study has attempted to give information of a practical nature and to provide a meaningful context in which the therapist can work.



## HISTORY AND PHILOSOPHY OF THE STUDY

This paper is an attempt to set forth a philosophy and method of speech therapy practised with a specific group of children in the Public Schools of Portland and the Summer Session of the Portland State Extension Center. It is a teacher-oriented study and not a research paper. The conclusions drawn have been based on a limited number of case studies.

This therapist has been convinced for some time that although professional literature covered research in the field of speech and hearing fairly adequately, the case history aspect and the practical classroom and clinical methods which are constantly being developed in the field have been neglected. This is no doubt an inevitable consequence when busy workers in the field have little time to write up their findings. A discussion of methods and cases is of particular value to the beginning therapist, but it is valuable also to the therapist in the field.

The purposes for this study are as follows:

- (1) To add to the literature in the field of speech correction, stressing classroom philosophy, techniques, and use of case histories.
- (2) To draw together in a coherent fashion the observations and conclusions derived from working and observing in two very practical clinics.
- (3) To draw some general conclusions about the value of pre-school therapy and group therapy.

(4) To present a coherent account of the various facets involved in the rehabilitation of the severely speech-handicapped child.

(5) To draw together observations and methods which have proved of value to this therapist, and to present these personal findings in a manner which may be useful to other therapists.

The sources for this study are three. Previous literature in the field has pointed the way to the needs which the Portland program has tried to meet. The Summer Session of the Portland State Extension Center began a teacher-training demonstration group for speech therapy in the summer of 1948. The Buckman Pre-School Clinic, part of the Portland Public School System, was begun in the fall of 1949, for cerebral palsied pre-school children and was later enlarged to include cleft palate and brain-injured children.

The Summer Session Clinic in connection with the Portland State Extension Center is still being carried on. It is a training program for speech clinicians and a service to children from Portland and throughout the state. Mrs. Myrtle Dawson, the head clinician for six summers, built this program and established a fine reputation for it. It has developed techniques of speech training applicable to groups such as are found in public school systems and provided teachers with an in-service training program which they found difficult to obtain in most university summer schools. Because of Mrs. Dawson's wide classroom experience and excellent clinical training, this clinic offered the very best to those participating in the program.

The clinic served to spark interest in the early training of the speech-handicapped child. Children were enrolled at the age of three

for therapy, and parents of younger children were encouraged to attend clinic sessions and parent meetings, bringing their children as on-lookers. In this way, several children became oriented to group experience and conditioned to take part in group therapy by the age of three.

Buckman Pre-School Clinic was a continuation of the above summer program. Mrs. Dawson was at this time Consultant for Speech and Hearing for the Portland Public Schools. In the fall of 1949, parents of pre-school cerebral palsied children, who had organized a private kindergarten, made a plea to the Director of Child Services of the Portland Public Schools for speech therapy. This request was granted. Shortly after that, state funds were made available for young children with organic disorders providing they were three years of age or more. This is an amendment to section 2, chapter 480, Oregon Laws 1941, relating to the education of handicapped children, which reads in part "Special classes may be established whenever eight or more children of any special type of the five general types (1) deaf or hard of hearing (2) blind or partially sighted (3) speech defective (4) crippled, cardiopathic, or otherwise physically handicapped and (5) clinical (maladjusted) are found... This applies to pre-school children approved by the Superintendent of Public Instruction..." (10, p.55) Mrs. Dawson then requested that the Portland Public Schools provide speech therapy for the pre-school cleft palate and brain-injured groups. This latter group, although technically the same as the cerebral palsied group, had little or no motor involvement and were not included in the kindergarten program. They were primarily in need of speech therapy. Permission for the establishment of these speech therapy



classes was granted and Buckman School was chosen as the clinic center because of its central location. This clinic served all children eligible by law who resided in the Portland area or who were brought in as tuition students from outlying school districts. Referrals for this service were also made by some social agencies. One child came from as far as Prineville, Oregon, with foster home placement. Without state aid, it is unlikely that the program could have been assumed by the Portland Public Schools during the school year.

In the fall of 1951, Crippled Children's Division of the University of Oregon Medical School added a speech department and the pre-school group were transferred there for therapy.

These programs called upon the help of plastic surgeons, psychologists, orthodontists and other specialists. The medical supervision and certification of these children for entrance into these clinics was under Dr. O. Cleary of the School Health Division of the Portland Public Schools, and Dr. Paul Haffner, Director of the Crippled Children's Division, University of Oregon Medical School.

The method followed in setting up the study was to divide the subject into several aspects, dealing with theory, philosophy, practical therapy methods, and case studies, woven together with reference to previous work in the field. Discussion has been further divided under these general categories. Since the study is anecdotal, this type of organization seems necessary. No attempt is made to answer questions on a research basis, but an attempt is made to give information and context with which the therapist can work.

## NATURE OF THE PHYSICAL DISABILITY OF A CLEFT PALATE CHILD

The cleft lip and cleft palate date back to the earliest times of which we have a record. Contemporary studies show that there is a fairly definite percentage of cleft palate births. "Lip and palate clefts occur about once in every 1200 births, and more often on the left than on the right side." (14, p.35) Members of the Caucasian race are more likely to suffer from these deformities than are members of other races. They appear more commonly in males than in females.

Several theories for the cause of cleft lip and palate have been developed but none have been established beyond question. Hereditary factors, diet, interracial mixtures, and age of the mother at the time of conception have been explored as causes.

A cleft, in simple terms, is a hole, and the layman usually refers to it as 'a hole in the roof of the mouth'. In more exact language, "Congenital cleft lip and cleft palate denote a failure of union in early embryonic life between the separate processes which form the lips, alveolar border, hard and soft palates. There may be any degree of deformity, ranging from a bifid uvula, or a notched vermilion border of the lip, to a failure of all the various processes to unite, thus producing a bilateral complete cleft lip and cleft palate." (14, p.37)

The problem of faulty dentition is often a grave one in cleft palate cases, and much orthodontia may be required. Plastic surgery to improve the cosmetic effect may be continued for several years.



The surgical treatment of the palate depends largely upon the type and extent of the cleft, for if the tissues are present the closing of the cleft area may be reasonably simple. If the cleft is extensive, with little tissue present, a far different problem confronts the surgeon. He must especially consider the muscle function and its preservation, because the soft palate is useful only as it may be moved to prevent the flow of food out of the nasal passages during the act of swallowing, and as it is moved to channel air through the mouth during speech.

When surgery has been unable to rehabilitate the structures, the prosthodontist may be able to construct a device which will separate the oral cavity from the nasal cavity. The dentists have taken an interest in this phase of rehabilitation and have been making an increasing contribution of late years.

The child who comes to the speech therapist may or may not have an adequate structure after surgery, and upon this will depend to some extent the eventual prognosis for adequate speech. However, mention must be made of the fact that other factors, chiefly emotional, may operate to make prognosis difficult. Most speech therapists have noted that some children with an excellent repair will not achieve good speech, while others with a less adequate repair, will produce remarkable results. In an article titled "Atypical Cleft Palate Speech", Joan van Thal states "...the patient's emotional stability as well as his intelligence affect the adjustment of cleft palate speech."

(13, p. 204)

### NEED FOR EARLY SPEECH THERAPY

It is unfortunately not always possible to begin speech therapy for the child with a cleft palate immediately after the operation. Speech therapists who first receive the child for training at school age have often felt that early training, shortly after the operation for palate closure, might forestall the formation of inadequate habit patterns and produce a better end result. But this has been impossible because of the lack of speech therapists to give service to the pre-school group. Furthermore, it has been difficult to reach the children, many of whom live outside the center where training is available. Frequently neither parents nor surgeons knew about the existence of such service.

If the parents can be given help in the techniques of early speech training, much may be accomplished, and at least one program has been set up on a state-wide basis to give the child a series of concentrated lessons which included parent-training. (15, pp. 1-20) Another clinic has this to say: "Assuming that the child has satisfactory repair of his palate at the age of two, the mother has four years in which to encourage good speech habits before he starts to school. It is extremely important that these four years not be wasted." (3, p.8) Also the Cleveland Hearing and Speech Center has this to say: "The younger the children get started in the right direction, the lighter the job of the parent and the speech therapist later, and the better the chances of obtaining good speech by school age." (6, p.14)

The parent unassisted cannot cope with the training of the child, and yet these early years are acknowledged by reliable people in the field to be of first importance.

At ages six to seven, most children's speech habits are already set. If the years between the palate operation and the beginning of school have not been well utilized, the child's palate may be sluggish, or in some cases, completely immobile. The lip, if repaired, may show similar lack of function. Most therapists are familiar with the glottal click that supplants many of the plosive sounds and the compensatory movements of the tongue that all too often result where training is lacking. The clinical picture of each child with a cleft palate is, of course, individual, ranging all the way from completely inadequate, unintelligible speech with very few sounds even approximating normal production, to speech which is to some degree understandable, because the child has learned to make some or most of the sounds. In a limited number of cases, where surgery has been completed before the child has achieved his normal cycle of speech development, and where the surgery has been completely successful, some children develop normal speech spontaneously. In such cases, the function of the levator muscles has been completely restored in the closure so that action of the soft palate is normal for speech purposes. This is, however, the exception rather than the rule, and "It is a fact too seldom recognized that mere closure of the palate does not guarantee automatic speech improvement." (5, p.242)

The learning of speech in the normal child is preceded by a babbling stage, where the child practises sounds and sound combinations.



As the adults in his environment repeat words and phrases for him, his ear is gradually trained to pick out those sound combinations which form the meaningful associations we know as words, and he repeats and practices these himself, training his speech muscles to produce what his ear is able to discriminate. For the child with a cleft palate, the babbling stage was impossible before the operation because the child was unable to approximate normal speech sounds, producing instead, nasal snorts and whoofs. The delay of this babbling period can be remedied if the child can be exposed to a great deal of ear training and babbling after the repair, so that the structures are trained as much as possible in a delayed, but not distorted pattern. Because the ear stimulation is planned, it can be supplemented where necessary by games to help the child make correct placements and avoid wrong habits. It has been found that when the period during which a certain type of development normally takes place has passed, the child does not recapitulate and experience that training spontaneously. Therefore, we need to take him back and expose him to babbling as part of the therapeutic program. Research in psychology and child development substantiates this principle: "There is a certain time range within which a child may be able to overcome ill effects of delay; but if this is prolonged the child's development will probably be adversely affected. One activity tends to prepare for the next." (7, p.67) Babbling is the normal preparation for actual speech, and the more closely we are able to follow normal patterns of development, the more effective is our teaching. To utilize the babbling stage, then, therapy should begin early.

In summary, it would appear that early therapy can help prevent inertia of the tissues, prevent the formation of faulty habit patterns, and aid the child to follow a delayed, but not distorted speech developmental pattern.



## NEED FOR PARENTAL COUNSELLING

The need for early parental counselling is as important as the need for early speech therapy. This need arises the moment a child with a cleft palate is born, because of the emotional impact of giving birth to a defective child. Many parents have no idea what a cleft palate is. Most find it difficult to accept the fact of an abnormal child. Parents are only dimly aware of the adjustments and problems ahead in the total rehabilitation program. These fears of the unknown combined with shock, guilt feelings, and financial worry leave the parents tense, confused, and often emotionally incapable of handling the problem.

The doctor should set the minds of the parents at rest concerning the success and safety of modern surgical techniques used in cleft palate and lip closure. One mother said she "had never entertained the thought of giving birth to a child that wasn't physically perfect." Her doctor assured her that successful surgery was possible, effecting excellent repair for youngsters like her son and that they have every chance to grow up to be normal, well-adjusted adults. "From that day on," this mother reported, "I stopped worrying completely and I'm finding as time passes that his words were true." Such is the power of a trusted physician who makes such knowledge available to parents.

The parents of a cleft palate baby tend to seek a reason for the child's physical disability. These parents may have strong guilt feelings and tend to either overprotect the child, or reject it to a greater or lesser degree. If they can be informed that such accidents

happen because of incomplete formation at an early stage in embryo development, and that the reason for this is not as yet known but that it can happen to any family, they will be more likely to accept the child and begin planning for it. Otherwise, the tendency toward self-blame and the attendant compensatory thinking, whether it takes the form of rejection or overprotection, delays the establishment of a good relationship with the child and the taking of realistic steps towards alleviation of the difficulty. There is always, of course, the parent who cannot be reached because of a deep-seated inability to accept parental responsibility toward any child. Fortunately these are in the minority.

If the parents are referred to a speech therapist early in the process of rehabilitation, that is, even before the palate is repaired, the therapist will be able to help them realize the long-term nature of speech training, show them how they can take part in the program and contribute materially toward its success. In the case of the young child, exercises done for a period of about ten minutes several times a day are more effective than those done over a longer period, and the parent is in a position to carry out this type of schedule. Then too, we know that the young child will see no reason to learn, but will do so only because he is receiving attention and approval from the parents and teacher. These ideas will need to be explained to the parent, since teaching techniques and speech therapy probably will be unknown to them. During the course of therapy and concurrent parent training the parents begin to see and understand the learnings taking place. Skill in counselling comes with practice and in the cases of problems

involving organic factors, parents will profit most if only a very few ideas are presented at a time. These ideas must be given gradually during a series of parent conferences as well as incidentally while the parent is observing the child's therapy period. Spontaneous remarks by the parents give evidence of this: "I see now why regularity is so essential." "We got his tongue up in the k position last night too, just the way he did it in class." "He didn't do it in class, but he did it all the way home."

Although the speech therapist is not a medical person, she has had training in the pathology and anatomy of speech disorders and is therefore equipped to help the parents understand what surgery has done for the child's palate from a functional point of view. Until the therapist points out the action of the various parts of the "speech structure" the parent will not have much, if any, idea of what needs to take place for normal speech. It is the duty of the speech therapist to evaluate the structures for speech and to give the parents an idea of what can be expected. The parents should be cautioned that any prognosis for cleft palate often depends upon factors other than structure. In many cases, a child will have what seems to be an adequate structure, and yet the resulting speech will not be as good as might be expected. "Improvement for the child with a cleft palate must come from within. Nothing can be done for him except what he himself wants to do." (5, p.246)

The amount of movement that can be gained in the soft palate area differs from child to child and depends on eight vital factors:



- (1) Preservation of muscles
- (2) Length of palate
- (3) Age of operation
- (4) Type of cleft
- (5) Scar tissue and inflexibility of tissues
- (6) Adequacy of repair
- (7) Age of beginning therapy
- (8) Cooperation of parents in aiding the therapy program.

(1) Preservation of muscles. The surgeon will have endeavored to make the palate closure in such a way as to preserve the function of the levator palatini. If this musculature has been properly developed, and the function preserved, the child can accomplish the necessary palate elevation for speech.

(2) Length of palate. Even with good muscle movement a palate that is too short will not enable a child to make a sufficient closure of the nasopharynx for speech purposes. The throat area directly back of the palate contains a structure known as "Passavant's Pad" which moves forward to meet the palate as it rises. If this area has a strong compensatory movement, the disadvantage of the shortened palate may be partially or completely offset.

(3) Age of operation. The usual time is approximately two years of age for palate closure. The lip has been closed at six weeks to two months. If a good early repair is done before the child begins speech, there is a better chance that he will learn speech normally, because he will not have to unlearn poor habits.

(4) Type of cleft. The length of the cleft before the operation is a factor in the later adequacy of the structure. If the underlying bony structure of the hard palate is not joined, and surgery must supply tissue for this area as well as for the soft palate area, it is obvious that surgical repair has less chance for success. In the case of a wide and extensive cleft, small openings frequently result as the tissue tears if there has been an inadequate amount of tissue present.

(5) Scar tissue, inflexibility of tissues. Cicatrized tissue always has less movement than normal tissue, and this is a most important factor in cleft palate speech. The child who receives massage of the tissues at the proper time after the operation will have less difficulty with drawing and shortening of the palate or immobility of the upper lip.

(6) Adequacy of repair. It is important, of course, that the palate restoration be as nearly normal as possible. It is important that the function of the levator muscle to the palate be preserved. Tooth buds must not be displaced. Besides the amount of tissue available and its location, and the absence of other complicating anomalies, the skill of the surgeon is all-important. He operates, not for immediate obvious appearance, but takes growth patterns into account so that the eventual result will be the most efficient possible.

(7) Age of beginning therapy. This has already been discussed.

(8) Cooperation of parents in aiding the therapy program.

Different amounts of active participation are desirable for different



parents. For those who tend to push the child, cooperation consists principally in allowing the child to progress at his own rate. The parent who has a good relationship with the child can usually be made an integral part of the program.

The problem of eruption and alignment of teeth in relation to speech can be explained to some degree by the therapist. It may be through her efforts that the parent is guided to a center where excellent, though less expensive care is given. In Portland, the Dental College of the University of Oregon Medical School has initiated a program for long-term study and repair which is of great value to these children whose gross patterns develop and change over the years. Exodontia, orthodontia and prosthodontia are often needed for these children because of the extreme disturbance of the tooth buds which often accompanies the anomaly. The speech therapist is in a position to interpret to the parents how the dental work can benefit health, cosmetic effect and speech, and so aid the child to be more nearly normal.

The child with a cleft palate is peculiarly susceptible to colds and nose, ear and throat infections. "...as a group cleft palate babies are not as well nourished as are normal babies. This fact helps to explain why cleft palate babies have colds, ear infections and other illnesses more frequently than normal babies." (8, p.284) This fact often delays speech development and hinders therapy, as exercises cannot be done with swollen tissues and blowing exercises can cause infection to spread to the middle ear. Ear trouble is a constant men-

ace to some children.

When parents meet, as they do when they bring their children for lessons in speech, they discuss their problems with each other and find mutual help. The topics range from the ever-present problem of colds and ear infections, to behavior problems. One group of parents enjoyed reading a set of pamphlets on developmental patterns of children and behavior problems as they waited outside the speech room. Several parents by their attitudes and wholesome approach to their child's speech problem influenced the ideas of others in the group and helped them considerably.

Thus, from counselling about speech directly to providing material on behavior and similar topics, the day to day classwork and conversation take in many phases of the child's problems. From simple sharing to referral to agencies, the speech therapist helps weave meaning into the child's rehabilitation.

### TEAM WORK APPROACH

The child with a cleft palate needs the help of more than one agency in the process of rehabilitation. The surgeon, dentist, orthodontist, social worker, psychologist and speech therapist each play a part, and often the otologist contributes too.

Surgery comes first, although it may also be a recurring problem. First the lip is closed, if it has been cleft, by an operation which generally takes place from six weeks to two months after birth. Surgeons differ in their opinion about the age for such surgery. However, it usually occurs when a child has regained his birth weight or at six weeks to two months of age. Some surgeons close the lip before allowing the child to leave the hospital. Some physicians now feel that the parents should not see the child till this lip closure has taken place and the parents have been prepared. The shock of seeing the child with an extreme cleft lip is apt to result in initial rejection of the child and permanent emotional trauma.

At approximately two years, the operation on the palate itself may take place, and at that time, the physician will generally tell the parents whether the prognosis is good or poor. If the operation is successful the first time, the child is indeed fortunate, for many of these children undergo several operations. Although a gross palate closure may be achieved the first time, frequently there are openings or sinuses left to be closed, or certain sections along the line of closure may not join completely.

As the growth process proceeds, the parents or child may wish to have further surgery of a cosmetic nature. Lip and nose contours are usually developed sufficiently by the time the child reaches school age to determine need for surgery. Nose surgery is often deferred until approximately age sixteen because the nose consists of cartilaginous tissue which is too malleable to hold the results of surgical change. In the early teens, this cartilage hardens and develops a consistency close to that of bone. "The main difficulty in correction of a deviated nose is not, however, the bony walls but the cartilaginous and bony septum and the molded distortions of upper and lower lateral cartilages and their overlying skin that become actual inherent defects on their own part. These are as difficult to repair as the bent steel spring of a child's toy or as a warped door made from green lumber." (4, p. 251)

The service of the medical social worker is not available in many hospitals, but the need for this service is highlighted dramatically at times. Recently, a child was born with a cleft palate in a Portland hospital, and the parents were shown the child immediately with no attempt by doctor, nurses, or any of the hospital staff to explain the deformity. The father asked about informational sources but was given only one futile lead. The day was spent by the parents in frantic self-searching to try to discover the cause in their family backgrounds. When the doctor did find time to talk to the parents, a day later, she did not have any definite help but thought that Crippled Children's Division might be contacted. The father did so, and the medical social worker there talked out the problem with him,



obtained from the Speech Consultant simplified informational materials, and next day, made arrangements with the doctor who would perform the necessary surgery. "You are the first person who has explained this or given me any hope," the man said as he left. How much more help the worker could have been on the spot.

If the child needs foster home placement during the speech training period or perhaps while awaiting surgery, the social service agency or Children's Bureau in the community often can aid in this problem. Children come into Portland from many areas of the state to attend the summer clinic. Since the parents may not be able to bring the child for lessons each day, some provision must be made for residence near the center. This has been done by the Portland State Extension Center in several instances.

The alignment and often absence of teeth is a problem that may need attention after surgery has been completed. It is not often that the surgeon is able to close the palate so that the tooth buds are not disturbed or pulled out of line, and in the majority of cases, they are already out of alignment. The child with this problem needs especially careful dental supervision, because his teeth will need to be saved as much as possible so that bridges and prosthetic devices may be anchored. If the upper lip is retracted, the orthodontist will assess the area to plan for a bridge which will plump out the upper lip. Sometimes this means extraction of teeth in the area, and sometimes it means the teeth will be left as an anchoring device, while a prosthetic appliance provides the usable upper teeth. The latter, placed anterior to the natural teeth, will also supply cosmetic improvement. Misalignment of



the side teeth may be so severe that these erupt through the middle of the palate. X-ray studies are made to discover this.

If the soft palate is insufficient, the orthodontist's services are needed to build a prosthesis with a bulb attachment which can be grasped by the sphincter action of Passavant's Pad, thus making a closure between the oral and nasopharynx. Although this therapy is not new, it is a recent project of the University of Oregon Dental School, in cooperation with the Crippled Children's Division of the University of Oregon Medical School.

Before the child is accepted into the clinic he is given a psychometric rating, usually by the Guidance Department of the Portland Public Schools. This testing indicates the child's mental and social development and helps to determine whether or not the child is ready for group instruction. It gives the teacher an indication as to the type of progress she may expect from the child in relation to his ability to follow instructions and to complete the task he is given. The relationship between intelligence and progress is often noticeable in the clinic.

Since these children so often have middle-ear infections, the otologist may play a part in the child's therapy program. Because the ear, nose and throat areas are interconnected in the normal mouth, infection can spread easily from one area to another. The cleft palate child is especially prone to the spread of infection, since these areas are not formed in the normal manner. Cold infection often means ear infection also, with attendant lowering of hearing acuity.

In Portland, hearing testing in the schools is done through the School Health Department of the Portland Public Health Bureau and the Hearing Conservation Program in the Division of Infant and Maternal Welfare of the State Board of Health. Some testing is done on referral to a United Fund Agency, the Portland Center for Speech and Hearing. Many of the children in the clinic were referred to these sources first in order to determine any hearing loss, to discover whether further medical referral was needed, and to help the speech therapist discover whether this area was one which might hinder the training program.

At present, the agencies mentioned do not have as close cooperation as might be desired. Parents often do a great deal of searching before they find the service which will be the answer to their problem. However, since Crippled Children's Division of the University of Oregon Medical School has become the central agency in dealing with the young cleft palate children, greater cooperation of these various agencies which are interested in the rehabilitation of the child will be possible.

## RATIONALE FOR GROUP THERAPY

The Portland Summer Session Speech Clinic and the clinic at Buckman School were both organized on a group basis. The number of children in the groups varied from two to six. Some factors which determine the grouping are the ages of the children, and a desire to maintain a two-year span as nearly as possible. The type of defect determined which grouping the child would find most suitable. Brain-damaged, cleft palate and hard of hearing cases were usually separated for teaching purposes. Transportation problems were considered. In one instance two children with delayed speech were placed with the cleft palate group.

Group work with children has many advantages over individual individual instruction, but there were other reasons for using the group method. In the Public School program, it would have been impossible to provide service individually. The therapist came to Buckman School three half-days a week during the years 1950-51 and 1951-52, and two half-days a week during the 1952-53 school year. This allowed for five half-hour lessons, or fewer lessons of an hour's length. The schedule was arranged so that the cleft palate group had at least one hour-long session during the week, and as the timetable allowed, the other groups received lessons of one half to three quarters of an hour. Over this three-year period, the length of the lessons depended on the number of children registered each term, and this fluctuated from seven to sixteen.



The summer program used group work advisedly. Most children who have been blocked off from communication with others of their own age need to develop social techniques for their own adjustment. They need to develop the desire to use speech as a communicative tool. The group is the natural medium for this. As Backus says in her book on group techniques,

"Gradually it became apparent that the changes in speech behavior which took place depended less upon devices for breathing, blowing, tongue exercises, "ear training", and the like, and more and more upon forces operating in the interpersonal relationships between child and therapist and among children as a group." (1, p.4)

Children who had had very little experience outside the family circle were extremely shy at first, and parents were often overanxious about the child's reactions. Problems of group interaction gradually resolved themselves and the children grew in their capacity to communicate and share. A great deal of pre-school readiness activity and socialization were essential parts of the therapy at all times. In the beginning this was the prime goal of therapy in order to prepare the children to move easily into intensive therapeutic work. A sense of success, joy in speech participation, and a sense of general well-being had to come first.

Sheryl was a child who came into the group as a disrupting influence, and who tried to claim the clinician's attention for herself exclusively. The following are a number of excerpts from her daily case report:

"6-28-51. Sheryl was completely negative and refused to answer -- ran naughtily around room distracting Brenda ---outside she ran up and

down banks and generally seemed hyperactive --- is apparently jealous of Brenda --- sat very close to worker on bench, so she is not entirely rejecting." (Student clinician)

Note by Clinic Director: "She will be slow in entering group activity but needs socialization so let's continue to draw her into group cooperation and sharing, but let her stay close to you and give her the feeling that she is important. Enlist Brenda's more mature and stable state to allow Sheryl to be first 'because she is younger and hasn't been with us before as you have.'"

"7-2-51. Got first good f by trying to bite finger placed against lower lip. Five minute attention span. Talked freely today - indicated great pleasure at Brenda's absence. Also much easier for therapist to give full attention to one."

Note by Clinic Director: "Indeed yes, but she needs socialization, and speech therapists are too scarce in Oregon to do much individual case work except as absolutely needed so group therapy must be the answer. Aside from that it has become recognized that group therapy when done with properly grouped children gives something individual case work cannot do - especially with young children and speech inhibited persons, for speech is a social tool, not used in isolation."

"7-3-51. Child was spontaneous and cooperative today - wanted to talk a great deal.

"7-12-51. Results - poor.

"7-16-51. Under good control today.

"7-23-51. Results poor. Child distracted. Seems to have lapsed into jargon.

"7-31-51. Sheryl relaxed and cooperative."

At this time, Sheryl was four years and three months old. By September, 1951 she entered well into group activities and seemed adjusted to class routines at Buckman Center.

Not all children have difficulty in group adjustment. For these, there is value in inter-child stimulation. Praise from the clinician is both helpful and necessary, but praise from the group is an even stronger motivational force. There is always the time when a child does something especially well and can be called upon to "show the others how to do it." For the child who has a great deal of individual attention at home, the group situation offers valuable learning in sharing and learning to await turns. There is comfort for the timid child who can see how others do it before he is called upon to try.

Furthermore, group work offers many children an emotional release and helps them to discover a sense of proportion that is not always achieved through individual therapy. Ollie Backus calls it a "corrective 'emotional' experience." "...some children have found such therapeutic experience in classes where the therapists themselves were not conscious of how such changes were taking place..." (1, p.45).

The parents too benefit from group work. While watching their own child's reactions in the group, they gain a new perspective of his ability in comparison with other children. They learn the particular problems of the other children, and come to realize there is not a definite pattern for cleft palate speech but that each child's problem is highly individual. They see too that children are treated as



individuals within the group. Some parents bring their children for therapy with the idea that a formula is administered to all children and that good speech then miraculously results, but in company with other parents they become partners in a project which offers new learnings and a fuller understanding of the child's problem. There is shared rejoicing when the child shows measurable gains. There is comfort and an easing of tensions while they share problems and feelings. Much practical sharing goes on outside the clinic door on days when parents are not observing in the clinic, and during parent meetings called by the clinic director. So often there has been in the group a parent who was of great assistance to the program because of her attitude or the casual remarks she might make. The mother of Stevie, a cleft palate child, was outstanding in this way, showing the results of careful parental counselling done in the earliest years of Stevie's life and active participation in an intensive therapy program started when he was two years of age. These casual sharings and discussions did more at times to promote faith in the program than any talk that could be given by clinic personnel.

Group work may be undertaken as a necessity in many instances, but to this therapist it is an ideal way of working. The teacher experiences more satisfaction as she keeps the individual child's needs in mind and uses the dynamics of the group to leaven her teaching. Group instruction offers real challenges which are highly rewarding to the therapist, parent, and most important of all, the child.

## TYPES OF THERAPY FOR CLEFT PALATE

The therapy for the cleft palate child consisted of the following steps:

1. The provision for relaxation so that the child was in a mood receptive to therapy.
2. The building of oral pressure so that the child could master the production of speech sounds, which are mostly oral.
3. The provision for lip and tongue drills, especially necessary where cleft lip accompanies cleft palate.
4. Ear training and identification of individual sounds.
5. Babbling.
6. Practice of individual sounds in words, phrases, sentences.
7. Opportunities for spontaneous speech.

Relaxation may be accomplished in several ways, but it is a necessary beginning step before effective speech therapy can take place. The children enjoy relaxation exercises, imitating rag dolls, trees in the wind, flowers, and similar things. Verses, stories and conversation about 'letting go' are techniques used. Sometimes the children merely rest their heads on the table while music is played or a short story is read. The teacher's manner itself can be an important relaxing factor.

The building of oral pressure is usually done through blowing exercises. There is not complete agreement among therapists regarding its usefulness but in the majority of cases such exercises have seemed to be of value. Distinction should be made between hard blowing and

easy, controlled, directed blowing with no air caught in the cul-de-sac of the cheek. Hard blowing is not used in speech, and very little air is needed for each expulsion for speech. The gentle flow of air controlled at will is the goal. Blowing exercises are also a colorful activity and therefore provide incentive for the young child.

Some of the more useful exercises are the following:

1. Blowing soap bubbles. If these are blown with a ring instead of a pipe, the child can say the unvoiced "puh," and bubbles will form as he says the sound. He can try to hold a bubble on the ring, without blowing hard enough to detach it.

2. Blowing light objects, such as feathers, bits of paper, and ping pong balls. Some children require a drinking straw in order to channel the air.

3. Blowing bottles and blowing troughs are used for the children who can manage them. It is discouraging to the child who finds them too difficult.

4. Bubbling is done in water with a straw.

Lip and tongue drills are taught to the group by means of stories and jingles. Individual needs are taken into account after the story and during it. The children soon become used to waiting a moment while the therapist helps one child with a specific drill. Parent help can be enlisted for home practice for specific movements. The child with the scarred lip needs help in pushing out the upper lip with his tongue, moving the upper lip over the teeth, and from side to side. Palate movement needs stimulation. Tongue placements require drill.



The following exercises proved useful:

1. Lip exercises.

- a. Open the mouth widely and then close tightly ten times.
- b. Open mouth widely, then bring lips together and press tightly. Pull lips apart quickly to make smacking noise.
- c. Clench the teeth, pucker the lips as far forward as possible, then draw them back into a forced smile.
- d. Place upper lip over lower lip as far as possible, then place lower lip over upper lip as far as possible.
- e. Push upper lip out with tongue from the inside.
- f. Tighten upper lip over the teeth.
- g. Say ee-oo-ee-oo with exaggerated lip action.
- h. Purse lips tightly, and keeping them in this position, swing them from one side to the other, and then up and down.

2. Tongue Exercises.

- a. Stretch the tongue outside the mouth as far as possible. Point it.
- b. Keep the tongue pointed and dot four places on the lips.
- c. Keep the tongue pointed and dot the teeth, the gum ridge, the hard palate and the soft palate in four counts.
- d. Dot each tooth. "Knock on the door of every little white house."
- e. Open the mouth, swing tongue from side to side.
- f. Make a cup of the tongue.
- g. Groove the tongue. Alternately cup and groove the tongue.

h. Make a hill of the tongue. (k position)

i. Say "lah-lah" several times, without letting the jaw move. Keep mouth moderately open.

j. Round the mouth, open moderately wide, call it a 'race track.' Let the tongue go around carefully as the 'racing car', then faster. Keep the racetrack still, the car on the track and not 'off in the woods' (away from the lips).

k. Say ng, prolong it and make a quick hard take-off from the palate, to make a g sound.

l. Stroke the tongue along the palate, front to back and back to front.

Stories for these lip and tongue exercises are available, in 'Talking Time'.<sup>11</sup>

An original story which has proved successful is 'Little Brown Bear', and it is told as follows:

Little Brown Bear wanted some honey. Oh, how he wanted some honey. He knew that if he wanted some honey, he would have to find a bee tree, because that is where little bears find honey in the woods. So he started out for a walk. He walked and walked and walked and walked, not very fast and not very slowly, but being a fat little brown bear, he waddled from side to side like this (Make tongue go from side to side in the mouth). Then as he walked along he heard a noise. He stopped and listened. It sounded like this (d-d-d-d-d). Little Brown Bear looked up and saw - Can you guess what he saw? A woodpecker, pecking away at a tree to find bugs and insects for his dinner. D-d-d-d-d-d went the woodpecker. "Hello up there," said Little Brown

Bear, "I'm looking for some honey. Have you seen any bees around here?" "Hmm," said the woodpecker. "Yes, I have. There have been bees going past here all morning." "Thank you," said Little Brown Bear, and off he went, waddling from side to side. (Tongue moves again) Well, it didn't take him long to find a bee tree, and he crept up to it very slowly, and very carefully, because he didn't want the bees to hear him. His pink tongue went (put tongue out and in to show how the bear's tongue went.) Then he licked a little faster, and a little faster, but the bees did not hear him. His tongue went very fast indeed, and - the bees heard him. Then came z-z-z-z-z around his ears and his tender little nose, and the little bear turned and ran, like this (tongue sideways, fast). The bees were very angry. Z-z-z-z-z they came after him, and z-z-z-z they tried to sting him through his thick soft fur. Z-z-z-z-z, z-z-z-z, z-z-z-z-z. The little bear kept running, and he came to a little hill. He slid right down. (Make a slide by extending tongue out and down at an angle). The bees were left far behind, and the little brown bear sat down to clean the honey from his mouth. He made his tongue go up high in his mouth and cleaned the honey from the top. He worked his tongue inside his cheeks. He cleaned around his top teeth, and then his lower teeth. His tongue worked hard. He cleaned his lips, and a spot off his nose. He cleaned a spot off his chin, and then he went over to a little stream and took a long drink of water (lapping movement). Then the little bear went walking along until he came to a hill (hump tongue) and went up and over it to his home.



### 3. Palate Exercises.

a. Watch in a mirror and try to make the palate jump up at will. A paper drinking straw to 'tickle' the soft palate often helps get the initial movement.

b. Open mouth wide, relax tongue and throat. Whisper ah sharply and strongly. Watch in a mirror to get a good palate movement.

c. Take a quick breath through the mouth - an audible gasp - then say ah slowly. See if palate rises and remains up for the sound.

Ear training and visual stimulation are especially important for the child with a cleft palate. For the younger children, stories of animals and objects that make sounds are appealing. Individual sounds can be noises made by creatures and things, and the child learns to identify the sounds in this way.

A set of pictures of animals may be introduced. The children listen to the sound made by each, and the cards are laid on the table. The teacher makes the sounds and the children match these with the animals. If the room is large enough, the pictures can be hidden, and the children can hunt.

The children are given small cars or boats. The teacher explains that the thing that makes the car go is a certain sound, for instance, k-k-k-k. If any other sound is made, the cars cannot go and must stop.

The children are given paper and a crayon. They may draw

little wiggly snake lines as long as the teacher makes the s sound.

Many such suggestions and games are to be found in the following books:

Lassers, Leon, *Fun and Play with Sounds and Speech*. (9)

Scott, Louisa and Thompson, J. J., *Talking Time*. (11)

The sounds by themselves need to be given specific personalities because the young child does not learn through conceptual thinking but rather through concrete representation. A small card set is useful for this, although when a sound is being introduced, a stuffed animal or other prop helps set the impression for the child. The child attempts to make the sound and then follows the teacher as she babbles with it. For instance, the child is learning the s sound. Sammy Snake (a dime store purchase) has come along to help and the child has held him and made him wiggle while the teacher made the sound. The teacher may hold Sammy and invite the children to make the sound with her. They make it softly, as the far-away snake would, then louder and louder. Next, the teacher makes the sound in combination with vowels and the children babble along with her: sa-sa-sa-see-see-si-si-si-sa-so-sa-so and so on. Other sounds can be reviewed in this brief babbling period.

Babbling, as described above, is an effort to recapitulate for the child a phase in learning speech through which he may well have never passed. These children so often have operations at the time they would be normally babbling and if they do babble, the sounds emerge as unidentifiable whoofs and snorts. Babbling is pre-speech

rehearsal and facilitates the production of words.

The practice of individual sounds in words, phrases, and sentences needs to be carefully planned and presented. The child who can make a sound in isolation and who can babble it with vowels should incorporate it into words without much difficulty. Some children do best with the sound in the initial position, others manage it best in the final position. Each child's ability will soon be discovered, and the starting-point decided upon. The word is said slowly, and sometimes needs to be broken at first, as, s-it. The techniques useful for teaching include the following:

1. Objects containing the sound can be put into a small box and drawn out one at a time, and named. When the child is familiar with them, they can be used for other games, such as:

- a. What Did I Take? The objects have been placed on the table as named. Someone is leader and says to the others, "Close your eyes." Then he takes an object away and says, "Open your eyes. What did I take? The children guess in turn.

- b. The box is closed, and the teacher tells something about one of the objects. The children guess which object is meant.

- c. As the children put objects back into the box, they take turns saying the name of an object three times before replacing it.

2. Cards with pictures of objects can be used.

- a. The child has his own set of pictures in front of him. He says the name of his card, puts it into another pile beside him, and the turn passes around the group. Sometimes the teacher places a



card to one side for extra practice.

b. The cards may be placed face up in groups of four in the middle of the table. The children look at them, and then the teacher turns them upside down. She asks, "Where is the .....?" and the children who remember hold up their hands. Someone is chosen, and the child says, "Here is the ....." before he is allowed to turn the card over to see. Six, eight and more cards may be tried if memory and concentration are good.

c. Riddles may be played with the cards.

d. The children may play postman by putting the cards into envelopes and letting a child deliver them. When the "letters" are opened, the children tell what they have.

e. The children may see if there are more s-s-s-s words or more r-r-r-r-words, or whatever sound is being worked with, in the picture.

f. The children may put the cards on the table, and throw a bean bag on top of a card. To "win" the card, they say the name of the picture.

g. They may take two cards, name them and turn them upside down. A child chooses to say the name of one of the cards, and if he guesses it correctly, may keep it. The winner gains the most cards.

h. The children each have three cards in front of them. They turn them upside down, and in turn, say the name of each one three times. As the turn passes around the group, it is not too easy to remember all the three cards.

### 3. Special toys can be useful.

a. Color cone can be taken apart and the children handed pieces in turn. They name the colors. Then they are asked to put the pieces back, one at a time, as they repeat a phrase including words with the sounds to be practised. For the s sound, the phrase might be 'Slip it on,' or 'Here it goes.' For the l sound or the th sound, the phrase might be, 'This is the blue color.'

b. Blocks, sticks, peg boards may be used the same way. Blocks may be put into the bag one by one. Sticks may be laid in a design, or fence a 'field' into which a small animal may be placed as a reward.

c. Make-a-Face - a commercial flannelboard, with facial features ready to stick on an oval face shape. Various phrases may be used for this, as well as the names of the features. Other flannelboard devices may be used, cut-outs of objects, with flannel backing.

d. Another game is played with colored cups and small objects. The children close their eyes, and an object is placed under one cup. They open their eyes and guess, 'It's under this cup', and win the object if the guess is correct. The teacher may use one object and the children take turns at both hiding and guessing. They can practise a number of phrases such as: "Shut your eyes," "Open your eyes," "Find it."

e. Children enjoy both the commercial lotto games of food, animals, etc., and teacher-made ones for drill on a particular sound.

### 4. The following two games proved valuable methods of develop-

ing sounds:

a. The envelop chart, the type used for reading in the primary grades. The children can say the words on the cards and place the card in the chart fold. The pictures may perhaps be grouped into two or more groupings, as "Things that go outside" and "Things that go inside." The child draws from the pack of cards in the teacher's hand and says, "The swing goes outside," or "The cup goes inside the house." Other sets might be "Things that go on land" and "Things that go on water," "Things that are alive" and "Things that are not alive." "Things that are big" and "Things that are small." The children may find noisy and quiet things, soft and hard things, or farm and city things.

b. Verses may be found in abundance in several collections of children's poetry. The therapist should discuss the topic of the verse first or weave a little story about it. For example,

"Once there was a little boy named Jimmy who was always and always asking his mother for a penny to buy candy. Sometimes she said 'yes' and sometimes she said 'no,' because too much candy isn't good for us. One day, Jimmy came in and said to his mother,

'Please, please, please  
May I have a penny?'

But his mother replied,

'No, no, no,  
Because I haven't any.'"

Then the class can work on the verse alone.

Short jingles are best, and are usually great favorites. The teacher and children may find it fun to make up their own jingles.



## THE CASE STUDY OF SHERYL - A CLEFT PALATE CHILD

### General Background

Sheryl was born March 30, 1947, the first child in the family. The father had a welding job and the mother helped out the family income by selling Stanley products. The family appeared warm and affectionate, but did not pay sufficient attention to good discipline and health habits until counselling was done at the speech center. The father had a repaired cleft himself, and had spoken with extreme nasality until a high school teacher had helped him to overcome much of this habit. When tired, he reverted to his old pattern of speech.

A report from the Summer Session Clinic by a student clinician gives a good picture of Sheryl at 4 years of age. "This child is a pixie type little girl, highly skilled in motor activity, and shrewd in planning for the execution of her own wishes. As an example, when she could not reach the drinking fountain in the hall, she simply walked around to the end and climbed up in the plumbing, spurning all help. Sheryl is taken care of during the day by a fourteen-year-old boy cousin who is probably quite lax with her. During the school year, an elderly lady 'from the church' cares for her. The child appears undisciplined, and the mother complains that her sleeping habits are poor in that she lies awake for hours. She never walks but runs and is always very busy."

### Health History

Sheryl was born in North Dakota at the home of her paternal

grandparents, while the father was away in the service. The palate was cleft but the lip was not.

The doctor suggested that the baby be fed by cutting off the entire top of the nipple, and Sheryl learned to control the flow of milk with her tongue. When she was 18 months of age, the family began to seek adequate medical care, first going to Idaho and later to Portland. Dr. Gurney operated, and the result was most successful. Sheryl has been very susceptible to colds and has had much medical attention for this. As her mother said in one interview, "I call her my little penicillin shot." Dental work was done by a private dentist because the family realized how important good dental care was for her, even though her teeth were erupted in a near-normal way.

#### Speech History

After the operation, the family moved back to North Dakota, but on realizing that Sheryl would need speech help, moved back to Portland to live. She received speech training at the Buckman Center during the years 1950 to 1952 and at the 1951 Portland State Summer Session. Lessons were discontinued because it was felt that her speech was normal for her age, with no nasality present.

At four years, eight months of age when she entered the Summer Session, her diagnosis read: "Repaired cleft palate resulting in poor articulation, some nasality, also general infantile speech pattern." Her class work in both clinics consisted of ear training for the consonants, blowing drills, babbling, oral gymnastics with lip, jaw and palate exercises, word and conversation drills of the type to interest this age level.

Sheryl's response was excellent. Her ability to learn was hampered somewhat by immature behavior coupled with her hyperactivity and nervous tensions. However, she gradually improved as the training progressed and as her mother received guidance and counselling in the handling of the child.

By the fall of 1951, most of the nasal quality had disappeared except in moments of tension and excitement. Work on consonants was considered beyond her age level, but it was felt wise to teach them and control their production. Sheryl worked on ch, z, s, and l at this time, and learned them sufficiently well by June 1952 that it was considered advisable to excuse her from further lessons. A check-up in October of 1952 showed that the sounds had been well stabilized and that her speech was completely normal.

The family's attitude was excellent throughout this period, and any drills assigned were faithfully followed at home. Both the parents realized the importance of early help for Sheryl as the father had had so much difficulty with his speech while he was growing up, and had only by chance learned to speak without nasality through the help of a high school teacher.



## CASE STUDY OF MICHAEL - A CLEFT PALATE CHILD

Background

Michael was born January 2, 1949, in Portland, Oregon. He was born with a bi-lateral cleft palate and hare lip. The attending physician thought it best for the parents not to see the child and to leave him in the nursery at the hospital until the lip might be repaired. Application was made at Doernbecher Hospital, and the lip repair took place when the baby was two months old. When he was 19 months old, partial palate repair was undertaken, and at 27 months, the final palate repair took place.

The last operation caused much unhappiness to Michael. He had reached an age where people and places had taken on meaning for him and when he was suddenly separated from all that meant security to him, he exhibited an emotional reaction which persisted for some time. He cried a great deal, had many fits of temper, and showed a great deal of negativism in everything. In the Speech Clinic, two months after the second palate operation, his fears and negativism were most pronounced.

Health History

Michael presented a difficult feeding problem because of the extensive cleft. The hospital had fed him through a tube, forcing the food down his throat. At home, he was fed with a special syringe, until he learned to drink from a bottle with enlarged holes in the nipple. He never did learn to suck. He seems to have been fairly healthy otherwise.

### Speech History

Mike attended the Speech Clinic at the Portland State Extension Center Summer Session during the summers of 1951 and 1952. He exhibited extreme fear of the situation at first, and did not participate in any of the activities, but sat on his mother's lap and watched the clinicians and the other children. As lessons continued, he gradually participated, and always went home and tried to do the things he had seen the others do in class.

In this case, good use was made of parent observation of the clinic group. The mother sat in on all lessons, and received counseling in the parent counselling program so that she understood what to expect of the program and her part in it.

At the beginning of his work in the 1951 summer session, it was concluded that Michael's three operations had slowed down and interfered with the normal speech process so that he had not developed the speech muscles through sucking as do most babies. The mouth cleft was still open during the babbling stage, from 3 to 18 months, and he did not experience the normal sound-rehearsal of pre-speech. The emotional impact of the last operation had slowed down his ability to meet the problems of his small world, and the necessity of re-building his sense of security had to come before his energies could be released for other developmental tasks. Nasality was present, but not very much so that prognosis was optimistic. His vocabulary at that time consisted of about five words, and he showed no desire at home to enlarge it, using gestures as much as possible.

Cooperation in the group was limited for the entire first summer, and always done on the fringes. With the individual assigned clinician, however, he cooperated very well. The clinician's report reads in part as follows: "We walked out into the hall, tried to get his interest in the drinking fountain, etc., but he refused to be quieted. Mrs. N. then told me that it had been less than two months since his last hospital experience, so I suggested going out into the open, away from the confining walls of the building. This we did, and soon passing vehicles claimed Michael's interest, and he ceased crying. This still gave me no opportunity to get into the picture and make his acquaintance. It was about noon, so I suggested food as a basis of friendship... Within the next half hour Michael was sharing potato chips and cookies with his mother and me on an impartial three-way division. I was accepted."

Later in the term the clinician reports: "Suffice it to say that each succeeding trip to the clinic has shown wonderful response to sound stimuli, socialization and adaptability on the part of Michael. His mother has gained courage with her increased knowledge in the parent conferences. Michael is now 'Helloing' and 'Goodbying' the bus drivers on his way to and from school, imitating many sounds of the bus, airplanes, etc., making friends with mothers and children in the clinic group, showing each day progress in the pattern toward normalcy."

When Michael re-entered the clinic for the 1952 summer session, he had improved remarkably. By Christmas of 1951, he had acquired



most of the words normal for children at age two, and by March of 1952 was talking in whole sentences. Stimulation had been given to him at an opportune time, it seemed. At the end of the 1952 session, he had made sufficient progress to report: "Mike has very good, understandable speech... His voice seems a bit rough or husky at times but for the most part is not nasal. He has a good stream of controlled air from the mouth, can blow ping pong balls easily and his horns louder than anyone else."

#### Summary

Michael did not return for further speech work, as it was felt that his speech pattern was normal for his age and the problem of nasality had been eliminated with excellent home cooperation. His socialization had shown remarkable progress due to the informality of the clinic situation, where he met parents and children who accepted him and were interested in him as a person. Except for the question of further surgery of a cosmetic nature, Michael could enter school as a normal little boy in spite of his early handicap.

## THE CASE STUDY OF STEVEN - A CLEFT PALATE CHILD

Background

Steven was placed in the Buckman Center cleft palate class in the fall of 1950, at the age of three. Previous to that, for almost a year he was tutored privately. The group in which Steven took part was composed at various times of from three to seven members. Sessions were held three times a week during the school year. During the summers of 1950, 1951, and 1952, Steven attended the Speech Clinic of the Portland State Extension Center and received both individual and group work.

Health Record:

Steven was born July 25, 1947 in Portland, Oregon. He was a full-term baby. Palate and lip were both severely cleft. When Steven was eight weeks old, Dr. Charles Gurney did lip surgery on him with remarkable results. At twenty months of age, Steven underwent his second surgery, this time for palate repair. Dr. Gurney was very pessimistic about the outcome of this surgery and gave the parents little or no encouragement to hope for good results. The surgery was successful, however, and Steven gained a functional palate. The levator muscles were saved, but the structure was tenuous and the palate short.

Tonsils were enlarged and Steven had many colds, and at age three, the tonsils were removed.

In the summer of 1951, orthodontia work was begun on Stevie,

with Dr. Denton Reese. The front teeth were removed and an upper plate was designed to plump out the upper lip and give Steven a more normal bite. Plastic surgery is planned for some future time to improve the structure of Steven's nose.

Steven continued to be susceptible to colds and ear infections but an audiogram of June, 1951, showed his hearing to be within normal limits.

### Speech History

Two months after Steven's second surgery, at 22 months of age, Steven began work with Mrs. Myrtle Dawson in speech therapy. She worked with him privately once a week for six months and then once every other week for another six months. Speech at that time consisted of nasalized babbling, whoofs, puffs and snorts.

Since the tonsils had to be removed in order to aid in control of the infections to which Steven was constantly subject, the first aim of therapy was to gain a maximum amount of palate control while the tonsil structures were present to aid in palate area closure. This was accomplished within the year and the ability to control the palate area proved to be a permanent learning.

His learning was rapid, and a report from the Summer Clinic of 1950 reads 'Very precocious child, probably lower genius. Alert, retentive.' Reports state also that 'he is well socialized, very cooperative, alert and eager to please.' With this type of child, learning progressed steadily and with a good deal of satisfaction for teachers, parents and Steven.

The tight upper lip posed a difficult problem and much work was



done to improve the function. Lip exercises to hold the two lips together and to stretch the upper lip by pushing inside with the tongue tip were stressed.

Remarks from the reports of the 1950-51 school year at the Buckman Center indicate his specific needs in sounds: "K and g sounds are weak but recognizable. Labial sounds need perfecting as do l, s, and v. Work will consist of palatal exercises, lip exercises and correction of sounds. Prognosis - favorable."

Steady progress continued and Steven entered regular school kindergarten at age 5. During the summer session of 1952, just previous to this, reports read in part:

"Objective set for Summer Session:

Steven is having some orthodonture work done. While his front upper teeth were missing we tried to hold the sounds, especially the sibilants and blends, that he has mastered.

Treatment:

Steven was given a general review of sounds, a great deal of spontaneous talking, a little blowing and some babbling every lesson.

Progress:

Steven accomplished the objective set for the Summer Session. His single sibilant could be made perfectly but in his hurry to talk he sometimes fuzzed it up a little. His front incisors are out now, making it difficult to achieve a perfect sibilant at present."

Recommendations:

The teacher who has Steven should be acquainted with his

difficulty, but accept and treat him as any five year old. The speech therapist should continue with Steven in order to watch transfer of correct sounds he has mastered and not allow him to slip into poor habits of speech. Some work on sibilants may be needed after his dental reconstruction is completed this fall. He does not need much more therapy.

### Social History

Steven was from an upper middle class home. The parents were very cooperative, and the mother especially had insight and understanding into the child's problem. They had a practical, matter-of-fact attitude and met the problem in that way.

Steven's father had stuttered and Steven began to show a tendency to repeat the beginnings of words. This had been passed over because the mother was cautioned to show no concern and Steven never developed a true stutter.

Since Steven was entering regular kindergarten in the fall of 1952, a letter was sent to the school principal.

August 14, 1952

Principal  
B. School  
Portland, Oregon

Dear Mr. Principal:

The following is a report on the progress of Steven R. Steven will enter Kindergarten at B. School this fall. He has attended the Portland Summer Session speech clinic for the past three summers, and has worked privately with other instructors. He has also attended Buckman Center Cleft Palate Clinic for more than a year. At the present time he is having orthodonture work done. When his upper teeth are in position he should have good speech.

Steven is energetic, bright and very capable. Entering Kindergarten next fall he has the possibility of quickly adjusting to the school situation. He reacts and talks like any five-year-old child. He is to be treated as such. Steven has learned to wait quietly while others are being helped. He is a charming, cooperative child with leadership qualities and great initiative. He is willing and will try his level best to follow directions in all training situations.

Steven's home life is ideal. Mr. and Mrs. R. have been very cooperative in following suggestions in work and speech training. Cooperation like this should insure for Steven a very happy and normal school experience.

He represents the best in the end-results of early and intensive training and parent counseling for organic speech disorders in spite of a poor prognosis for speech correction. We are proud of his achievement, for without this training which he started at two years of age, he would be a severely handicapped child.

We are anxious for the school to continue handling him, and treating him, as a normal five-year-old. We hope that you will enjoy working with Steven as much as we have.

Very truly yours,

(Mrs.) Myrtle H. Dawson  
Speech Therapist  
Summer Session Clinic



Summary

In spite of a poor medical prognosis, continuing into the third and fourth year because of the problem of infections, Steven has achieved the best in end results. The story of Steven illustrates better than most how community agencies and the home can combine efforts to rehabilitate to the point of complete normalcy if work is done in such a way as to approximate the normal developmental pattern.

## THE PROBLEM OF BRAIN INJURY

The methods used to teach brain-damaged children differed somewhat from those used with the cleft palate children and, of course, individual needs varied. Need for parental counselling and inter-child stimulation was the same, however. Since the two boys included in this study were in a regular classroom situation, teacher cooperation was essential.

The case histories show the great differences in the problems of the two boys. John moved his tongue with difficulty, had oversalivation and poor swallow reflex, needed much repetition in order to remember, but was alertly interested in all that went on. Bill had very little trouble in manipulation of the speech organs, and quickly learned to make most sounds, but could not put a group of words together meaningfully and had much difficulty in understanding even simple directions. He seemed to be in a constant doubt and was not at all alert in manner. Both boys were highly distractible and were first taught behind a blank screen in order to eliminate extraneous stimuli.

The child who exhibits speech retardation because of brain damage has a long therapy period ahead with such slow gains that they usually cannot be measured in terms of academic years. Entirely new neural pathways must be established, and muscular re-education must take place. New centers in the brain must assume language functions. Where ideation is disturbed, the problem of whole language development

and the understanding of speech as a meaningful technique in communication must be patiently established with laborious development of meaningful vocabulary and continual bombardment of the child with experiences which motivate him to talk.

These children exhibit specific problems. Alfred A. Strauss and Laura E. Lehtinen have described these problems of the brain-injured child as follows:

(1) He exhibits 'catastrophic' reactions. This means that when he is confronted with a task too difficult for him to perform he experiences a strong reaction of rage, despair, anxiety or extreme depression.

(2) He is extremely distractible. This is evidenced in two ways. First, there is undue fixation upon irrelevant external stimuli. Second, he experiences fluctuation in the perception of object and ground. This means that he cannot single out and concentrate upon one object exclusive of other things making up a background for it. This fluctuation occurs in thinking also and often results in a meticulousness and exactness in things he uses, thus affording him some feeling of power over a frustrating environment.

(3) He makes an effort to make substitutions and find detours, such as finger-counting. In teaching, certain crutches are helpful, for example, reading markers.

In testing, responses are erratic and associations are not logical. When asked to match related objects in a picture, the child will choose many unrelated objects and justify the choice because of color or something that might happen in the future, or just because



"I like it." When presented with a board of marbles placed in a pattern and asked to reproduce the pattern on another board, response is erratic and the method of doing the task shows that the child is not conscious of the whole and is not organizing his efforts towards producing that whole.

These factors enter into the teaching of speech.

## THERAPY NEEDS FOR THE BRAIN-DAMAGED CHILD

The brain-damaged child can benefit from much of the same therapy as the cleft palate child, but there are important and highly significant differences. Because of the neurological involvement, emphasis must be laid upon developing meaningful associations for the child.

First, the speech room must be arranged so that extraneous stimuli are eliminated. Bright pictures on the walls, materials in view of the child, a nearby window, sounds in an adjacent room, are some of the distractions that must be controlled. At the Buckman Center, a special three-piece wooden screen had been constructed, and the children were seated so that they faced this. Materials were kept on a shelf behind their heads or out of sight on a table behind the screen. The room was fairly quiet most of the time. With visual and sound stimuli cut to a minimum, the therapist could more successfully direct attention to her materials.

The large mirror was used in another section of the speech room, and reflected only the children who sat in front of it and the bare wall. At times it was moved behind the screen and placed so that it reflected the screen. In a small room with limited space, this was not always easy to arrange, but although the space was small, it paid to eliminate as many distractions as possible.

Gradually, after about six months of work behind the screen, some work was done at a table in another part of the room which con-

tained just the materials to be used. Response to this was good and gradually, after about a year, the use of the screen was abandoned.

As with the child with the cleft palate, tongue and lip drills were needed, but palate drills were unnecessary, as there was no nasality to the speech. Babbling was used to obtain facility of movement of the speech organs for the various sounds, because these children had either never used babbling or had not been able to make the necessary speech sounds in whatever attempts at babbling they had undergone.

Word drills were used in a special way. Since sound had little meaning for Billy in particular, the language symbols for objects and ideas had to be presented to him to enable him to build up his language concepts. He had to learn that a word meant some particular object and that that object could be described with a further series of words. Therefore, many small objects were used, and many pictures were used. If the children showed spontaneous interest in an object or an idea, that idea or name was developed immediately into simple but meaningful speech.

The factor of perseveration had to be taken into account. Many times, the wrong response would be given because it had been given just previously. Often, a thought from another time in the day would intrude and express itself in garbled language, and the ability to go on to a new thought would be impaired. A chance happening, like a dropped card, would precipitate a repetition of the act until attention could be switched.



Slowly, lesson by lesson, sounds and words were learned by means of such repetition, until purposeful, meaningful speech began to take the place of the jargon. Plateaux and lapses were frequent, but the general trend showed that results were forthcoming.

The classroom teachers cooperated as fully as possible, helped in the development of concepts in reading and arithmetic. They taught the members of the class how to help the two boys in the understanding of simple classroom instructions and routines. The boys fitted into this day-to-day procedure with its patterns and its repetitions better than was at first expected, and results of classroom and speech class cooperation were extremely gratifying.

Billy was placed in first grade on trial, at age seven and a half. He was a pale, curly-headed little boy with an "other-world" look about him. On the first day of school, he wandered off through the halls like a shadow as his mother stood for a few moments to talk to the teacher. He had great difficulty in understanding even simple directions and had to be led by the hand for the first few weeks. His future appeared most unpromising.

#### General Background

Billy was born April 14, 1944. He had been tested at the University of Oregon Medical School where his parents had been advised that Billy might need to be institutionalized. There was some question, however, since the tests showed a near-normal result in some areas. It was stated that he was quite mentally retarded, and an electroencephalogram showed brain damage. In spite of this report, the Department of Special Education in the Portland Public Schools felt that it was wise to attempt to help Billy toward some degree of normalcy and a trial period of one year was decided upon.

Billy's mother and father were both interested in his welfare. Unfortunately, there was much disagreement between the mother and father and shortly after Billy's entrance into school, they separated and obtained a divorce. Some of this emotional tension apparently transferred itself to Billy.

Billy was always easily handled at home. He would sit and play

by himself by the hour, quietly. He would mind well but did not initiate communication. His mother described him as always being "off in space." His face had a vacant look. At times he seemed "nervous" and edgy. There seemed to be no pattern to the occurrence of such spells, although they happened about twice a month. A tantrum usually resulted.

His lack of initiative even showed in his morning habit of lying in bed until told to get up. He would not go across the street by himself, even when told to do so, and was afraid to venture any distance away from the house or from his mother.

#### Health Record

Billy was a healthy baby who weighed eight pounds and nine ounces at birth. He was nursed until five months of age and was a fat baby. At birth, oxygen was administered but no further indication of birth trauma could be supplied by the mother. He sat up at six or seven months and walked by himself at fourteen months.

Billy had food fads. At ages three and four he would eat no vegetables. When his mother went to work, he is reported to have begun eating well. He was very fond of sweets and chocolate flavor.

He had measles, mumps and chickenpox. Toilet training was accomplished by the age of two.

Medicine in the nature of a stimulant was prescribed to help him to concentrate. Since this retarded his appetite, he was given vitamins. The medicine was discontinued after a short time as it seemed to stimulate him too much.

An interesting note is that he did not like to be rocked.

### Speech History

Speech did not develop except for a very few words until the age of six. It was this lack of speech which first prompted the parents to seek help. When he came to school, he could repeat a few memorized words but could not answer a question meaningfully with them. At school he would not speak at all, though gradually he began to try to speak usually after some urging.

The record of his work in speech class is one of very gradual improvement. At first he received three lessons for a half hour period three times a week, and in the following years, two lessons a week. He was in a class of two or three during this time.

Work was begun with tongue and lip exercises, sound discrimination, babbling, and most important for Billy, the meaningful use of words. He was taught the names of common objects, learned to answer and describe objects in simple phrases. During his second year of school, he began to answer questions meaningfully if the subject was concrete and the expected replies short and simple. Excerpts from his case record follow:

(9-7-51) Attention wanders constantly. Very easily distracted (ticking of clock, any noise in the hall). Does not follow directions very well. Appears confused at times about directions. Has trouble going through tongue exercises. Voice extremely faint.

(3-52) Billy seems to be less lethargic, more able to follow directions, and better at concentrating as the year progresses. His



ordinary speech is still too jumbled to make much sense. When he wants something, he usually says just one word, for example: "puppy", but can say "May I have the puppy?"

(4-52) Words usually good, most sounds incorporated. Sentences still a muddle of indeterminate sounds, though I can hold some sort of conversation now with Bill. Blends not good yet, but haven't really worked on these. In sentence drills, the sequence generally has to be repeated several times before Bill can take it on his own, but when he does, it is all there with most of the sounds and all the small words.

(5-52) Another conference with the mother on Bill's seeming day-dreaming. Talked about the amount of attention she was able to give him, the playmates he has. Bill's mother works long hours, so doesn't have much time for Bill. He is not playing much with other children in the neighborhood, especially since the coming of another little boy who makes fun of Bill's difference. The mother thinks that Bill probably doesn't notice the remarks made. His teacher thinks he isn't chosen much by the other children. I notice that Bill is sometimes purposely destructive with materials, throwing cards and other things on the floor instead of holding them, purposely dropping something and laughing, enjoying the attention and ensuing laughter from John.

Sentence structure is not improving much lately. Still very easily distracted. Often asks about "puppy card" when he comes in and will break off from what he is doing to say "Maggie" (the name of his father's dog).

(10-52) Billy's speech has improved and he can now carry on an understandable conversation. He is inclined to do a certain amount of pointing. His sentences are rarely in good order. It is a "tumbled" type of speech. It is still hard to hold his attention and he will go off on a tangent of his own in the middle of anything you are saying. If you repeat what he is trying to say in an orderly fashion, he will nod and say "Yes" rather than try to say it correctly. His memory seems good for some things. He knows all the sound cards and quickly learns the phrase drills.

Billy is in a destructive mood this fall and his classroom teacher worries. However, since she gave him some special paper to tear instead of what he had been tearing (good cards and drawings) he stopped most of the streak.

One day when I questioned him about a lost lunch box to see what response I would get - I got exactly nowhere. Billy simply lets his attention wander when pinned down by an exact question, or changes his story, or lapses into jargon.

(11-52) We have been working on th and have begun to try some l blends in passing. They are both coming. Billy's connected speech is still very poor and is not improving particularly fast.

His attention is easily held on some days and not on others. In the main, it is better.

(12-52) Billy has done excellent work on the th sound and tried hard to put it into his casual talking, being successful a good part of the time. Sh is not very strong as yet, but we have not done a great deal of work on it, using it only in babbling drills.

Billy's big problem is lack of "language ideation." He just doesn't string thought together sensibly. He doesn't receive instructions with understanding, either. I asked him to choose a visitor to bring to class, then asked who it would be. Billy said "blackboard." Repetition did no good. The fact that just before he had been asked, John had answered with another child's name had not helped. I had to say "a boy or a girl," and then he named Carol, who was not in his room except for a couple of days in September his teacher said. Next lesson, when asked again, he said "Polly" and as she was in his room, he had apparently caught on.

He seems to find comfort in repetition. He likes the Red Horse story (a tongue exercise) to contain all details. He wants the same cards each lesson.

(3-53) Billy is currently working on ch with ear training for sh and j. He often makes these as a lateral lisp and hasn't a true sound of any of these as yet, although there were several occasions when he was very close. His th seems established now. He can do l blends when reminded but needs drill on these.

Phrase drill and constant checking and ear training for everyday phrases is Billy's greatest need. He does the drills well in class. If a phrase is slowed down and repeated several times, Billy can reproduce it."

Further work with Billy is planned for the r sound, vocabulary work, and much help in expressing ideas. He needs help in this letter area even yet. A sample of Billy's response from March 1, 1954 is as



follows. He was given a pack of heterogeneous pictures of people, things, and animals, and asked to tell something about each picture. The first picture was one of a family having a picnic, and Billy said, "We live on the family." He was urged to try again. "We eat the food on the family," he said. He was asked what they were doing in the picture and he replied, "The family is cooking." "They are having a picnic, aren't they," I added, and he then said, "The family is having a picnic."

The second picture, one of a boy fishing, seemed easy. "I like to fish in the water," he said.

The third, a white bear, elicited, "Fuzzy bear is moving."

The fourth was a large picture of a fish, and he said, "My fish is busy."

Others were, "The telephone is ring." "I like use a red pencil." With urging he corrected these last two.

Another day, the concept of a dozen was needed, and since he had no grasp of a verbal explanation, I got out a checker set. Some of the checkers showed the crown side, and others did not, and before he would pay any attention to an explanation, the checkers had to be turned the same side up. It was as if a blank wall was there until that small piece of exact arrangement was finished. Then he quickly learned the dozen and half dozen.

### School History

Interviews with Billy's classroom teachers were fairly frequent, as they knew that the nature of Billy's trouble had not been completely



diagnosed, and wished to discuss what he was accomplishing. It was noted that he gradually became less withdrawn throughout the first year and took more of an interest in his school environment. The other children included him in classroom games, even though he responded poorly and had much difficulty in following directions. He showed no interest in stories told in the class. In reading, he quickly memorized the necessary words and at the end of the year, could read with the highest reading group. He could not, however, answer even so simple a question as, "Where is Dick?" until near the end of the year. In arithmetic, he learned a little counting and a few combinations with the rest of the class. He could draw well, and had a good sense of form and line, with careful precision in his work.

Because he was shown to be educable after this trial year, he was promoted, and entered second grade with his class. A difficult adjustment period lasted for about a month. Billy seemed lost again, did not follow directions, and went through a destructive phase which included pulling buttons off his shirt and tearing materials. The latter was helped when the classroom teacher supplied some special "tearing paper" and he tore that quite happily. When asked if he had destroyed an article he always replied in the negative, and blamed some other child, even though the whole class and the teacher had seen what actually took place. His "lies" always proved to be completely transparent.

During the second year of school, he began to contribute to the oral sharing period by showing toys, and could answer questions put by

the class, although he could not describe the object coherently without answering the direct question.

During the third year of school, he began to use single sentences in written work like the following:

"Friday is the sixth day of the week.

Betty is tired from jumping rope.

My playmate will give me one of his marbles."

However, he relapsed shortly after this sampling was taken and for two months did not manage to reach the same level of accomplishment. His sentences were like the following samples:

"I been see the name at the same at the yesterday.

I like to drocock the chocolate milk.

I will go bowntown at May eighth."

He was unable to play games because he could not understand them, and the presence of other children confused him. He preferred to play completely alone, galloping around the yard on an imaginary horse most of the time. When drawn into a game and helped through the motions, he tried willingly enough but soon drifted off into solitary play. In second grade, each day the class formed committees to play with Billy to help him learn to play with others, but improvement took place very gradually.

Billy learned arithmetic fairly well, although a certain amount of repetition was necessary before he could grasp a new idea. In fourth grade, long division has been extremely difficult for him, but he is beginning to master this. Simple problems have been mastered.

On October 25, 1954, a Wechsler test was administered by the Guidance Center and its results show Billy to be far from the mental defective which early tests showed. Exerpts from the report follow.

Age - 10 years, 6 months

Referred because recent improvement belies previous I.Q.

Results and Classification: Wechsler Intelligence Scale for Children.

Verbal Scale I.Q. - 72 Classification - Borderline

Performance Scale I.Q. - 92 Classification - Average

Full Scale I.Q. - 80 Classification - Dull Normal

Conclusions and Comments - This clean, well-groomed, blond boy has clear, blue eyes and very fair skin with good color. About average in size, he is quite plump and has chubby face and hands...

Billy reacted to the Wechsler cheerfully and with unconcern at first, probably because he found the Picture Completion Test a non-threatening one and was able to identify enough missing elements either by name or by pointing and describing to give a high score of thirteen points. It was interesting and significant to observe the difference in his facial expression and attitude when the Information Test on the Verbal Scale was next presented. He looked anxious, began to fidget and immediately employed escapist tactics in order to avoid answering. For instance, such a simple question as, "From what animal do we get milk?" upset him and he immediately changed the subject and asked, "What is that?" as he pointed to an object in the room. By repeating these verbal questions slowly and urging him to try, he could sometimes give sensible answers. At other times, the verbal symbols seemed meaningless to him...

Slow in memorization and transcription of digit symbols, his



poorest performance on the Wechsler Performance Scale was in the Coding Test where he scored only four points. Another low score was in Picture Arrangements and this five point score was consistent with the low score in the Comprehension Test of the Verbal Scale. These both indicated a lack of judgment in dealing with practical social problems. This bears out school findings as to his lack of social consciousness. Most interesting and encouraging was his high score of fourteen points in Block Designs. Billy loved this test, solved four designs quickly enough to earn bonus points and solved all seven correctly...

Individuals capable of high performance on the Block Design Test are not retarded mentally and one believes Billy to be a mentally normal child. He was twenty points lower in the Verbal Scale I.Q. which was only borderline, than on the Performance Scale. His peculiar inability to use verbal symbols suggests lack of development or damage to the verbal areas of the brain with resulting retardation in speech development. His slow but consistent improvement in speech, in academic achievement and in social behavior is encouraging."

Summary

Billy's improvement has justified the trial placement allowed four years ago. He has much confusion in the language area, making prognosis difficult, but he should continue to improve and eventually will no doubt be a self-supporting member of society since he enjoys hand work and can perform memorized tasks efficiently. The present task is to help him to achieve in normal curriculum areas in spite of his handicap and to gradually advance his social age. His early tantrums and destructive behavior have largely disappeared, although there are still instances of lost control. School and home agree that so far the improvement has been dramatic but that Billy needs much continued help and understanding.

## CASE STUDY OF JOHN - A BRAIN-DAMAGED CHILD

Background

John was born June 26, 1945. He was a full-term baby, weighing 7 pounds, 2 ounces at birth. There was no history of any illness of the mother during pregnancy - not even a contact with an infectious disease. His six weeks' examination showed 'perfect physical condition' according to the mother. It was an instrument delivery and there was a mark on his head.

His father and mother, college graduates, with an older son of better-than-average ability, were finding adjustment to John's handicap somewhat difficult. The father especially was anxious to know what prognosis could be made.

John was placed in Buckman School in first grade in the fall of 1951 on an experimental basis, with an understanding teacher. He received speech lessons three times a week. At first, he came on the school bus that took handicapped children to other schools in the district but later was brought by his parents.

Health History.

He was not as active as most babies. At seven months, he would remain sitting if his mother sat him up. She noticed at that time that his muscle tone was poor, especially in his legs. He did not bounce if held so that his feet touched the floor. He crawled at seven or eight months and began to walk at 22 months.

Somewhere around the end of the first year, the family noticed



that he was developing differently and slowly. He never babbled, but only cried. He had trouble swallowing, and would choke on any soft lumps in his food. He drooled excessively and this lasted till he was four. At one year of age, he had a complete physical examination from the family doctor, and nothing helpful was discovered.

Toilet training was a decided problem, with bowels under control by age three and bladder by age four, though accidents occurred through age seven. Illnesses were the usual childhood types, mumps, measles, chicken pox, with no unusual attendant symptoms. From his appearance, one would expect him to be fairly robust, as he was a chunky, well-built child with a dark shock of hair, dark complexion, a ready grin, and an alert manner. Coordination in walking was still not good and he did not run well when he entered school. However, he tried to follow the other children and enjoyed the jungle gym, and this seems to have helped him to improve considerably.

#### Academic Record

In October, 1949, John was seen by the Child Guidance Clinic because his mother wondered whether or not he was normal, since he had not talked. The Minnesota Pre-School Scale was administered, and a C.A. of 4.3, and M.A. of 1.7 placed him, seemingly, in the mentally deficient class (Wechsler classification). The report at this time goes on to say, "In view of his verbal deficiency the fact that the non-verbal score was even lower than the verbal one is surprising, but John's lack of coordination, especially in the more refined tasks, such as manipulating a pencil, and his great destructibility were large



contributing factors to this." His mother later stated that she felt that John's comprehension showed his ability to be above that indicated by the test.

In December of 1951, after John had been in school for almost four months, a test was done at the University of Oregon Medical School, The State Child Guidance Extension Department. Excerpts from the report to Dr. Morrison of the Portland Child Guidance Center follow:

"Physical and neurological examinations reveal a fairly obese, very pleasant, cooperative young lad who appears to be in good health. There is marked difficulty in accomplishing finer movements of the extremities, but the general physical and neurological are within normal limits. His drawings and non-verbal performance seem to be at about a 4 to  $4\frac{1}{2}$  year level although verbal areas are considerably better.

"Psychological examination on the Stanford-Binet revealed a mental age of  $5\frac{1}{2}$  years, as compared to a chronological age of  $6\frac{1}{2}$  years...General level of functioning was about five years, with range from 4 to 6 years. The psychologist's impression suggested dull normal ability potentially, with apparent disturbances in visual-perceptual motor functions. There was a great deal of interference in the testing which seemed to be organic in nature.

"You will remember that the original tests indicated an I.Q. somewhere in the neighborhood of 40...At the present time testing shows him to be functioning considerably higher. I believe we are dealing with a mentally deficient child whose apparent range of functioning has been appreciably lowered because of neuromuscular difficul-

ties. At best he is still a very dull child, but I believe that with special training and a great deal of attention that his functioning level may continue to improve somewhat."

It was on the basis of this last test that John was admitted to first grade at Buckman School. It was soon obvious that he fitted in well with classroom routine and could be counted on to do the best of which he was capable.

He was placed in the slow reading group, and remained there throughout the year. Much repetition was needed. Written work was undecipherable as a rule and drawing was mainly scratches. During the first part of the 1952 school year he hit a long plateau for learning and supplementary drill was tried at home, with success. Arithmetic was extremely difficult.

John's learning problems were accentuated by his tendency toward distractibility, a characteristic of brain-damaged children. The use of a screen to cut down extraneous stimuli was considered but the home help began about then, and since John enjoyed these home drills, it was decided not to use the screen. Once John obtained insight into his reading or other work, he retained quite well, and 'got the sense' of reading assignments. He achieved at a slow but progressive rate and obviously justified the trial placement. In March of 1953, he was transferred to his own school district.

#### Speech History

John had had a few lessons with a private tutor before he came to Buckman speech class. He had a few words, but so many sounds were

distorted or missing that he could not always make himself understood, even at home. His tongue seemed to fill his mouth with an immobile mass and he would twist his mouth and head in an effort to get out what he had to say. He spoke mostly in words or very short phrases, all sounding like jargon, but his common method of communication was to point and gesture, with an earnest look on his face till you asked the right question for him to nod a "yes" or in some way comprehend what he wanted to convey. Then he would break into a pleased smile and nod vigorously, saying "Ye...."

He felt his lack of speech keenly, being an outgoing child with a definite interest in other people and things. At home, he was unhappy about the fact that his brother could and did talk a great deal, giving John very little chance to get his ideas across. Before coming to school, he had given up trying, but after about six months, he began to try to contribute to the conversation and as his ability grew, he demanded more and more attention for his speech efforts.

From an observation notebook kept at that time comes the following note: "Named all objects and pictures on display correctly. Has habit of echolalia. His speech is labored and it appears to be quite an effort for him. His attention span is fair. Is easily excited. Points and gesticulates when excited. Responds to praise. General responses are fair to good. Can follow directions fairly well. Enjoys mirror work and imitation is good. Has trouble pointing tongue to nose and directing it in various ways."

A note from September 17, 1951, reads "John, upon hearing



square-dance music in the gym, tore away from me and ran down the hall, into the gym, and began laughing and clapping his hands. It took me quite some time to distract him and lead him away."

The next entry is December, 1951, and reads in part, "Doing well with lip sounds; working on control of saliva and keeping lips together when not speaking. John has a habit of allowing his mouth to remain open. Breath control and breathing pattern improving. Expressing himself more freely. Echolalia reduced."

By March, John had considerable mobility in his tongue and dearly loved doing the exercises when done as a story, especially when his tongue was an imaginary red horse. His ear was distinguishing sounds well and he could do several sounds in isolation that he could not manage to put into words. In general, he had a tendency to voice his unvoiced sounds, so that p was said as b, t as d, and so on.

At this time, he had discovered the s sound and loved to try to get it into words. It happened one day when he found a sample bar of soap on the shelf in the speech room. He smelled it excitedly, then turned to me and said "Oap, oap." I said "Yes, ssssoap," and he repeated, "Ssoap." Thereafter, that became John's special sound for awhile, and we hunted for it in his reading book and asked his teacher to help him watch for it too. Over the summer, he put it into words assiduously, even where it should not be, as his mother laughingly reported.

His f sound was not too easy, and in words was usually an fp combination unless the word was said very slowly and broken, as "f..at".



However, this sound was given an impetus in an accidental fashion too. It was April or May and the flies had begun to bother us. John's distractibility was being sorely tried, because he could see the fly on the window and its movement caused his attention to wander." "Pie," he said. I took a moment to catch and kill it, when another made its appearance. "Doo pies," said John, indicating that I should deal with it too. He seemed highly satisfied, and wanted to talk about it, so we worked on the word, and he managed to achieve, not only the f but also the fl combination. We went from there to other fl words and the f sound progressed much more quickly from then on.

By the beginning of May, 1952, it was obvious that John was making people understand whole sentences. Conversation was not easy, however, and there were plenty of moments in class when his vocabulary was not equal to the task or my divination failed to operate.

September, 1952 saw much improvement after the summer's maturation. Almost everything that he tried to say could be understood and he was definitely interested in having his share of the talking both at school and at home. His mother reported that he objected if his brother took more than his share of the conversation at home.

His sounds needed much more work. Vowels were in need of improvement as well as consonants and each new task always presented difficulty to John. In March, 1953, he transferred out of the school district and speech lessons were carried on further by the Crippled Children's Division of the University of Oregon Medical School. Prognosis for John was good, but it seemed highly probable that his speech would always sound a little labored and different.

## SUMMARY AND CONCLUSIONS

Summary of Findings

In the area of cleft palate therapy, the cases used in the study were all pre-school children. It was felt that these children would benefit from therapy begun as early as possible, even as early as two years of age. Excellent results were obtained with these children (in spite of a poor prognosis in one case and a doubtful prognosis in another). Indications are that early therapy is more effective and economical than extensive later therapy after wrong habits are set.

In the area of group therapy, it was discovered by all clinicians in the program that this method of teaching could and did take care of individual needs while enabling the child to remain in a situation which helped him to grow toward an effective social adjustment. Besides acquainting the children with the problems of others, it also acquainted the parents, to their mutual benefit. Group dynamics proved its effectiveness in the group sessions, bringing to each lesson more than the devices for speech therapy ever could do alone.

In the area of parental counselling, group sessions were found to be of decided value, particularly the informal sharing that went on from day to day.

In the area of brain damage, it appears that early prognosis is impossible. The two cases studied justified the trial given both academically and in the field of speech therapy. ( This was shown in

spite of poor prognoses in both the cases studied.)

Need for close cooperation among the rehabilitative agencies is obvious. Closer cooperation is desirable.

#### Conclusions and Recommendations

(1) Findings in these clinics point to the advisability of early therapy for the child with a cleft palate.

(2) Parental counselling needs to be available immediately when a child with a cleft palate is born, and carried on concurrently with the various phases of the child's rehabilitation.

(3) Inter-agency cooperation is essential. Continued improvement is necessary here.

(4) Group therapy provides a valuable medium for instruction of the child and counselling of the parents.

(5) Prognosis for the brain injured child is difficult and it is inadvisable to attempt this in the beginning stages of therapy.



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APPENDIX



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## DEFINITION OF TERMS

Babbling period - the period from three to eighteen months approximately, when the infant indulges in sound play.

Cartilagenous tissue - a white, semiopaque nonvascular connective tissue composed of a matrix containing nucleated cells which lie in cavities or lacunas of the matrix. (2, p.184)

Cicatrized tissue - from cicatrix, a scar. The connective tissue which replaces a localized loss of substance. (2, p.219)

Glottal click - the sound produced when the vocal cords are brought together with force as air is expelled over them.

Levator muscles - muscles which raise or elevate.

Levator palatini - the muscle which lifts the soft palate.

Passavant's pad - the bulging of the posterior pharyngeal wall produced by the contraction of the overlapping of the superior and middle constrictors of the pharynx. (2, p.262)

Pharynx - the musculomembranous tube situated back of the nose, mouth and larynx, and extending from the base of the skull to a point opposite the sixth cervical vertebra, where it becomes continuous with the esophagus. It is lined by mucous membrane. (2, p.760)

Nasopharynx - the upper portion of the pharynx, functionally a part of the respiratory tract.

Oral pharynx (oropharynx) - lower part of the pharynx, functionally a part of the digestive tract.

Prosthetic appliance - an artificial substitute for a missing part. (2, p. 823)

Plosive sounds - those consonants produced by an explosion of air after pressure has been built up within the oral cavity.

Septum - a partition; a dividing wall between two spaces or cavities. (2, p.922)

Sinus - a hollow or cavity; a recess or pocket. (2, p.936)

Sphincter - a muscle surrounding and closing an orifice. (2, p.956)

Uvula - the conical appendix hanging from the free edge of the soft palate, containing the uvular muscle. (p. 1112)

Bifid uvula - a uvula divided into two parts.



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