

The development of education for deaf-blind people

Legacy of the Past

The book *Legacy of the Past* (Some aspects of the history of blind education, deaf education, and deaf-blind education with emphasis on the time before 1900) contains three chapters:

- Chapter 1: The development of education for blind people
- Chapter 2: The development of education for deaf people
- Chapter 3: The development of education for deaf-blind people

In all 399 pp.

An internet edition of the whole book in one single document would be very unhandy. Therefore, I have divided the book into three documents (three internetbooks). In all the three documents contain the whole book. *Legacy of the Past*.

This Internetbook is

Chapter 3: The development of education for deaf-blind people.

Foreword

In his Introduction the author expresses very clearly that this book is not The history of blind education, deaf education and deaf-blind education but *some aspects of their history of education* with emphasis on the time before 1900.

Nevertheless - having had the privilege of reading it - my opinion is that this volume must be one of the most extensive on the market today regarding this part of the history of special education.

For several years now I have had the great pleasure of working with the author, and I am not surprised by the fact that he really has gone to the basic sources trying to find the right answers and perspectives. Who are they - and in what ways have societies during the centuries faced the problems?

By going back to ancient sources like the Bible, the Holy Koran and to Nordic Myths the author gives the reader an exciting perspective; expressed, among other things, by a discussion of terms used through our history.

As I am trying to say, Dr. Enerstvedt not only presents a historical survey, rather he discusses the situation of the blind, the deaf and the deaf-blind in the context of the actual time they were living in.

Dr. Enerstvedt is not only a theoretical researcher - he also has a practical experience from the field, which he reveals in his discussion on methods.

The book has the character of having been written by a professional in sociology and by a person with a deep understanding and knowledge in special education. As said earlier, this volume is not a bare historical outline, but is also a story of individuals and their helpers from the Antiquity and beyond - to our time.

This book should be of great interest to all of us working with sensory-deprived people, to parents and to students in the area of education, psychology, sociology and other related areas.

Oslo 28th of May 1996

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Introduction

The present book is not The history of blind education, deaf education, and deaf-blind education. It is not A history of ..., it is precisely what is stated in the title: Some aspects of the history of blind education, deaf education, and deaf-blind education with emphasis on the time before 1900.

My own qualifications for trying to make a contribution to the field of deafness, blindness, and deaf-blindness:

My main profession is that of a professor of sociology, Department of Sociology, University of Oslo. I am Senior Research Officer at Skådalen Resource Centre for Special Education of the Hearing Impaired and the Deaf-Blind (previously: Skådalen School).

I worked as care-worker at a residential school for deaf and deaf-blind children in Oslo - Skådalen school - from January 1990 to July 1991. Previous to that I worked for more than a year as a relief worker at the same institution/school (from October 1988 to December 1989).

During the autumn of 1991 I studied deaf-blindness with Sense - The National Deafblind and Rubella Association in the UK, at Sense in the Midlands, i.e. a regional centre for Sense in Birmingham.

The first half of the year 1993 I studied deaf-blindness at Perkins School for the Blind, Watertown, USA.

Although my interest in working with deaf-blind people primarily was a theoretical and general one - that of the essence of communication and language - my actual work with deaf-blind persons altered my perspectives. I am still interested in the general theoretical questions of communication and language and plan to write something on that subject. However, I have gradually become more and more interested in the lives and fates of deaf-blind people. In the beginning I merely wanted to give a very brief historical overview before I came to my main interest, that of the communication of (and with) deaf-blind people. However, my studies led to an interest in the history of both deaf and blind education. I recognized the necessity of studying blindness and deafness as prerequisite to understanding deaf-blindness, although the latter is not merely the sum of deafness and blindness. The result is this book - the first part of my main project: the communication of (and with) deaf-blind people. It is the result of the practical experience and theoretical studies of several years.

It is impossible to mention all the people who have been important and helpful in my work. However, some persons without whom this and the next book

never could have been published, deserve being named. To exemplify this help would require the space of a great book in itself! (Perhaps such a book should be written so that the reader might understand that every book is a collective product.) In alphabetic order :

Yerker Andersson, Abdel Magid Al-Araki, Thomas E. Allen, Eldbjørg Arnesen, Knut Arnesen, Jim Banta, Cafer Barkus, Anne-Grete Barlaug, Mike Bello, Carol Benoit, Barbara Birge, Lynne F. Bernstein, Peter Blackwell, Delma Boyce, Martin Jon Bray, John Bridge, Silje Brosvik, Norman Brown, Wendy Buckley, Tony Bugge, Eddie Calhoun, Linda Callahan, Cristina Castro, Rodney Clark, Gini Cloke, Carol Crook, Steve Davis, Lorraine Delhorne, Susan DeCaluwe, Jennifer R. Douglas, Nat Durlach, Steinar Dybvad, Kimberly Emrick, Åse Enerstvedt, Bård Engen, Elizabeth Engen, Trygg Engen, Paul Ennals, Lyn Faulkener, Marte Feiring, Arvid Fennefoss, Peter Fitzgibbons, Janice C. Gatty, Dennis Gjerdingen, Debbie Gleason, Unni Gran, Mary Grannell, William Green, Sharon Grey, Torill Grønhaug, Terje Haraldsen, Virginia Harris, John Hatton, Rosie Hayes, Margareta Henriksson, Karen Hern, Mary Hill-Peters, Angunn Hirth, Gunnar Høgden, Robert J. Hoffmeister, Grete Høie, Lisa Holden-Pitt, Alvina Holyoake, Deborah Hughes, Yvonne Hurley, Bitten Haavik Ikdahl, Carolyn Jones, Steve Kiekopf, Tony Kirk, Mari Klashaugen, Christine Lebert, Christopher Leek, Fridtjof Lehne, Dot Leslie, Lauren Lieberman, Bård A. Lindgaard, Marjorie Magner, Martha Majors, David S. Martin, Barbara Mason, Donna Mehan, Beth Miller, Astrid Moe, Donald F. Moores, Marsha Morales, David Morrison, William A. Moses, Mogol Musa, Anne Nafstad, Hilde Nes, Maurin Nichols, Kathy Norris, Trine Noven, Debra Nussbaum, Cyndi O'Brian, Christine Peatman, Geoff Plant, Susan Powers, Julie Pratt, Charlotte Reed, Sally Revoile, Bjørg Rike, Nan Robbins, Harold Robertson, Joan Robertson, Arthur A. Roehrig, Liv Rolandsen, Lynda Samourian, Janet Sauerwein, Odd-Inge Schröder, Gretha Seeland, Philip Franz D. Seitz; Eva Seljestad, Lynne Silverstone, Anita Simonsen, Eva Simonsen, Anne Skhakeshaft, Trygve Skomedal, Christin Sletten, Julie Smith, Robert J. Smithdas, Bob Snow, Astrid Sund, Tonje Sørensen, Sharon Stelzer, Kathleen E. Stock, Erling Storhaug, Bob Storm, Kenneth Stuckey, Jan Svendsen, Else Marie Svingen, Jeri Traub, Kurt Vinterhøj, Arnfinn Vonen, Bettie Waddy-Smith, Claire Wade, Julie Waters, David Williams, Bernadette Wynne, Mary Zatta.

My thoughts also go to all the tutors (house/residential workers; "program aids") I have worked with. Except for two or three cases; this was a successful cooperation in which I learned very much.

Last but not least; the deaf-blind students and their parents have been decisive to my learning in this very difficult subject.

The following institutions also were of major importance for my work:

The University of Oslo - Department of Sociology; Skådalen Resource Centre for Special Education of the Hearing Impaired and the Deaf-blind, Oslo; Sosialdepartementet (Royal Norwegian Ministry of Social Welfare), Oslo ; Statens Sentralteam for Døvblinde (Norwegian Central Team for the Deaf-Blind), Oslo; Faglitterær forfatterforening (The Norwegian Non-fiction Writers and Translators Association), Oslo; Borlaugs legat (Borlaug's legacy); The National Deafblind and Rubella Association (Sense) - Sense in the Midlands, Birmingham, Great Britain; Perkins School for the Blind, Watertown, Massachusetts; Clarke School for the Deaf, Northampton, Massachusetts; Rhode Island School for the Deaf, Provi-

dence, Rhode Island; Helen Keller National Center for Deafblind Youths and Adults (HKNC), New York; Gallaudet University, Washington, D.C.; The Learning Center for Deaf Children, Framingham, Massachusetts; Research Laboratory of Electronics, Massachusetts Institute of Technology.¹

The development of education for deaf-blind people

The history of the education of deaf-blind people is very short viewed in a historical perspective. Although we know that many visually impaired people are also hearing impaired and many hearing impaired are also visually impaired, the histories of the education of blind people and that of deaf people seem to have emerged and developed relatively independent of each other. Later the education of deaf-blind people came into existence in either institutions for blind people or in institutions for deaf people.

The Myth

Helen Keller

Many people have read the story of deaf-blind Helen Keller (1880-1968) in her own words. They have also read how Helen - nicknamed by herself as "Phantom"² - at the age of approximately seven years made the real cognitive breakthrough together with her teacher - "Teacher" Anne Sullivan Macy (1866-1936). Helen Keller narrates:

"Phantom grew angry over Annie's repeated attempts to impress upon her the difference between 'water' and 'mug'. Tactually, I recall quick footsteps in the room, a hand - my mother's - seizing Phantom and dragging her away for a sound spanking. After that Phantom began to improve, but still she lacked the normal child's love of praise. She was not aware that she had been punished because she did not distinguish between right and wrong. Her body was growing, but her mind was chained in darkness as the spirit of fire within the flint. But at last, on April 5, 1887, almost exactly a month after her arrival in Tuscumbia, Annie reached Phantom's consciousness with the word 'water'. This happened at the well-house. Phantom had a mug in her hand and while she held it under the spout Annie pumped water into it, and as it gushed over the hand that held the mug she kept spelling w-a-t-e-r into the other hand. Suddenly Phantom understood the meaning of the word, and her mind began to flutter tiny wings of flame. Caught up in the first joy she had felt since her illness, she reached out eagerly to Annie's ever-ready hand, begging for new words to identify whatever objects she touched. Spark after spark of meaning flew through her mind until her heart was warmed and affection was born. From the well-house there walked two enraptured beings calling each other 'Helen' and 'Teacher'. Surely such moments of delight contain a fuller life than an eternity of darkness." (Keller,H. 1956, p. 35).

Helen Keller was born in Tuscumbia, Alabama, on June 27, 1880, a normal child. Nineteen months later she was stricken with an illness which left her hearing impaired³ and blind. We still don't know which disease. Helen says: "They called it acute congestion of the stomach and brain." (Keller,H. 1922, p. 7).

Her body was otherwise unimpaired. Nella Braddy Henney informs us that the condition of her mind was in doubt. Some said she was an idiot. It was impos-

¹ Thanks to Norman Brown, Grete Høie, Susan Powers, Arnfinn Vonen for language improvements.

² Later Helen was also known by another nickname, "Billy," John Macy's nickname for her. His nickname for Anne Sullivan was "Bill."

³In this book there will be no discussion of terms like "impairment", "disability", "handicap", etc. See Enerstvedt 1995.

sible to reach her and she was, using her own words, "a Phantom living in a world that was no-world".

She stayed in this no-world for five years.

Then Anne Sullivan, a graduate from the Perkins Institution for the Blind in Boston, became her teacher. Anne Sullivan, very visually impaired herself - she had developed trachoma at age five -, came to Tuscumbia on March 3, 1887, a date that Helen Keller always cherished as her "soul's birthday".

She began at once spelling into Helen's hand, suiting the word to the action, the action to the word, and the child responded by imitating the finger motions like a bright, inquisitive animal (Henney,N.B. 1956, p. 7-9).

Helen Keller published several books. *The Story of my Life*, first published in 1902, has become a classic, continuously in print for more than fifty years. The book was written with the assistance of John Macy, a critic and socialist reformer.⁴ That was the way he met Anne Sullivan.

Keller declared herself a "Christian socialist" and she also wrote an article with the title "How I Became a Socialist". Her life is also the story of a certain society - the capitalist one - and her ups and downs remind us of the cyclical development of this society. With money she was at the top, without money she had to sell her life story, live as a vaudeville actress with Anne Sullivan in a twenty-minute "act" where she and "Teacher" demonstrated how she had been taught and how she had adapted herself to the world. Helen Keller was a matter of discussion all her life. When she became a socialist she disappointed many. When she became a Christian, she disappointed others. And all the time she was accused of being "used" by others for their dark and sinister purposes. She was also accused of being a fake - that in fact "Teacher" wrote her books (i.e. before "Teacher" passed away on October 20, 1936). This accusation of fraud was originally based on the following: In 1891 Helen Keller had written a short story which she titled *The Frost King* as a birthday gift for Michael Anagnos, Director of the Perkins Institution. Delighted with Helen's efforts, Anagnos allowed the story to be published. Almost immediately, a sharp-eyed reader noticed a close resemblance between Helen's *The Frost King* and a story written some twenty years earlier called *Frost Fairies* (George,J. St. 1992, p. 39).

Nella Braddy Henney defends her and refers to how she wrote her books. However, also Henney when telling that Helen went on to Radcliffe College in 1900 and four year later was the first deaf-blind person to earn a college degree, says:

"But even this was not enough. As long as Anne Sullivan lived, and she died in 1936, a question remained as to how much of what was called Helen Keller was in reality Anne Sullivan. The answer is not simple. During the creative years neither could have done without the other." (Henney,N.B. 1956, p. 10).

Helen Keller died in 1968.

Olga Skorokhodova

Another well-known story, elevated to myth in the former Soviet Union, is the life of Olga Skorokhodova (1914-82), perhaps not so known in western countries as the life of Helen Keller. Olga Skorokhodova tells:

⁴ Other publications include *The World I live In* (1908), *Out of the Dark* (1913), *Midstream* (1929), *Helen Keller in Scotland* (1933), *Helen Keller's Journal* (1938) and *Teacher - Anne Sullivan Macy* (1955) (Turkington,C., Sussman,A.E. 1992, p. 111).

"I was born in a small Ukrainian village by the name of Byelozero in 1914. My parents were poor peasants. In early infancy I fell ill with meningitis and lost my sight completely and later my hearing as well. Losing sight and hearing in infancy isolates a child from those around him. Usually this enforced isolation leads to mental degradation.

Fortunately this did not happen in my case: I was brought to a special school-cum-clinic for deaf-blind children that was set up in 1923 in the Ukrainian city of Kharkov by Professor Ivan Sokolyansky. My powers of speech were restored to me. I was given regular instruction in all subjects of the ordinary school curriculum once I had been taught the dactylic (finger) alphabet and mastered Braille script. I completed my schooling, received a higher education and then began to engage in research. I am infinitely grateful to my fellow-countrymen, for here in the Soviet Union I am constantly afforded the most considerate care and assistance." (Skorokhodova 1979, p. 13).

Olga Skorokhodova became a well-known writer and researcher in the Soviet Union. The process of her learning and her contributions to Soviet research on deaf-blindness have been a constant theme of Soviet literature in this field. According to Mike Lambert, her book, *How I Perceive, Imagine and Understand the World*, attracted particular interest (Lambert 1988, p. 125). It is a three-part work, a collection of notes initially made at the request of her educators, which recorded the process of her learning and the nature of her perceptions of objects, people, places and the arts. Through the work she became the most famous deaf-blind individual to reach normal levels of personal and academic attainment through specialized education in the Soviet period. She became the Soviet 'Helen Keller', typifying for many the developmental possibilities for severely handicapped individuals in the USSR (Lambert 1988, p. 125).

The essence of myth - or the myth of essence?

Are myths true?

Concerning Helen Keller, Olga Skorokhodova, and apparently also Laura Bridgman and the Norwegian Ragnhild Kaata, we cannot be sure of the exact degree of their visual and hearing impairments at different times of their lives. In a scientific evaluation this would be of great interest. The author has made an attempt to say something about the degree of Helen Keller's visual and hearing impairments in Appendix III.

However, the essence of myth does not concern its truth, but rather its effect. The effects of such myths deserve a discussion.

Firstly then, it may be of interest that the author of this book early in childhood read Helen Keller's *The Story of My Life* and since then has also been interested in the fate of the deaf-blind population. This is perhaps of little importance, but it may parallel the experience of many other people too. If so, it is important.

Alexander Meshcheryakov, (1923-1974), the famous Soviet deaf-blind expert, the successor of Ivan Sokolyansky (1889-1960), has an opinion on this matter. In almost every newspaper or magazine article about Helen Keller, he says, she was declared to be a woman of genius, outstanding and possessed of knowledge purely on account of her extraordinary gifts. It was thus implied that other deaf-blind people, lacking such unique genius, could not hope for any significant success in their studies. The Russian writer Maxim Gorky, who took an interest in deaf-blindness and had a profound understanding of it, wrote in a letter to Ivan Sokolyansky (25.8.1933):

"I saw Helen Keller in 1906 in New York, it was none other than William James, in Harvard, Boston, who advised me to 'acquaint myself' with this 'wonder'...Helen Keller

made an unpleasant, even grim impression on me: she appeared to be an affected, very temperamental and extremely spoilt girl. She talked about God and how God disapproved of revolution. In general she reminded me of those 'blessed' and 'holy' nuns and 'pilgrim women' whom I have seen in our villages and convents. She was surrounded by a collection of old maids, who flustered round her as if she was some kind of parrot, whom they had taught to talk...It was quite obvious, that Keller was a business proposition for her retinue." (In Meshcheryakov 1979, pp. 37-).

This aura of the miraculous and the halo of the superwoman, says Meshcheryakov, remained with Helen Keller to the end of her days (she died in 1968). Photos were published in journals and newspapers showing her in the company of film stars and statesmen. She was invited to receptions given by presidents and kings. She was and indeed still is written about as some extraordinary phenomenon. F.N. Doubleday, the editor of the magazine *Outlook for the Blind*, wrote, in the June 1955 issue, that to stand in the presence of Helen Keller was like standing before some superwoman possessing six sense organs denied to ordinary mortals and using them to penetrate more deeply the riddle of human existence.

All this fuss and publicity did of course place Helen Keller in a unique position and to a large extent impeded efforts to reach a correct understanding of the problems connected with deaf-blindness and to make adequate arrangements for the instruction and care of deaf-blind people, according to Meshcheryakov (Meshcheryakov 1979, p. 37-38).

The great Soviet teacher Meshcheryakov holds an interesting opinion, but it is not the whole truth of this matter. On the contrary: It is more likely that the story of Helen Keller has inspired many teachers in special education. The author has some empirical evidence for this assertion. He has met many teachers acquainted with this story. The problem seems more to be the opposite of what Meshcheryakov believes it to be. People do not see Keller as so unique. They think what Helen Keller achieved may be achievable for many, if not all, the deaf-blind. This educational optimism has no scientific basis. The reality is far from the myth. An education based on the myth is doomed to failure and may also do much harm to the development of deaf-blind people.

Some comments on terminology

What is deaf-blindness? Does there exist a definition of deaf-blindness commonly agreed upon? Which criteria define a person as "deaf-blind"?

Now, merely the question of terminology will be touched upon. What is the meaning of terms like "multi-sensory impairment" (MSI), "dual sensory impairments", "multi-sensory deprivation" (MSD), "deaf-blindness"?

The most frequently used terms are "deafblind", "deaf-blind", "deaf-blindness", "multi-sensorily impaired", "multi-sensory impairment", "multi-sensory deprived" and "multi-sensory deprivation".

The respected authors on the subject, J.M. McInnes and J.A. Treffry, use the terms "deaf-blind children" and "multi-sensory deprived children" as synonyms (McInnes and Treffry 1982). Christine Best uses "the multi-sensorily impaired" and "the deaf-blind" as synonyms in her contribution in David Ellis's (ed. 1986) outstanding book *Sensory Impairments in Mentally Handicapped People* (Best,C. 1986). Some years ago also the term "deaf,dumb and blind" was used. This last expression should be avoided, since nobody at present anymore refers to deaf people as "deaf and dumb" as was common in the nineteenth century. The term "dual sensory impairment" also exists. This is perhaps the most accurate,

precise term. However, the term "dual" is also ambiguous since "dual" does not indicate which are the senses in question. The author of this book views the terms "multi-sensorily impaired" and "multi-sensory impairment" as almost identical with the terms "dual sensorily impaired" and "dual sensory impairment". The former have perhaps a minor wider extension than the latter, since "multi" also may include other senses. Both the former and the latter terms are precise terms on the main matter, since only a minority of the so-called "deaf-blind" persons are totally deaf and blind. The majority of them have either residual hearing or vision or both. The reader may choose for himself the best terminology. The author of this book prefers the terms "multi-sensory impaired" and "multi-sensory impairment" since they are to the point and also seems to be frequently used terms. However, there is a long historical tradition of using the terms "deaf-blind" and "deaf-blindness", and according to that, the latter terms will be used in the present book.⁵

From *terra nullius* to Samuel Gridley Howe

From the earliest days of recorded history to the nineteenth century scarcely any record exists of persons who were both deaf and blind, neither congenitally nor adventitiously.

Deaf-blindness before the end of the eighteenth century

The Bible and deaf-blindness

The author has investigated the Bible, both Old and New Testament. The term "deaf-blind" or "deafblind" does not occur in the Bible, neither in the Old nor in the New Testament (translation KJV). Neither does a passage exist which can indicate the occurrence of deaf-blind persons, with the exception of Mt 12:22 in the New Testament:

Mt 12:22 Then was brought unto him one possessed with a devil, blind, and dumb: and he healed him, insomuch that the blind and dumb both spake and saw.

Although the last part in this passage is not quite unequivocal in modern English, in the Greek basis for the English translation it is clear that the meaning is *one* blind and dumb person, the expression "the blind and dumb" does not mean blind people and dumb people.

However, there is little reason to interpret dumb as deaf, cf. our earlier discussion on the question concerning the relation between deaf and dumb in The New Testament. On the other hand, this person might have been deaf too. Notice that "dumb" in this passage (in KJV) is a translation of Greek *μετένθητι*, which also can have the denotation "deaf". The passage in Matthew is significant in the sense that one aspect is the devil as cause - indication of "evilness", "sin", "punishment". The other side, however, is that the blind and dumb man can be cured.

Did deaf-blind persons exist before the sixteenth century?

Dugald Stewart, the nineteenth century Scottish philosopher, suggests that the great majority of blind deaf-mutes were destroyed by the neglect or violence of their relatives (Stewart 1812, in Waterhouse, E.J. 1977, p. 5). This supposition is reinforced by conditions which have prevailed to this day in many areas of the world, particularly in Asia and Africa, where almost no information about deaf-blind people is available. Workers there among people who have an impairment

⁵The International Association for the Education of Deafblind People has (1991) recommended to spell "deaf-blind" without a hyphen (Brown,N. 1993, p. 2).

concede the possibility that children born deaf-blind do not survive infancy. However, Waterhouse is right, stating that this does not explain why there are no records of those persons who had a normal childhood but became deaf-blind in adulthood. Surely such persons existed at all times and in all countries (Waterhouse, E.J. 1977, p. 5).

Waterhouse is right, the Koran indicates that.⁶

The Koran and deaf-blindness

There is no single Arabic term in the Koran equivalent to the term "deaf-blind" or "deaf-blind". However, the Koran is - at least 4 times - referring to people who are both deaf and blind!

For example, the following passages (in context) are very interesting - metaphors about deaf-blindness, and comparison with a real deaf and blind person. In chapter 11:

- 21. And who does greater evil than he who forges against God a lie? Those shall be presented before their Lord, and the witnesses will say, 'Those are they who lied against their Lord.' Surely the curse of God shall rest upon the evildoers
- 22. who bar from God's way, desiring to make it crooked, they disbelieve in the world to come; they are unable to frustrate Him on earth and they have no protectors, apart from God. For them the chastisement shall be doubled; they could not hear, neither did they see.
- 23. Those are they that have lost their souls, and that they forged has gone astray from them;
- 24. they without doubt will be the greatest losers in the world to come.
- 25. But those who believe, and do righteous deeds, and have humbled themselves unto their Lord- they shall be the inhabitants of Paradise, therein dwelling forever.
- 26. The likeness of the two parties is as the man blind and deaf, and the man who sees and hears; are they equal in likeness?

Will you not remember? (The Koran 1955, volume one, pp. 241-242; Koranen 1989, p. 212).⁷

Then there is the metaphoric passage 75 in chapter 5:

- 75. And they supposed there should be no trial; but blind they were, and deaf. Then God turned towards them; then again blind they were, many of them, and deaf; and God sees

the things they do. (The Koran 1955, volume one, p. 139; Koranen 1989, p. 116).⁸

Then we have the metaphoric passage 73 (in context passage 72-73) in chapter 25⁹:

⁶ The Online Version (Palmer's translation) is first investigated to find the passages. Then the Norwegian edition is investigated to give the passages number. Finally, the English translation by Arberry is chosen. In the investigation of the Koran, especially its terms, Abdel Magid Al-Arabi was of great help. References to the Arabic terms should be: Al-Arabi, Enerstvedt in Enerstvedt 1996.

⁷The Arabic terms translated to "the... blind and deaf" in chapter 11:26 are "al-aṣmaa wa al-ṣamm".

⁸The Arabic terms translated to "blind... and deaf" in chapter 5:75 is "ṣammu wa ṣammuu".

72. And those who bear not false witness
 and, when they pass by idle talk, pass by
 with dignity;
 73. who, when they are reminded of the signs
 of their Lord, fall not down thereat
 deaf and blind; (The Koran 1955, volume two, p.62; Koranen 1989, p. 361).¹⁰

Finally, the metaphoric passage in chapter 47, passage 25 (in context with 26).

25. Those are they whom God has cursed,
 and so made them deaf, and blinded
 their eyes.
 26. What, do they not ponder the Koran?
 Or is it that there are locks upon
 their hearts? (The Koran 1955, volume two, pp.222-223; Koranen 1989, p. 516).¹¹

The phrases "blind and deaf"¹² have a striking difference to phrases in the Bible. Neither in the Old Testament nor in the New Testament such phrases occur. Between the latter one and the Koran half a millennium has elapsed. Deaf-blindness has come to the surface.

Something has happened - but what?

A change in attitudes? Conditions? Treatment?

And where? Only in the Arabic culture? The change is difficult to interpret.

One of the earliest references in print to a deaf-blind person is found in Governor Winthrop's Journal for 1637.

There was an old woman in Ipswich who came out of England, blind, and deaf, yet her son could make her understand anything, and know any man's name by her sense of feeling. He would write upon her hands some letters of the name, and by other such means would inform her. (Perkins, 1841 in Waterhouse,E.J. 1977, p. 5).

From the above passage, however, it is sensible to assume this was a post-lingual deaf-blind person.

Then we have an early reference by J.B. Bulwer in the seventeenth century. In his *Deafe and Dumbe Man's Friend, or Philocophus*, he says:

"It is also reported by Ecclesiasticall writers that one Anagildus, who was both deafe and dumbe and blinde was restored to all his senses, whilst he prayed unto St. Julian."
 (Bulwer,J.B. 1648, in Farrell 1956).

l'Abbé Deschamps - a theoretical approach to the possibility of teaching speech to children who are blind, deaf and mute

While some thinkers in the past recognized the theoretical possibility of teaching deaf-blind children (this opinion was voiced by Diderot as early as 1749 in his famous Letters on the Blind for Those Who Can See), no practical attempts were made to exploit these opportunities (Meshcheryakov 1979, p. 40). Also in the letter from 1751 mentioned earlier, Diderot touches upon the teaching of the

⁹In the Norwegian translation by Berg the Norwegian term "stum" (English: dumb) is applied, by Arberry, however, "deaf".

¹⁰The Arabic terms translated to "deaf and blind" in chapter 25:73 is "ṣumman wa ḡumyaana".

¹¹The Arabic terms translated to "deaf, and blinded" in chapter 47:25 is "ḡammahum wa aḍmaa".

In this book all referred Arabic words for "blind" have the same root (root-consonants: ḡ-m-y), except "al-akmah". In this book all referred Arabic words for "deaf" have the same root (root-consonants: ḡ-m-m).

¹²The meaning in the quoted passages here really is deafness and blindness in one person; the reference is not to deaf *or* blind persons.

deaf-blind. The Frenchman l'Abbé Deschamps, whom we know from Desloges' criticism (see above), however, in 1779 makes a theoretical approach to the possibility of teaching speech to children who are blind, deaf and mute. He writes that the first step would be to give the pupils some idea of what we are trying to do for them. We would try to make them understand that when we want something we move our lips to ask for it. We would tell them that, like us, they have tongue and lips, that, in order to make use of them as we do, they must place them in similar position, and that they must alter the position of these organs in different ways. We would have them feel these changes with their hands, for these varied positions are what make us talk, what make others aware of our wishes, what make us ask for our daily needs. Feeling the position of the speech organs, the pupil could imitate them and make use of them as we do. Patience and repetition would be our key words (Deschamps,M. 1779, in Farrell,G. 1956, pp. 6-7).

The end of the eighteenth century

Lorenzo Hervas y Panduro - the outlining of a method for teaching deaf-blind persons

Sixteen years later in a book published in 1795 in Madrid, where a school for deaf people was opened in 1788, the author, Lorenzo Hervas y Panduro, outlines a method for teaching deaf-blind persons. In a section of the book, where the author is discussing a language of arbitrary signs, he writes:

"Signs can serve just as well as words to form one of many languages. If I, for example, were to teach a blind-deaf mute, I could not give him any instruction with a vocal or visible language because hearing and sight are lacking...I therefore must avail myself of a language adaptable or perceptible to the other senses which the blind-deaf mute has. In such case, I would make use of the signs of touch, of smell and of taste..."

I would compose, he continued,

"a spelling book of letters in high relief; I would have the blind-deaf mute touch them with his fingers. Then I would present to him the word 'bread' in raised letters; I would have him take a piece of bread and taste it, and in this way I would make him understand what the word 'bread' meant." (Panduro,L. 1795, in Farrell,G. 1956, pp. 7-8).

Abbé Roch Sicard in the footsteps of L'Epée

According to Sicard, L'Epée must have talked about the education of deaf-blind people before Panduro's publication. As we remember, L'Epée had passed away already in 1789. Sicard refers to his own opinion on the matter of method as stemming from L'Epée and identical with L'Epée's. Sicard says in 1803:

"...if among the exceptions of nature or among its distressing mutilations we came across someone who was both deaf and blind, what would our means of communication be?..."

What can the teacher's hand do on the pupil's hand when the tongue can express no sound, when the ear cannot hear any, when the face also keeps silent?...

Why don't signs come to our aid in this case? For if we lack eyes for seeing these signs, don't we have hands for touching them?...

Oh, if the experiment I would like to perform were successful, if I managed, as I have done for the deaf, to give such a person a mind, this triumph would make me even happier than its subject.

My illustrious predecessor dared to believe this possible. He did not hesitate to publish, in the newspapers of the time, a proposal for an education that had always seemed impossible even after his successes had accustomed people to faith in the greatest wonders. Here are the methods he communicated to me.

Epée planned to use an alphabet of polished iron letters to form the vocabulary for physical objects and actions identifiable by touch. He hoped to familiarize his pupil's hands with these letters, getting the hands to do the work of the eyes. The pupil was to touch the object with one hand and to spell its name with the other. Epée's creative genius would probably have invented the rest as he went along.

I fully appreciate the difficulties arising at each step. For how, without ever seeing or hearing each other, do we agree on a sign to establish a connection between the object and its name? I would think we should stimulate instinct. I would give the pupil some interesting object, whose name he was willing to make an effort to remember, and have him make the sign and combine the letters. The first step might be followed by a second - discrimination of the qualities or modes of the objects. Of course we realize that colors and sounds would not enter into our reckoning, but the basis for the new metaphysics and the first objects in this training would be the shapes of tangible objects. Because the visual qualities have led the deaf by analogy to the discovery of purely abstract moral and intellectual qualities, why would not the tactile sense lead us to the same kind of discovery?" (Sicard 1803, pp. 99-100 in Lane 1984b).

James Mitchell - a congenitally deaf-blind person?

According to Collins and Zambone, among the first deaf-blind people to be educated were Victorine Morriseau (1789-1832) in Paris, France (Collins,M.T.; Zambone,A.M., p. 1).

While there are several references to deaf-blind persons in the literature of the eighteenth century, there is only one real case history that is at all illuminating. This is Stewart's account of James Mitchell, a deaf-blind boy who was born on November 11, 1795, at Inverness, Scotland. It is asserted that Mitchell was congenitally deaf-blind. While James was still young, his father, who had been a clergyman, died, and the mother moved to Nairn. Early in his childhood, the deaf-blind boy began to use effectively his remaining senses - taste, touch, and smell. It is reported that he was able to distinguish strangers by their smell and to know his own articles of clothing in the same way. James walked about quite freely and was able to ride a horse. He developed systems of signs which enabled him to convey to his mother or sisters his hunger by touching them in an expressive manner and pointing to the cupboard where food was usually kept. Members of the family were able to express their opinion of his actions by giving a gentle tap if they approved and a quick slap for disapproval. One of his earliest expressions of interest was to hold a bunch of keys so that a suspended one would strike his teeth. This seemed to afford a very pleasant feeling of vibration, and was one of his favourite amusements. When a piece of wood was substituted, he did not find the same satisfaction (Farrell,G. 1956, p. 12).

Meshcheryakov, however, points out that the Dutch teacher and psychologist Lenderink described how at the end of the eighteenth century several prominent British scholars and doctors met together to discuss Mitchell's condition. They came to the conclusion that nothing could be done for him and that no invalid was more crippled and deprived than a deaf-blind person.

Simon (1812-) was born in the East-Pyreneas and is said to have become blind and deaf at the age of 3. He was very bright and able in carpentry.

Anna Temmerman (1818-1859) was born in Ostende and passed away September 26, 1859, in Bruges. She was one of the first educated deaf-blind persons. Anna Temmerman came at 20 years of age to the institution for blind and deaf in Bruges. There she was taught by Abbé Carton. He has also written about the results he achieved in his education of her (Scholler 1990, p. 439). The author does not know if Anna was congenitally deaf-blind.

Samuel Gridley Howe and Laura Bridgman

It is generally accepted that the first man who demonstrated in practical terms the possibility of teaching a deaf-blind person was Samuel Gridley Howe, the American doctor and educator. We already know him from the chapter on blindness and deafness (see above). Harlan Lane disputes that Howe was the first one teaching a deaf-blind person. Thomas Gallaudet did demonstrate this possibility before Howe. We will later refer to and discuss Lane's opinion.

Laura Bridgman - the first educated deaf-blind person?

Although Howe knew the unfavourable reports from Europe concerning the teaching of deaf-blind persons, he was eager to meet an eight-year-old girl living in Etna, New Hampshire, reported to be deaf-blind. He met her in June 1837 in her home. It was Laura Bridgman (1829-89) (Farrell,G. 1956, p. 14-16). Laura was born in Hanover, New Hampshire to a successful farming family. Always a delicate child, at the age of 26 months she and her two older sisters contracted scarlet fever, which made her visually and hearing impaired and left her ill for two years. Her two sisters died (Turkington,C. and Sussman,A. 1992, p. 38; Donaldson,H.H. 1890, p. 294). Donaldson, based on Howe, said that both eyes and both ears were suppulated, and taste and smell impaired. Sight in the left eye was entirely abolished. With the right eye she appeared to get some sensation from extremely large bright objects, up to her eighth year, but after that time she became completely blind. Two years passed before she recovered sufficiently to sit up all day. At the age of five years she had regained her strength. She very soon stopped speaking and retreated into silence. In an Appendix to the Sixth Annual Report 1837 (Perkins Institution for the Blind) Howe makes some very touching remarks on Laura's speech, remarks that also reveal Howe's deep comprehension:

"...as her health and strength began to be established, she learned to go about the house and manifested a desire to be employed; not by looks, for she was blind; not by words, for she was dumb. She could, it is true, for a time pronounce the few words she had before learned; but not hearing *the sound of her own voice*, she soon lost the command of her articulation; the sound answered not to the thought; the will lost command of the tongue; and the last articulate word she was ever heard to utter was, 'book!'"



Laura Bridgman

Photo: Perkins School for the Blind

It was also observed, according to Howe, that her sense of smell was almost entirely destroyed and, consequently, that her taste was much blunted (Howe 1849, p. 14). The sense of smell seems to have been subject to some variations. During the first years of her residence at the Perkins Institution it was apparently completely wanting, and there was never at any time the slightest tendency to test objects by holding them to the nose. Later (1843) she seemed able to locate the kitchen by the odours coming from it, but this sense does not appear to have ever been of any importance to her. The sense of touch was very acute even for a blind person, and she was sensitive to jarring (Donaldson,H.H. 1890, p. 296).

On October 4, 1837, this deaf-blind girl aged about eight was admitted to the Perkins Institution for the Blind in Boston. According to Meshcheryakov, prior to that date no deaf-blind person had ever been given specialized instruction. This can be disputed; it depends on what is called "specialized instruction" (cf. Julia Brace). Laura's teacher was Howe. Laura Bridgman was the first deaf-blind person whose successful instruction challenged the prevalent belief that "the deaf-blind" were unteachable. Laura Bridgman learned to read, write and express simple ideas. She also learned to carry out certain manual tasks (Meshcheryakov 1979, p. 41, 45). Laura lived all her life at Perkins. She was sent home when 23

years old, but she obviously missed the institution. Some months later she was back and died there 59 years old in 1889.

Howe's method

Howe's method of teaching Laura Bridgman was inspired by his work with blind people. He had developed the system of embossed types which spoke to the fingers and proved comprehensible to the blind (see above on that). Farrell describes his method as follows:

His first step, then, was to take the symbols of articles (objects) and attach meaning to them. To accomplish this, Howe selected objects of common use, a key and a spoon, and later a knife and a book. To each of these he attached labels bearing the name in raised letters. Laura was made to feel the objects and then the words designating them, until she associated the name with the object. The second step was to detach the labels from the objects, and the pupil, given an object, was taught to find the right label. The third step was to cut the letters of the word apart, and to ask the child to pick out the letters forming the name of the object given her. It is interesting to observe that words were used before letters, antedating by some ten years the introduction of the word method by Mrs. Horace Mann and her sister, Miss Elizabeth Peabody. As close friends of Howe, they probably got the idea from his method of teaching Laura Bridgman.

In carrying on the instruction (governed by the element of fatigue displayed by the pupil), the embossed Roman letters of the doctor's Boston Line Type were spelled into the palm of Laura's hand by means of the manual alphabet of the Abbé de L'Epée. The next step after the manual alphabet of the deaf mutes had been mastered was to convey to her the ideas expressed in adjectives, such as hard or soft, and later, the formation of sentences.

Howe in 1839 wrote, "One of her earliest sentences, after learning the adjectives, was this: She had found the matron ill and understood that her head pained her; so she said, 'Smith head sick - Laura sorry.'" (Farrell,G. 1956, p. 18-19).

Laura was later taught to write, guided by a grooved board, the square-hand script which Howe favoured. In 1841, Laura began to keep a journal, filling half a page of large paper every day in neat pencil writing. This journal is one of the best ways of judging her progress, and of showing the facility which she developed in expressing ideas and even, at times, breaking into verse (Farrell,G. 1956, p. 19).

With Laura Bridgman a very important hypothesis can be put forward: *It is possible to reach a linguistic level without vision and/or hearing by tactual-kinaesthetic means*. However, we would emphasize that Laura Bridgman was not congenitally deaf-blind.

Nan Robbins: The curriculum aspect of Howe's education of Laura

Nan Robbins, using different sources, has in an excellent way pointed out the organizational and curriculum aspect of Howe's educational methods with Laura Bridgman:

- education in a classroom rather than "in the world"
- education in a residential school
- teaching by a variety of teachers, apparently, over the years, rather than by a teaching companion as in the case of Helen Keller

- education during certain periods of the day due to the classroom structure, rather than essentially all day with a tutor-companion as in the case of Helen Keller
- lessons as drill; teaching by an associative, analytic approach
- teacher-steered curriculum rather than child-focused
- apparently strict academic curricula throughout the years, rather than functional curricula (Robbins,N. 1983, 3, p.108, book B).

Lane's criticism of Howe

The chosen way of mastering the English language is, above all, Laura's fingerspelling, not speech (cf. Howe's reports). Lane, in the voice of Clerc, expresses an opinion on fingerspelling different from that of Howe (and later Sullivan and Hofsteater). "You might think it wondrous", Clerc says,

"that Howe never tried to teach his deaf-blind pupils to speak, especially as he now advocates this course so stridently for all the deaf, whose friends cannot hear them, whereas if Laura, Oliver, or Lucy had spoken they would have been in instant communication with all around them at Perkins. In fact, all had once spoken before contracting their illness and Laura on her own initiative developed distinct vocal names for each of her Perkins acquaintances." (Lane 1984, p. 293).

Lane points out that Howe did not teach speech because he realized what he later forgot, how difficult such a task is and how meagre the results (Lane 1984, p. 293). Instead, according to Lane, in the deaf person Laurent Clerc's voice,

"Howe taught his pupils fingerspelling, not sign. I have given some reasons. He did not know any sign and he did not realize, therefore, that language can be manual as well as vocal. He thought sign concrete, and hence unfit for restoring his deaf-blind pupils to society at large - as if they ever had belonged to society at large or ever would. And as if Massieu, Berthier, and I - and countless deaf people since - had not learned sign language first, then written language second." (Lane 1984, p. 293).

At the same time that Howe urged fingerspelling exclusively for all the deaf, he hastened, Clerc says, to acknowledge that his proposal "has an important bearing upon the whole subject of deaf mute instruction, of which I by no means pretend to be a competent judge..."¹³

However, Clerc asks:

"Then why not ask one, such as Thomas, me, or indeed virtually any deaf person at all? We would have told him that fingerspelling is slow and taxes the mind, that it takes ten different handshapes, for example, to convey the single brief sign UNDERSTAND, that it exists in space but does not exploit the possibilities of space, that when deaf people are obliged to use it with speakers of English they present a peculiar telegraphic form of English that is neither oral language nor manual language. Nothing shows more clearly how bizarre is a sequential spelled language to someone whose language is visual than Laura's question why it mattered whether you spelled 'cat' CAT or TAC or TCA" (Lane 1984,pp. 293-294).

The arguments of Lane against fingerspelling (totally against, or only against an exclusive use of it?) in the last quotation are precisely those arguments an advocate of fingerspelling would use *for* fingerspelling, because the first - the *simplicity* of signs - is a mental obstacle for learning a sequential language, and the second, the *sequentiality* of fingerspelling, might be the reason why fingerspelling seems to be so productive in the learning (and teaching) of the phonetically based language.

¹³This is quoted from Howe's report for the year 1841 on Laura Bridgman, already mentioned in our book in the chapter on the deaf (and quoted in Appendix II).

Was Julia Brace the first educated deaf-blind person in history?

Shortly after he opened his school for the blind in Boston, and before he met Laura Bridgman, Howe, in that characteristic way of seeking new fields to conquer, heard of a deaf-blind girl at the American Asylum for the Deaf in Hartford. This was Julia Brace who, born in 1807, had lost her sight and hearing through typhus fever when she was four years old. Apparently, Howe visited her. However, it is likely that he did not see any possibility educating her. This is interesting, because it already raises the question of the possibility of learning language if the learning process does not start early in infancy (see later on that topic).

According to Farrell, Howe also made another effort to reach the mind of Julia Brace. When she was 34 years old, in 1841 he took Laura Bridgman to visit her. The following year Julia Brace returned the visit. Then, however, after a time it was concluded and recorded by Howe:

"She is past the age which nature destines for the acquiring and storing up of knowledge...I fear the time has gone by for the active operation of Julia's faculties." (Farrell,G. 1956, p. 20).

Harlan Lane refutes Howe's opinion. He paints a totally different picture of Julia Brace.¹⁴

According to Lane (Laurent Clerc), Julia Brace "was to become the first educated deaf-blind person..." (Lane 1984, p. 255).

Thomas Gallaudet had visited Julia's home in Glastonbury just before going overseas. While abroad he discussed her case with the philosopher Dugald Stewart and sent back instructions that a tangible alphabet should be constructed out of wood, clay, or pins in a cushion, and Julia taught to read and spell. The reader might think it, Lane (Clerc) states,

"particularly obtuse to try and teach a deaf-blind girl to manipulate shapes that represent in a complicated way the component sounds in words she cannot hear, but it should be said in Thomas's (R.Th.E.: Gallaudet) defense that Julia had heard and spoken until her illness at four and a half. Still, letters could not penetrate the veil of darkness that surrounded her. In fact, the abbé Sicard did not think much of this way of proceeding. He wrote that he started out with the alphabet when he went to teach Massieu, but 'what information, in reality, can the understanding possibly derive from a series of abstract characters arranged in a particular order by chance alone and to which nothing equivalent can be exhibited in Nature?' Sicard urged, instead, that our instruction be modeled not on the teaching of reading but on the child's natural acquisition of his mother tongue. He was right: it was sign, which Julia learned promptly and well once she joined the deaf in our school, that penetrated the veil and did so beautifully. How extraordinary that this language, destined for the eye and obeying, as it were, the eye's imperatives, could be equally grasped by Julia's opened palms passed ever so lightly over the hands of the signer." (Lane 1984, p. 256).

We present some information about the comprehension, the knowledge, and the abilities of Julia Brace, in the manner Laurent Clerc sees them. When she came to the asylum in Hartford she learned the names of objects around her that concerned her. Soon, she could be sent to fetch an article of dress, her scissors, thimble, or anything of her own with as much assurance that she would understand and procure with anyone else. Although she spent nearly her entire life in

¹⁴It is very difficult to evaluate many of Lane's descriptions of facts (are they "facts"?), since his presentation is in the words of Laurent Clerc. However, Lane expresses some views which are of principal interest and they are not distorted here although some "facts" could be disputed.

the asylum, Clerc tells, Julia's knowledge of the external world, acquired through signed communication and some firsthand experience, is considerable. Clerc says,

"...You may wonder how she tells time. At school, she is guided during the day by the regular succession of the pupil's activities. She anticipates the return of the seasons, holidays, and vacations, no doubt by her own observation and by talking with those around her. Julia rises in summer about four, in winter five o'clock; the earliest riser in the women's dormitory, she washes, dresses without assistance, brushes her hair before the looking glass, and makes her bed impeccably. She then goes down to the sitting room and waits until summoned for breakfast. Then comes one of her duties: she has for years washed and wiped the teaspoons used by the pupils at meals and tea, some 130 of them. Others on the kitchen staff collect them for her, except during vacation. Then it is her job, and on the very first morning of vacation she sets off around the hall without a word being said to her on the subject. Once she has cleaned and dried the spoons, she puts them in their proper place and changes the towels as often as cleanliness requires. If teaspoons from the steward's table become mixed with the others, she instantly detects the error and puts them to one side..."

In the morning, she sews, knits, or mends. Clothing has become the central concern of Julia's life...

Julia knows most if not all of the women in the institution and is well disposed to all of them, strongly attached to a few." (Lane 1984, pp. 258-259).

"Laurent Clerc" (Lane) interprets the facts concerning what happened in 1841 quite differently than Howe, and, it seems, Farrell. Howe came down from Boston to confront Julia Brace, then thirty-four. Julia had been in the asylum¹⁵ for seventeen years, Clerc tells. Howe came with his own deaf-blind pupil, then twelve, Laura Bridgman. Clerc says:

"Howe proposed that Julia accompany them to the Perkins school in Boston, where she would learn reading and writing by the same means Laura had. I was opposed on the grounds that Julia, a grown woman, would be disoriented there with no one who knew her language, and besides, she already had greater skills in communication than Laura, albeit in our language (R.Th.E.: i.e. the indigenous sign language, the deaf's own language). I was overruled by Julia, who, much pleased with the proposal, set about preparing her wardrobe. Thomas and matron were inclined to accede to her wishes and Howe's urging.

Alas, I was proven right. Once separated from all her friends, duties and familiar environment, Julia sat apathetically all day long. If left alone she slept. She was pleased with her all-too-infrequent lessons, and learned the letter names of a handful of objects, but it was surely impractical to ask this beleaguered middle-aged woman to start learning a new language under such circumstances. After a year, she asked to be returned to Hartford, where she promptly resumed her old and effective means of communication." (Lane 1984, p. 292).

So, was Julia Brace "the first educated deaf-blind person", as asserted by Lane, or was it Laura Bridgman?

In fact, these opposite views can be understood in the paradigm of the manualist-oralist controversy. In the manualist version of history, Julia Brace was the first one, in the oralist version, it was Laura Bridgman.

Who is right?

It depends on what is meant by "educated." If it is a presupposition that an educated person master a kind of the phonetically based language, then it was Laura. If not, then it was Julia. Nowadays, both manualists and oralists agree that the mastering of the phonetically based language is important. Is that an argument supporting the oralist stance? No, it is not, because, a person might be educated,

¹⁵R.Th.E.: At Hartford.

although he could not speak, read or write. Lane should be taken seriously. This is a matter for further discussions.

In his own words: Howe's teaching of Laura Bridgman

The education of deaf-blind people seems to have developed due to the outstanding work of some personalities - in either institutions for the blind or in institutions for the deaf. We think of Thomas Gallaudet, Samuel Howe and of Anne Sullivan from the United States of America, and of Ivan Sokolyansky and Alexander Meshcheryakov from the former Soviet Union.

The methods in the education of Laura Bridgman and Helen Keller still have many valuable aspects and should neither be forgotten nor used inappropriately. There is also a link between those methods since Anne Sullivan - the teacher of Helen Keller - obviously was influenced by Howe's methods and her living in the same house with Laura Bridgman for six years. The methods of Howe and Anne Sullivan are milestones and turning points in the education of multi-sensorily impaired people. We will therefore quote extensively from Howe's reports and Sullivan's letters and reports.¹⁶ Neither should the work of Ivan Sokolyansky and Alexander Meshcheryakov sink into oblivion. However, the author is only acquainted with the work of the latter. We will quote extensively from his presentation of his methods.

First then, from Howe's reports referring to the teaching of Laura Bridgman.

What was the condition of Laura Bridgman before Howe started educating her?

In his report for 1840 (Appendix A) Howe says on her condition before she became ill:

"She is described as having been a very sprightly and pretty infant, with bright blue eyes. She was, however, so puny and feeble, until she was a year and a half old, that her parents hardly hoped to rear her." (Howe 1849, p. 13, 14).

It was not until four years of age that her bodily health seemed restored:

"As soon as she could walk, she began to explore the room, and then the house; she became familiar with the form, density, weight and heat, of every article she could lay her hands upon. She followed her mother, and felt of her hands and arms, as she was occupied about the house; and her disposition to imitate led her to repeat everything herself. She even learned to sew a little, and to knit.

Her affections, too, began to expand, and seemed to be lavished upon the members of her family with peculiar force.

But the means of communication with her were very limited; she could only be told to go to a place by being pushed; or to come to one by a sign of drawing her. Patting her gently on the head signified approbation; on the back, disapprobation.

She showed every disposition to learn, and manifestly began to use a natural language of her own; she had a sign to express her idea of each member of the family; as drawing her fingers down each side of her face, to allude to the whiskers of one; twirling her hand around, in imitation of the motion of a spinning wheel, for another; and so on. But, although she received all the aid that a kind mother could bestow, she soon began to give

¹⁶ We used the Reports from Perkins Institution for the Blind 1829-47, and 1846-63, and Howe's reports quoted from *Education of Laura Bridgman* (1849), Perkins Institution for the Blind, Mary Swift Lamson's *Life and Education of Laura Dewey Bridgman*, and, concerning Helen Keller, "A supplementary account of her education, including passages from the reports and letters of her teacher, Anne Mansfield Sullivan" by John Albert Macy in Helen Keller's *The Story of my Life* (1922), and Reports 1883-87. The work and comments of the outstanding specialist on deaf-blind education, Nan Robbins (1983) were also of great help.

proof of the importance of language to the development of human character; caressing and chiding will do for infants and dogs, but not for children; and by the time Laura was seven years old, the moral effects of her privation began to appear. There was nothing to control her will but the absolute power of another, and humanity revolts at this; she had already begun to disregard all but the sterner nature of her father; and it was evident, as the propensities should increase with her physical growth, so would the difficulty of restraining them increase." (Pp. 15-16).

How did her education begin? In the 1840 report Howe continues:

"There was one of two ways to be adopted: either to go on and build up a language of signs on the basis of the natural language which she had already herself commenced, or to teach her the purely arbitrary language in common use; that is, to give her a sign for every individual thing, or to give her a knowledge of letters, by the combination of which she might express her idea of the existence, and the mode and condition of existence, of anything. The former would have been easy, but very ineffectual; the latter seemed very difficult, but, if accomplished, very effectual: I determined, therefore, to try the latter.

The first experiments were made by taking articles in common use, such as knives, forks, spoons, keys, etc., and pasting upon them labels with their names printed in raised letters. These she felt of very carefully, and soon, of course, distinguished that the crooked lines *spoon* differed as much from the crooked lines *key*, as the spoon differed from the key in form.

Then small, detached labels, with the same words printed upon them, were put into her hands; and she soon observed that they were similar to the one pasted on the articles. She showed her perception of this similarity by laying the label *key* upon the key, and the label *spoon* upon the spoon. She was here encouraged by the natural sign of approbation, patting on the head.

The same process was then repeated with all the articles which she could handle; and she very easily learned to place the proper labels upon them. It was evident, however, that the only intellectual exercise was that of imitation and memory. She recollects that the label *book* was placed upon a book, and she repeated the process, first from imitation, next from memory, with no other motive than the love of approbation, and apparently without the intellectual perception of any relation between the things." (Pp. 16-17).

In which way was the letters separated from the whole word?

"After a while, instead of labels, the individual letters were given to her on detached pieces of paper: they were arranged side by side, so as to spell *book*, *key*, etc.; then they were mixed up in a heap, and a sign was made for her to arrange them herself, so as to express the words *book*, *key*, etc., and she did so.

Hitherto, the process had been mechanical, and the success about as great as teaching a very knowing dog, a variety of tricks. The poor child had sat in mute amazement, and patiently imitated everything her teacher did; but now the truth began to flash upon her, her intellect began to work and she perceived that here was a way by which she could herself make up a sign of anything that was in her own mind, and show it to another mind, and at once her countenance lighted up with a human expression; it was no longer a dog or parrot,- it was an immortal spirit, eagerly seizing upon a new link of union with other spirits!" (Pp. 17-18).

To this description by Howe, Nan Robbins comments:

"Even though the beginning step used totally arbitrary symbols and even though the method of labeling seems, now, dull and to build on associations only to develop language, Laura was able through this method to grasp the significance of symbols and to begin communicating." (Robbins,N. 1983, 3 p.111, book B).

For how long time did Howe work to achieve this breakthrough - the emergence of symbols?

"I could almost fix upon the moment when this truth dawned upon her mind, and spread its light to her countenance; I saw that the great obstacle was overcome, and that henceforward nothing but patient and persevering, plain and straightforward efforts were to be used.

The result, thus far, is quickly related, and easily conceived; but not so was the process; for many weeks of apparently unprofitable labor was passed before it was effected." (P. 18).

In which way was the working on letters continued?

"When it was said above that a sign was made, it was intended to say that the action was performed by her teacher, she feeling of his hands, and then imitating the motion.

The next step was to procure a set of metal types, with the different letters of the alphabet cast upon their ends; also a board, in which were square holes, into which holes she could set the types, so that the letters on their ends could alone be felt above the surface.

Then, on any article being handed to her,- for instance, a pencil or a watch,- she would select the component letters, and arrange them on her board, and read them with apparent pleasure." (P. 18).

When was fingerspelling introduced? Before we turn to Howe's report again, we mention that there is a tendency to forget the people working in direct contact with the deaf-blind persons - the teachers, the house tutors (in the US: the "program aids"). Who taught Laura Bridgman fingerspelling? Her name was Mrs. L.H. Morton (Miss Drew). She assisted Howe in all the early lessons, and she continued to be Laura's teacher for several years. She writes:

"It was nearly two months before any use was made of the manual alphabet. At this time Howe gave me a letter of introduction to Mr. George Loring, who was a deaf-mute and a graduate from the Institution at Hartford. In one afternoon he taught me the alphabet, and the next day I began to teach it to Laura, showing her the position of the fingers to represent each of the types which he had been using...I shall never forget the first meal taken after she appreciated the use of the finger alphabet. Every article that she touched must have a name; and I was obliged to call some one to help me wait upon the other children, while she kept me busy in spelling the new words. Dr. Howe had been absent for some time, and on his return was much delighted with the progress she had made, and at once learned the manual alphabet himself." (Lamson,M.S. 1879, pp. 7-8).

Howe continues his report as follows:

"She was exercised for several weeks in this way, until her vocabulary became extensive; and then the important step was taken of teaching her how to represent the different letters by the position of her fingers, instead of the cumbrous apparatus of the board and types. She accomplished this speedily and easily, for her intellect had begun to work in aid of her teacher, and her progress was rapid.

This was the period, about three months after she had commenced, that the first report^{*17} of her case was made.

The whole of the succeeding year was passed in gratifying her eager inquiries for the names of every object which she could possibly handle; in exercising her in the use of the manual alphabet; in extending by every possible way her knowledge of the physical relations of things; and in taking proper care of her health.

At the end of the year a report¹⁸ of her case was made, as follows:-

...It has been ascertained, beyond the possibility of doubt, that she cannot see a ray of light, cannot hear the least sound, and never exercises her sense of smell, if she has any. Thus her mind dwells in darkness and stillness, as profound as that of a closed tomb at midnight. Of beautiful sights, and sweet sounds, and pleasant odors, she has no conception; nevertheless she seems as happy and playful as a bird or lamb; and the employment of her intellectual faculties, the acquirement of a new idea, gives her a vivid pleasure, which is plainly marked in her expressive features. She never seems to repine, but has all the buoyancy and gaiety of childhood. She is fond of fun and frolic, and, when playing with the rest of the children, her shrill laugh sounds loudest of the group.

¹⁷ (R.Th.E.: the * is a page reference).

¹⁸ (R.Th.E.: the following is a report in the report).

When left alone, she seems very happy if she has her knitting or sewing, and will busy herself for hours; if she has no occupation, she evidently amuses herself by imaginary dialogues, or recalling past impressions; she counts with her fingers, or spells out names of things she has recently learned, in the manual alphabet of the deaf mutes. In this lonely self-communion she reasons, reflects, and argues; if she spells a word wrong with the fingers of her right hand, she instantly strikes it with her left, as her teacher does, in sign of disapprobation; if right, then she pats herself upon the head and looks pleased. She sometimes purposely spells a word wrong with the left hand, looks roguish for a moment, and laughs, and then with the right hand strikes the left, as if to correct it.

During the year she has attained great dexterity in the use of the manual alphabet of the deaf mutes; and she spells out the words and sentences which she knows, so fast and so deftly, that only those accustomed to this language can follow, with the eye, the rapid motions of her fingers.

But, wonderful as is the rapidity with which she writes her thoughts upon the air, still more so is the ease and accuracy with which she reads the words thus written by others, grasping their hand in hers, and following every movement of their fingers, as letter after letter conveys their meaning to her mind. It is in this way that she converses with her blind playmates; and nothing can more forcibly show the power of mind in forcing matter to its purpose, than a meeting between them. For, if great talent and skill are necessary for two pantomimes to paint their thoughts and feelings by the movements of the body, and the expression of the countenance, how much greater the difficulty when darkness shrouds them both, and the one can hear no sound!

When Laura is walking through a passage-way, with her hands spread before her, she knows instantly every one she meets, and passes them with a sign of recognition; but if it be a girl of her own age, and especially if one of her favorites, there is instantly a bright smile of recognition, and intertwining of arms, a grasping of hands, and a swift telegraphing upon the tiny fingers, whose rapid evolutions convey the thoughts and feelings from the outposts of one mind to those of the other. There are questions and answers, exchanges of joy or sorrow; there are kissings and partings, just as between little children with all their senses.

One such interview is a better refutation of the doctrine, that mind is the result of sensation, than folios of learned argument. If those philosophers who consider man as only the most perfect animal, and attribute his superiority to his senses, be correct, then a dog or a monkey should have mental power quadruple that of poor Laura Bridgman, who has but one sense.

We would not be understood to say that this child has the same amount of knowledge that others of her age have; very far from it; she is nine years of age, and yet her knowledge of language is not greater than a common child of three years. There has been no difficulty in communicating knowledge of facts, positive qualities of bodies, numbers, etc.; but the *words expressive of them*, which other children learn by hearing, as they learn to talk, must all be communicated to Laura by a circuitous and tedious method. In all the knowledge which is acquired by the perceptive faculties, she is of course backward; because, previous to her coming here, her perceptive faculties were probably less exercised in one week than those of common children are in one hour.

She is now able to understand simple sentences expressive of action; as, 'shut the door', 'give me a book', etc.; or, rather, as she expresses it, 'shut door', 'give book', for she does not know the force of the particles, *the* and *a*, any more than a prattling infant, who understands, - give cake, - but puts in *me* and *a* from imitation, without knowing their meaning; or than many a child in school understands the difference between a noun and a verb, though he has gone through all the parsing exercises and can give a rule for everything about it." (Howe,S. 1849, pp.18-21).

Here ends this report in the report. At the end of her first year of education Laura understands simple sentences. However, after 28 months of instruction (around the age of ten years), she uses adjectives, verbs, and conjunctions (Robbins,N. 1983, B 3, p. 113). Howe carefully points out her progress and problems in language acquisition in other reports of great importance not only for work

with deaf-blind persons but for comprehension of what language is in its essence. (Cf. Howe 1849, pp. 52-58).

Alexander Meshcheryakov and Harlan Lane: Two different opinions regarding Howe

The real education of deaf-blind people, then, seems to have started with Thomas Gallaudet and Samuel Howe already in the first half of the nineteenth century. The great Soviet educator of deaf-blind people, Alexander Meshcheryakov, gives the following credit to Howe:

Howe is usually presented as the man who invented the method of instructing deaf-blind people. Indeed, it was he who first brought together in a common programme of instruction the embossed alphabet used by the blind and the dactylic (finger) alphabet used by the deaf, thus putting together the essential arsenal, as it were, for teaching a deaf-blind person to read and write. Whereas nowadays we take for granted the necessity of using both alphabets for teaching deaf-blind people, at that period when deaf-blind persons were considered absolutely unteachable, Howe's findings represented a spectacular discovery in the teaching of handicapped children (Meshcheryakov 1979, p. 54). Lane (Clerc) obviously does not share the view of Meshcheryakov concerning Howe. Lane asks the question whether it is best to educate those born deaf and blind among deaf people who see or hearing people who do not. Clearly, the former, Lane answers, for a child has no more urgent and imperative need than facile communication with a group, which allows its normal intellectual, social, and emotional development. He put forwards the assumption that Laura Bridgman might have been unusually intelligent. According to Lane, that would explain why two other deaf-blind children, Oliver Caswell and Lucy Reed, who entered Perkins after Laura and were taught by the same methods, made negligible progress. Caswell, deafened at the age of 3, was born in 1829 and went to Perkins at the age of 12. Lucy Reed, born 1827, deafened at the age of 3, arrived at age 14. Caswell learned some hundred nouns and a few adjectives. Reed learned less. She became a seamstress (Lane 1984, pp. 293, 448).

Towards the middle of the nineteenth century the first attempts were made to teach deaf-blind people in other countries than the US too. At almost the same time as Laura Bridgman was taught at the Perkins Institution, instruction of another deaf-blind pupil, Anna Temmerman, was undertaken at the Brussels Institute for Deaf-Mutes. Almost at the same time came also reports of the teaching of deaf-blind pupils in Switzerland, Sweden, Britain, France and Germany. In Sweden, where a survey revealed a large number of deaf-blind children in the rural population, a benevolent lady, Elizabeth Amrep-Nordin, took a profound interest in their welfare. After gaining the attention of the royal family, she secured legislative provision for their care. She established a school for blind deaf people, beginning with five pupils in 1886 (Farrell,G. 1956, p. 42).

The first statistics on deaf-blindness

In the year of 1842 something happened that nobody at that time possibly could understand the importance of. Charles Dickens came to America this year and, when he visited Boston, he spent most of his time at Perkins institution for the Blind. He was so absorbed in Laura Bridgman, that it was reported he did not deign to notice anything or anyone except Laura. He wrote about her in his

American Notes - fourteen of the thirty pages covering the Boston visit Dickens devoted to the education of Laura Bridgman (Farrell,G. 1956, pp. 20-21). Below, the reader will find out that more than 40 years after Dickens' visit, his writings were to have a very strange and important effect.

In the year of 1873 the first European Congress of Teachers of the Blind took place.¹⁹ This congress should be mentioned here since biographies of three deaf-blind persons were submitted to the congress and are included in the Report: Magnus Olsson, a Swedish boy, Martin de Martin y Ruiz, a Spanish boy, August Rudolf Miersch, a German boy. Wilhartitz from USA called attention to Laura Bridgman. Though the four deaf-blind persons were shown to be educable, no interest in establishing special educational facilities for them was voiced and no resolution or recommendations concerning deaf-blind people were passed (Lowenfeld 1973, p. 177).

One of the few records of deaf-blind people from the end of the nineteenth century is that of Bertha Galeron, born de Calonne (1860-) in Paris. She became blind and nearly deaf at the age of 6. She won an award for her collection of poems with the title "Dans ma nuit".

Another record is that of Therese Exner (1873-). She was born in Louisville/Kentucky. At 4 years of age she is said to have become deaf, and at 8 years of age blind. When she was 11 years old she was sent to a monastery, and when she was 13 years old she came to the institution for the "deaf and dumb" in Würzburg. A special language was invented for her ("Gebärdensprache" - gestural language). Otto Wolf wrote about her in the periodical "Vom Fels zum Meer", Volume 17, Year 15 (Scholler 1990, pp. 230, 208).

In the last half of the nineteenth century - and probably before that if we took a closer look - we find statistical information on the prevalence of deaf-blindness. In the Census of 1871 for Great Britain there are 111 returns for blind deaf-mutes, while in the tenth Census (1880) of the United States, there are returned:

Blind deaf-mutes	256
Blind deaf-mutes, also idiotic	217
<u>Blind deaf-mutes, also insane</u>	<u>30</u>
Total	503

However, Donaldson, our reference on this matter, states correctly that the statistics, if taken from all sources, would show a very considerable number of individuals in this class (Donaldson,H.H. 1890, pp. 288-299).

Scholler mentions a person who is said to have been deaf-blind in the last half of the nineteenth century, namely Eugenio Malossi (1885-1930). He was born May 18 1885 in Adelino and passed away May 15 1930 in Napoli. He received his education in the institution "Principe de Napoli" and became a mechanic. Malossi knew several languages and could communicate in Italian, French, English, German and Esperanto. He communicated by letters with Bertha Galeron de Calonne and Helen Keller (Scholler 1990, p. 329).

¹⁹See the chapter about the history of education of blind people.

The first speaking deaf-blind person in the world: The Norwegian Ragnhild Tollefsdatter Kaata

Nowadays, many people still have knowledge about Helen Keller. In the beginning of the 1890s Helen Keller got knowledge of a deaf-blind girl in Norway who had learned to talk. Although this girl became famous, very few people today have knowledge about her.

Ragnhild Tollefsdatter Kaata - "It is awful"

On May 30, 1873, a girl was born on the little farm "Kaataeie" in Vestre Slidre, Norway. She was the daughter of Tollef, and her name was Ragnhild Tollefsdatter Kaata (1873-1947). She became totally (?) deaf and blind between three and four years old in the winter of the last part of the year 1876 or the first part of 1877²⁰ and it was reported that she also lost her sense of smell and the memory of speaking. The diagnosis was scarlet fever. There is a very fascinating link between her and Helen Keller.

In the year 1888 Ragnhild Tollefsdatter was admitted to the School for the Deaf in Hamar. Until the age of fourteen Ragnhild lived at home. She was fourteen and a half years of age when admitted to the School for the Deaf in Hamar (Anderson, P. 1960, pp. 118-122).

According to Meshcheryakov, she possessed few human traits at that time: she would often sit in one spot for a whole day at a stretch without showing the slightest interest in what was going on around her, only emitting an occasional groan. If someone came up to here she began to stamp her feet, roar and scratch like a wild animal (Meshcheryakov 1979, pp. 79-80). This description, however, is an exaggeration. Other, more reliable sources, describe her, and her situation, in more positive words. For example, Hammer describes her as kind, gentle and merry. She had learned to knit and mastered also, to a certain degree, sewing. She was the oldest of eight children. Her family was poor but is described as a happy one. But she really had lost her speech (Hammer 1954).

The turning point in her life probably came in the year 1887. The public school teacher ("folkeskolelæreren") Hallvard Bergh (Halvard Berg) made the world aware of Ragnhild. He tells that he walked in the mountains of Norway and on his way he met a shepherd girl asking him if he had heard about Ragnhild. No, he said, but went to the mountain pasture where he found her in the mountain hut. There she was sitting, pale, unclean, and uncombed. When he gave her some coins, she said "D'æ fæt" (interpreted as "Det er følt", "It is awful"). These words were the last they heard her say very soon after her illness. Later, she uttered these words when she was sad and when she was glad. Afterwards Bergh wrote an article in the newspaper "Verdens Gang" (Oslo) about her way of life. Very soon the news about the 13 years old deaf-blind girl was spread to several papers. A month after the article in "Verdens Gang" her story was published in USA papers too. Hallvard Bergh himself writes in 1895 that children in Norway collected 4000 Norwegian crowns (appr. £400) for her, and children in USA collected 3000 (appr. £300) (Bergh 1895). Lars Havstad, himself deaf, wrote to Hallvard Bergh after seeing the story in "Verdens Gang". He recommended him to get in touch with Elias Hansen Hofgaard. The latter agreed to try to teach

²⁰There is some uncertainty about the exact time - 1876 or 1877. However, it happened before her fourth birthday. Probably she was closer to her fourth than to her third birthday.

Ragnhild. In January, 1888, Ragnhild's father took her to school (Hammer 1954, p. 7).

The principal of the school, Elias Hansen Hofgaard (1856-1906), was to be Ragnhild's teacher himself. He began at once to teach her orally, using methods employed by the seeing deaf.

Hofgaard placed his pupil's hands on his lips so that she could read with her fingers what others could see. Ragnhild showed phenomenal aptitude for speech-reading (lip-reading) by this means.²¹ Thus, by adapting the methods employed for the seeing deaf, Hofgaard was soon able to teach Ragnhild to speak so successfully that, according to Farrell, she is generally considered to be the first "deaf-mute" to overcome muteness (Farrell,G. 1956, p. 26-27).²²



Ragnhild Kaata in conversation with Elias Hofgaard

Photo: De Døves Blad 1954

²¹Odd-Inge Schrøder - a well-known Norwegian deaf associate professor at the Institute of Special Education, University of Oslo, told the author in a conversation on August 18, 1993, that his mother had known Ragnhild. Her mother had told him that some people did not like Ragnhild because she sometimes put her index finger into their mouth when speech-reading.

²²This should be a matter of definition. Several deaf people are known to have spoken before her, cf. the chapter about "The development of education for deaf people".

Elias Hansen Hofgaard - the teacher of Ragnhild Kaata

Elias Hansen Hofgaard was the son of a teacher and church singer Hansen and he had five brothers who all became teachers, several in schools for deaf people. Wishing not to be mistaken for one of them, Elias applied to take the name "Hofgaard" after the place where he was born in 1856. He passed his teacher examination in the year 1876 and was considered as promising because of his sensitivity in working with children, his fantasy, and his ability to make devices children could use in their play. He received a scholarship from the Norwegian state and he studied the teaching of deaf people in Denmark and Germany. He came back to Norway as a strong supporter of the oralist method. In 1881 the Norwegian parliament ("Stortinget") decided to found a school for the deaf at Hamar, a small Norwegian town not so far from Oslo. This was an effect of the law on obligatory school also for deaf children. At first I.G. Klute was appointed principal of the school. He did not take the position, however, because the state would not support the school economically with as much money as he demanded. The position was announced once more and this time the 25-year-old Hofgaard was appointed. He bought a property near the church - "Furubakken" - and here "Hofgaards skole" was founded in 1882 (Anderson 1960, p. 119).

At that time - and this is important in the history of deaf education - there often was no clear distinction between deaf people and mentally retarded people. In the general ideology deaf were also "dumb" in the meaning of "stupid", although the first scientific attempts already had been made to distinguish the two groups. It is likely that the "masquerade" at that time was double: In the school for the deaf there were people who obviously were primarily mentally retarded, while in the institutions for mentally retarded there were persons who were primarily (and merely!) deaf. This was probably also the case in Hofgaard's school, and most likely in schools in many other countries too, although the criterion was solely hearing impairment. In Hofgaard's school there were three levels, the a), the b) and the c) level. The most able were in a), with b) as the middle, and c) for the "slow learners". Hofgaard, however, insisted that teaching of speaking was important not only to deaf children but also to the slow learners.

Elias Hansen Hofgaard must have been very talented as a teacher. It was said about him that he had special talents in stimulating ("awakening") pupils the other teachers gave up. It should also be mentioned that Hofgaard after some time clearly saw that some of the hearing impaired slow learners would benefit from learning manual signing.

Elias H. Hofgaard did not reach an old age. After an accident during bicycling Hofgaard had symptoms of vertigo. That was likely the reason why, at 50 years of age in the autumn of 1906 at Ljan railway-station near Oslo, he was run over by the train when visiting his brother-in-law (Anderson 1960, p. 122).

In the *Volta Review*, May, 1930, Anders Hansen states that the pioneer work of teaching articulation and lip-reading to a deaf-blind pupil is a pedagogical deed of such almost gigantic greatness that it should not sink down into the darkness of oblivion. Therefore he has repeatedly asked the last surviving of the teachers who instructed Ragnhild, Miss Petra Heiberg of Hamar, Norway, to give a record of the education of that first deaf-blind pupil in the world who acquired speech. Though the task was in no way easy for Miss Heiberg, Hansen tells, because of the almost entire absence of printed or written material in public or pri-

vate possession which could throw light on the training of Ragnhild, she has finally written a statement of what she and others remember of the school years of the Norwegian "Helen Keller". From this statement we quote the following extract:

"She lost hearing, sight, and smell through disease in 1876. Shortly afterwards she seemed to have lost her recollection of language...When she was about 13 years old a teacher of her neighborhood wrote an article in a local newspaper about the existence of that unhappy creature. This aroused some interest, which led to her transfer in 1888 to the oral school for the deaf in Hamar; the school provided, in the Norwegian organization, for the C-pupils (slowest pupils), whose headmaster was Elias Hansen Hofgaard.

Hofgaard began at once to teach her orally. She was totally deaf and her eyes had been removed by an operation. Her teacher had only her sense of touch to rely upon. He placed her finger on his own mouth and let her feel his nose and throat to teach her the positions and movements of the articulation organs. It meant long, tedious and persistent repetitions before he succeeded in having her imitate the sound ä. The key was found, and he knew that he would reach the goal. It was a long way before the various sounds and syllables were learned, but he then knew that it was possible to feel the sound from the mouth and the throat. He had found the road which would lead to a result. He continued to teach Ragnhild speech in a similar manner to that used with his seeing pupils. His wonderful discovery, which no other before him had found, suggested to him the method which he continued to use throughout her school life. Her aptitude for lip-reading was simply phenomenal. As can be seen in the photograph (R.Th.E.: not shown in this book), she placed her fingers against the underlip of her interlocutor. Her articulation was as distinct and good as will be found among the best ordinary deaf people..." (Heiberg, in Hansen 1930, pp. 224-225).

Ragnhild could write Latin letters using a lead pencil. In Heiberg's report, she also tells that Ragnhild used books with embossed print for reading, but that the literature in such types was very scarce and not fit for textbooks. Miss Heiberg tells about the attempts by Hofgaard to invent a writing machine of raised letters which could be used both by teacher and pupil. At this time, Braille's point writing had not quite superseded the use of Latin letters in schools for the blind in Norway, and outside those schools it was but little known. However, Hofgaard's models for a new writing machine only caused him disappointment and expense. Miss Heiberg tells:

"He got hold of a chart of the point alphabet and a small apparatus, and one day he asked me if I would like to try it. He did not believe it would render any practical help for Ragnhild, but if I would give it a trial, we might see. As the youngest of the junior teachers, he had selected me as his assistant teacher for her. I brought the machine and the chart home with me and copied it for my pupil, and she learned it very quickly. Mr. Hofgaard was in the meantime occupied with his invention and other tasks, and it was not so often that he came into my room to survey the teaching of Ragnhild. One day after school was over, he heard her read aloud from the text of a catechism he had written for the deaf pupils, which had not been produced in embossed letters. He was delighted. And when I came to school the following morning, he gave me a hearty welcome which I never shall forget. He was so deeply moved that he could hardly speak. He held in his hand the bundle of point-written sheets which, to him, personally, was a 'closed book,' and then he exclaimed: 'This is then my catechism which Ragnhild has learned to read and to remember, and in such a short time!...'.

This was my first experience with point-writing. There were plenty of errors and erasures, and it was poor work as a textbook, but to Mr. Hofgaard it was an excellent help in his vain endeavours to construct his machine. His economic situation was very unsatisfactory, but his delight in having found this means of communication let him forget these troubles, momentarily, and in this moment of childish and happy mood he offered me a

new bicycle as a present; cycles were at that time the highest wish of the young people in Hamar!

From this time he stopped working at his writing machine because the point-writing quite sufficed for our purpose.

Ragnhild continued to progress satisfactorily. She also learned various sorts of knitting, as well as to string pearls and sew them on material. After she finished the school she was confirmed and returned to the small cottage in the mountains to live with her widowed mother. They are very poor, but Ragnhild is of a sunny disposition and is happier than most others despite her loneliness. She left school in 1897. Her lip-reading is at least as good yet as when she was in the school, probably even better. Her speech is clear and distinct as that of the best among ordinary deaf persons." (Heiberg, in Hansen 1930, pp. 225-228).



Ragnhild Kaata reading her teacher's lips

Photo: Volta Review

Heiberg tells that after Ragnhild Kaata had finished her education other deaf-blind pupils entered, and she taught them orally after the same pedagogical principles (Heiberg, in Hansen 1930, p. 228).

Ragnhild became very famous and people from all over the world visited her. And one of them was a certain Mrs. Lamson from Boston.²³

Anne Sullivan and Helen Keller

Helen Keller and Alexander Graham Bell

In 1886, an interesting link between the education for the deaf and for the blind comes into existence: The mother of Helen Keller had in a casual reading of Dickens' *American Notes* learned that at the Perkins Institution for the Blind in Boston, Howe had taught Laura Bridgman to read and write and, by means of a manual alphabet, to communicate with sighted and hearing people. But this had happened fifty years earlier and Boston was a long way from Tuscumbia. The

²³It was Mary Swift Lamson, one of Laura Bridgman's teachers.

Kellers did nothing about it, but when Helen was six years old (1886) her father Arthur Keller and her aunt Eveline Keller took her to Baltimore to consult a famous oculist, Dr. Chisholm. He confirmed what other doctors had said, that Helen would always be blind and deaf, but he advised them to go on to Washington, D.C. to consult - and here comes the link - Dr. Alexander Graham Bell, the famous personality in the history of education for the deaf (see above), about methods of teaching her. Ten years earlier, in 1876, Bell had met Laura Bridgeman, with whom he had a conversation through the one-hand manual alphabet. It was at Dr. Bell's suggestion that Captain Keller wrote to Perkins Institution. Over the years Bell advised Helen Keller on her education, helped her financially, encouraged her to speak out on issues, and supported her through good times and bad. For example, when Helen Keller was accused of being a fraud (the *Frost King* affair) Bell sent the Superintendent of the Volta Bureau, John Hitz, to Boston to look into the matter (George,J.St., p. 41). Hitz prepared a report that cleared both Helen and Teacher. With the strength of his name behind it, Bell published Hitz's report, which contributed to silencing the criticism although those accusations never ended.

Howe was, as said above, dead (January, 1876), but in due course Mr. Michael Anagnos, who had followed him as director (and, by the way, was Howe's son-in-law, married to Julia Romana, Howe's eldest daughter), sent one of his recent graduates to see if she could do anything for the child. This was Miss Anne Sullivan, twenty-one years old. She arrived in Tuscumbia on March 3, 1887 (Henney,N.B. 1956, p. 6).

What was the intellectual condition of Helen Keller at that time? Had she really lived in a "no-world" in the years after her illness as she herself stated? This is obviously a truth with modifications. However, we will turn to this question in the section where we ask if Helen Keller really was a large fraud.

By the time she was five, Helen could fold laundry, run errands for her mother upstairs and down, help in the kitchen, feed the hens and turkeys and get into mischief with the servant's children. However, she could be very angry and she had violent tantrums which the Kellers tolerated without making any demands or disciplining her in any way. She ate with her fingers from both her own and other people's plates, shoved aside any object that was in her way, kicked her nurse when she was angry and pinched her grandmother, whom she disliked. At the age of six, she locked her mother in the pantry and then sat on the back porch for three hours gleefully enjoying the jarring vibrations of her mother's pounding on the pantry door. A servant finally happened by and led Mrs. Keller out (George,J. St. 1992, pp. 24-25).

Anne Sullivan - who was she?

*She gave the world a name and shape for those
to whom it had been nameless and confused:
out of a void of darkness without sound
she brought the measured, rhythmic pulse of life,
a gift of language, and an eagerness
to know the universe with searching hands.*

*Her legacy is in the fruitful years
that stretch beyond her vision. From the seeds
of knowledge that she nurtured in one heart
has sprung the flowering of a century
of change and hope; and, far beyond her dreams,
a growing freedom for humanity.*

Robert J. Smithdas (1966)

Anne Sullivan came to the Perkins Institution in October 1880. At that time she was almost blind. Anne Mansfield Sullivan (later A.M.S. Macy) was born in Feeding Hills, Massachusetts. Her eye disease (trachoma) was probably connected with the poverty and unsanitary conditions of her environment. It slowly and increasingly impaired her vision. Following the death of her mother, she was sent to a state poorhouse in Tewksbury in 1876 where she remained off and on for six years. Five unsuccessful operations were performed on her eyes that alleviated the pain but did not improve her sight (Sardegna,J., Paul,T.O. 1991, p. 210). At the age of 14, she began her education by learning to read with her fingers. The school had no facilities for taking care of its pupils during vacations and when summer came she was put out to work in a rooming-house in Boston. Through one of the lodgers she found her way to the Massachusetts Eye and Ear Infirmary and in August Dr. Bradford performed an operation on her left eye. The next August he attended to the right eye and when the operations were over Anne could see well enough to read in the ordinary way for limited periods of time, but not well enough to warrant transfer to a school for the seeing. She remained at Perkins for six years, graduating in 1886 as valedictorian of her class (Hennay,N.B. 1956, p. 7-8).

Anne Sullivan was to become perhaps the most famous teacher of a deaf-blind person ever spoken of - "Teacher", the teacher of Helen Keller. She got acquainted with John Macy when he became a writing assistant and editor for Helen Keller at the time she was writing *The Story of My Life* (1902). Anne and John married in 1905 and Helen lived with the couple. The marriage grew troubled and Macy sailed alone to Europe in 1913. They were never divorced but remained separated from then on. In 1914 Polly Thomson joined Sullivan and Keller as a companion and assistant. In 1929, Sullivan's right eye was re-moved to relieve constant pain. Her vision in the remaining eye and her general health deteriorated rapidly. She died in 1936. Her ashes reside next to those of Helen Keller and Polly Thomson (Sardegna,J., Paul,T.O. 1991, p. 211).



Helen Keller and Anne Sullivan

Photo: Perkins School for the Blind

Anne Sullivan's importance to Helen Keller and to the history of deaf-blind education cannot be over-valued. The worries of Nan Robbins should be taken seriously:

"Yet I worry that in our recent years of focusing on functional learning, behavioural management, education through team-teaching, the introduction of sign language, pinpoint instruction and task analysis as a result of efforts and progress with severely injured children who have visual and auditory impairments, the actual wisdom of Anne Sullivan Macy is either not known or not valued by many teachers and other professionals in the field of education of deaf-blind children. Each time that I re-read her notes on the education of Helen Keller I am impressed by her intuitive knowledge and searching intelligence which combined principles of child development and linguistic knowledge into a most effective educational methodology for the totally blind deaf child or for *any* deaf child who is a language learner." (Robbins,N. 1983 B 3, p. 119).

The features of Anne Sullivan's method

Which are then the features of Anne Sullivan's methodology? Following Nan Robbins they are:

- instruction by a tutor-companion, permitting total flexibility of pace, curricula, and place or time of "education" as well as total tracking, by the teacher, of experience and skill acquisition;

- instruction in the home or in the greater community, rather than in a classroom or residential school setting;
- a child-centered approach and curricula, following often the child's lead in interests and pursuits;
- education, language input, all day, rather than during "class periods" only or during times when someone who can effectively communicate with you can be with you;
- a strong experience-centered approach to learning;
- a conversational approach to language development with strong emphasis on providing conversational input, language *to* the child;
- use of fingerspelling as the language vehicle for English (Robbins,N. 1983 B 3, pp. 119-120).

In October 1889, Helen Keller and Miss Sullivan came to Perkins, as the teacher felt the need of larger facilities to keep up with the progress of her pupil.

Helen Keller left Perkins in September 1893, attended the Cambridge School for Young Ladies in 1898 and then entered Radcliffe College in 1900, from which she was graduated with a bachelor of arts degree cum laude in 1904. Anne Sullivan remained at Keller's side throughout her studies, translating lectures and textbooks (Sardegna,J., Paul,T.O. 1991, p. 128).

Anne Sullivan's education of Helen Keller

Was Helen Keller a fraud?

This question has occupied many people since the incident of "The Frost King". We are, however, not interested in the ethical aspect of this. Why is the question of scientific interest?

The reason why is simply that some very crucial conclusions in several matters, e.g on the acquisition of language, the essence of language, the role of speech, of teaching and learning, of education, etc., might possibly be drawn from the example of Helen Keller - and of course of Anne Sullivan Macy. If Helen Keller is a fake, the interest in her would only be an ethical one. First then: Is it justified to put the question forward in such an exaggerated manner, as either - or? Yes, as a scientific method of specifying the problem. So far the emphasis almost exclusively has been put on the role of the persons close to Helen Keller - of Anne Sullivan Macy, of John Macy, of Nella Braddy Henney, of Polly Thomson. This, however, goes only to the surface of the problem (Cutsforth's criticism excepted. His criticism is profound, see below), it is the least important part of it. Because, and of course, all of Helen Keller's books were written in a close cooperation with the people who stood close to her. That was never a secret.

Concerning her *writing*, it is not without interest asking how much is due to Helen Keller, how much to the other mentioned persons. However, the point is, if there is 1) no "profound fraud" or 2) no silencing of important facts involving her closest friends, this question is to a high degree of lesser importance. No person's *individuality* is unsocial, "natural" - asserting that simply expresses a false theory. *Individuality is always coming into existence and developing in an activity related to other persons.* This is valid for Helen Keller and for us all. Of course, she was influenced by Anne Sullivan and John Macy - who is not influenced by other people? Also it should not be a shame being a friend of outstanding personalities like, for example, John Macy, who introduced her to the reading of great socialist writers and scientists, who wrote in *Socialism in America*,

"We have no kings, but America is the sport of capital. It lies abjectly prostrate before a power-drunk bourgeoisie" (Brooks, v.W. 1956, p. 49).

He obviously also influenced her to see the relation between poverty and blindness in the world.

Beginning with the question of "profound fraud" then, did other persons write her books in a meaning more than publishing, some spelling-correcting, and to a certain degree editing? To answer that we have to go deeper. We should rather study her *letters* than her published books, and rather her *handwriting* than her using of the Brailler or the typewriter (both manuscripts by Brailler and typewriter could have been manipulated). Although the author is no graphologist, studying the square hand writing said to be Helen Keller's, there can be little doubt she - and no other person - has produced it. The development of her hand writing in her seventh year of age and from when she was 7 to e.g. 11 years of age demonstrates that 1) it must have been written by the same person, that 2) this most likely must have been Helen Keller, since it would be impossible to fake this development, and that 3) it is not likely that a person has held her hand writing it "hand over hand" (the first teaching of her writing excepted). The impossibility of the latter is also confirmed by other data of her behaviour. Thinking that some people held her hands when writing in the long run is merely demonstrating the ignorance and lack of knowledge of Helen's temperament, her character! If this is correct, we should look at the "substance" and style of the letters. Doing that, we clearly observe an exceptional child - referring to a variety of subjects, fluently expressing herself - a child with exceptional intellectual abilities.

For the author, however, who has worked several years with deaf-blind youths, it is only at this point we arrive at the crucial questions. The first must be: Was Helen Keller really deaf and blind? Outsiders take that for granted. In the literature on Keller - as far as the author knows, and he has gone through several biographies - this is never questioned, see e.g. Lash's biography (809 pages) of Helen Keller and Anne Sullivan Macy (Lash 1980). However, *most of the people termed "deaf-blind" are not totally deaf and blind; they are visually and hearing impaired, some severely, some moderately.* The degree of hearing may be different from that of vision too. This should therefore be the first question: Was Helen Keller totally deaf and blind, or did she possess some residual hearing and/or vision? Was her hearing and/or vision functional, i.e. could she use it? Ultimately, it is not before these questions are answered that we arrive at the really interesting scientific questions: When did her language come into existence? What was the role of speech in the acquisition of her language? What was the role of her later learning of speech in the development of her language and thoughts?

The author will disappoint the reader. None of these questions can today be decided with a 100% certainty. In the Appendix III we will discuss the questions regarding Helen Keller's language and speech. In Appendix III the reader also will find the premises for the following conclusion concerning her vision and hearing:

Helen Keller might have had some residual vision. Judging by several expressions concerning vision the author has drawn the conclusion that she had no functional vision, at least none that she knew herself.

Concerning her hearing, the data seem to corroborate a hypothesis that Helen Keller was not profoundly deaf. She most likely had residual hearing exceeding the hearing by vibration. To which degree this hearing was functional for

some tasks is difficult to say. It is not impossible that she was able to utilize this in her acquisition of speech. Although she never spoke very intelligibly, she obviously spoke better than many deaf people. A very risky inference would be that this indicates some degree of hearing since we know that there is a clear correlation between degree of hearing and speech intelligibility. We know, however, that this connection is not absolute. Some people with greater hearing loss than others speak more intelligibly than the latter, and some with more unintelligible speech master language better than some with more intelligible speech.

Is it mere coincidence that findings on Laura Bridgman suggest similarities in hearing between Helen and Laura? In 1878 G. Stanley Hall made a series of tests upon Laura Bridgman. At this time she was found completely blind and deaf, though sensitivity to vibration was well enough developed to enable her to recognize the footsteps and sometimes even the voices of her acquaintances, her common statement being that she heard "through her feet" (Donaldson,H.H. 1890, p. 297).²⁴

The personality of Helen Keller

Cutsforth's criticism of Helen Keller

The most fundamental criticism of Helen Keller stems from Cutsforth and this criticism should be taken very seriously. The criticism has striking similarities to the criticism made by Bébian of the (oralist) Pereira's teaching of Saboureux de Fontenay in the middle of the eighteenth century. Cutsforth's criticism is very harsh.

In Cutsforth' opinion, it is

"discouraging to find prominent blind persons 'going white' in order to increase the popularity and salability of their writings. The blind street beggar with his badge is much less a traitor to his fellows than those writers who publish for the express consumption of the seeing, sob-sister public." (Cutsforth 1951, p. 127).

The heroic whimperings of Clarence Hawkes regarding his blindness and the ballyhoo of Helen Keller over the rapturous delights of denied sound and visual beauty have done more to confuse the seeing than any amount of scientific work can clarify, Cutsforth claims.

"Helen Keller, in her great ado over visual beauty reminds one of a person so foolish as to expatriate at length upon the delights and marvels of employing six legs in locomotion instead of two. However, the difference is that this foolish person would be able to draw upon his own imagination for the capers possible to a hexapodal existence instead of depending upon what some superior insect had told him about it."(Cutsforth 1951, pp. 128-129).

This is Cutsforth's harsh evaluation of Helen Keller.

²⁴Donaldson continues based on Hall: "At this time her sense of smell was such that she could distinguish the odors of some more fragrant flowers, but eau-de-Cologne, ammonia and onions were thus recognized only when quite strong. Contrary to what was stated for an earlier period, she was found least sensitive to bitter and acid tastes, and most sensitive to sweet and salt. It was concluded that out of the four defective senses, taste alone was well enough preserved to materially aid in developing her notion of the external world. A study of discriminative sensibility for two compass points showed a discrimination in her case, from two to three times as acute as that of a seeing person. To temperature, her sensitiveness was not remarkable, and hence the 'facial sense', as it is sometimes called in the blind, was not well-developed in her, though she was said to recognize the approach of persons by the undulations of the air. She was found sensitive to rotation, which made her dizzy and gave her a feeling of nausea." (Donaldson,H.H. 1890, p. 297).

According to Cutsforth, the following paragraph written by Helen Keller illustrates the facility with which she is able to express and socialize that which she herself cannot possibly experience:

"We followed a tributary of the Tamar, which we glimpsed through a mist of green. The trees were just budding. The willows were already in leaf, and I could smell the virgin grass and reeds - a tide of green advancing upon the silver-grey stream. It was misting, and soft clouds were tumbling each other in the sky which, Teacher said, had the effect of intensifying the greenness until the land seemed a great emerald. Soon we passed the stream and went speeding between grassy hedges thick with primroses and violets. I had to get out of the car half a dozen times to feel the blue pools of dogviolets and the cascades of golden primroses."²⁵ (In Cutsforth 1951, p. 52)

The paragraph conveys the conventional meaning to the average reader. Cutsforth holds the opinion that the words and sentences are intelligently structured so that the average reader will recognize meanings and situations that are common to him and his fellows, but relations and situations from which the writer is excluded. It must not be supposed, however, that the passage is meaningless to the writer. The visual words connote emotion or attitude rather than objective experience. Cutforths asserts:

"To the writer the paragraph represents a set of ideas entirely different from the objective reality expressed in the sentences, which represent as nearly as possible what the experience would be to those who both see and hear. The implied chicanery in this unfortunate situation does not reflect upon the writer personally, but rather upon her teacher and the aims of the educational system in which she has been confined during her whole life. Literary expression has been the goal of her formal education. Fine writing, regardless of its meaningful content, has been the end toward which both she and her teacher have striven. Her own experience and her own world were neglected whenever possible, or, when this could not be done, they were metamorphosed into auditory and visual respectability. Her own experiential life was rapidly made secondary, and it was regarded as such by the victim.

In order for one to comprehend this situation, in which one personality capitulated completely to a system of education or another person's values, it is necessary to understand the entire life history of the process. In this case the process was a lifetime, and the capitulation took place on an infantile level, when the personal affection and confidence of the child Helen were given completely to her teacher. From that time on, Helen's world contracted by expanding into that of her teacher. Her teacher's ideals became her ideals, her teacher's likes became her likes, and whatever emotional activity her teacher experienced she experienced." (Cutsforth 1951, pp.52-53).

The following passage from one of Helen Keller's letters demonstrates, according to Cutsforth, not only the *modus operandi* of abortive attempts at objective pedagogy, but also the intellectual barrenness of the result. The entire purpose, method, and result of the literary education of the blind is epitomized in this short paragraph:

"The fishing villages of Cornwall are very picturesque, seen either from the beaches or the hilltops, with all their boats riding to their moorings or sailing about in the harbor. One of the most impressive spectacles that has been described to me is the boats drifting on the dark waters at night with their lights twinkling. The scene is most peaceful, not a sound reaches the shore. For, as I said before, the fishermen are silent. Teacher and Polly give me such vivid wordpictures that I am spell-bound. When the moon, large and serene, floats up the sky, leaving in the water a long track of brightness like a plow breaking up a soil of silver, I can only sigh my ecstasy.²⁶ (In Cutsforth 1951, p. 63).

²⁵Helen Keller, "Holiday in England," *Outlook for the Blind*, 24 (1930), pp. 14-16.

²⁶Helen Keller, "Holiday in England," *Outlook for the Blind*, 24 (1930), pp. 14-16.

According to Cutsforth, the education of the deaf-blind affords a beautiful illustration of the value of experiential reality as an educational aim in contrast with a highly specific training in the art of disguising the sensory deficiency. As an example he quotes from a story of Kathryne Frick (see Cutsforth 1951, pp. 53-55) and holds the opinion it should be contrasted with any of the writings of Helen Keller.

"Kathryne Frick appears as a truly educated person who knows herself and her world thoroughly. She deals with her experiences completely and realistically. She uses no mechanized, stylistic sham to give the false appearance of a rounded life of experience on a level with the hearing and seeing, but even without it she gives the impression of being a complete living and experiencing person." (Cutsforth 1951, p. 55).

Unfortunately, according to Cutsforth,

"this accomplishment was denied Helen Keller, through her ill-conceived training. Helen, in her writings, appears much less a living, experiencing person. Her pretences at enjoying and appreciating that which she does not experience give the feeling that here is a soul cut loose from its moorings, drifting between reality and mirage, incapable of moving in either direction; but with her back turned upon the former she is making elaborate gestures toward the nothingness which lies ahead and forever out of reach." (Cutsforth 1951, pp. 55-56).

Cutsforth's criticism should never be forgotten, it is essential. However, is he right?

Is Cutsforth's criticism right? Back to the question of verbalism

To a certain degree he is right. However, both empirically and theoretically there are some problems with his view. Theoretically, the criticism is based on his theory on "verbalism". We presented this theory in a earlier section - in his own words, paying all respect to him.

At this place we will do something unusual in our book: We will (very briefly) discuss the truth and validity of Cutsforth's theory on verbalism. That is not because we wish to point a moralistic finger at history. Doing that is simply unnecessary since all truth is concrete-historical and relative. Merely fools view history with the "finger". (When the wise man points to the moon the fool merely sees the finger.) However, this theory needs some adjustments.

Cutsforth has observed a real phenomenon, that of verbalism. On the other hand, this theory is based on a false comprehension of the relation between personal, individual experience and language. Therefore he is *underestimating* as well as *exaggerating* the problem of verbalism in blind people in general and in the deaf-blind Helen Keller. Take his example in which he is asserting:

"A congenitally blind person's discussion of the theory of color mixture is not a whit more verbal than a college student's opinion on the labor question when he has never worked a day in his life. The factual content in each case is derived from the experience of others." (Cutsforth 1951, p.49).

In fact, this is an *underestimation* of the problem for blind people. If Cutsforth were right, our opinion on the lives of people in the past (of which we could not possibly have any individual experience) would be verbalistic. In short, most of our human comprehension would have a verbalistic character. If *verbalism has the connotations given by Cutsforth*, i.e. is regarded as a very undesirable phenomenon, the substance of human comprehension would be very dubious. If, on the other hand, the above-mentioned ordinary comprehension is not verbalistic, Cutsforth is underestimating the problem for *blind* people. The reason for that is that the sighted can relate their own experience to that of other people, not by verbalism, but by the *social-historic* function of language. A person can know

very much about a certain kind of "work", "labour" without having performed that kind of labour himself. For example, although a worker has never been a "slave worker", he can understand what "slave work" means because he can relate it to his own experience with working. An unmarried person can understand very much of what marriage is, although he was never married. A comprehension of the atom is not verbalistic, although we have never seen an atom, etc. This can be seen as the rule, not denying of course that people can talk about a matter without a real knowledge of it. Individual experience, however, has always a collective aspect, i.e. it is not an ahistoric "natural" experience, it is a *social* experience acquired in an interchange. The uniqueness of the personality is not "natural", outside the collective, it comes into being and exists exclusively in, and, as a part of, the collective. Also language has this collective character. It is produced in, and is a product of, human interchange. It is *social*. In humans, individual experience always has a linguistic aspect (of course, from that time when the individual has acquired language). The blind person, however, will always in a "sighted society" meet many terms (concepts) that it is impossible to relate to *any* experience of his own, e.g. the term "colour".

On the other hand Cutsforth is *exaggerating* the problem for blind people exactly by the same reason as the reason for underestimating it. E.g.:

"The adolescent college student knows no more about the unidealistic aspects of love and marriage than a man born blind knows about the hue, tint, and chroma of colors. There is, however, a vital difference between the verbal college student and the verbal blind. At the end of his college course, if he does not enter the academic field, the college student will be thrust out into a world which demands verification and readjustment to reality. The blind have no such avenue of escape. They are compelled to continue in a world of unreality. They remain under the necessity of dealing with the unreal as though it actually existed for them." (Cutsforth 1951, p.49).

Both sighted and blind people can have real and deep knowledge about matters without any "verification" and "readjustment". An unmarried person might understand what marriage is perhaps better than a married person! He could for example have grown up in a marriage telling him very much about what marriage really is. In fact, many of the most important matters in human life can never be verified in an individual manner. If what both blind and sighted people talked about was verbalism when it was not personally experienced, we would not talk at all! The exaggeration is perhaps the greatest weakness of Cutsforth theory.

Therefore, Cutsforth criticism of Helen Keller is also exaggerated.

Empirically, two points have to be made:

Firstly, looking at the history of Helen Keller very few people in the world (including sighted people) have had opportunities to experience as much as Helen Keller did. We are speaking of rich personal experiences, that are also richly documented in this book.

Secondly, Cutsforth is not right in asserting that Helen Keller's personality "capitulated completely to a system of education or another person's values..." Cutsforth criticism of Helen Keller is to the point, but it is an exaggeration.

Was Helen Keller exceptional?

We know that Helen made her own choices in crucial matters. In several important questions she held other opinions than her family and Anne Sullivan - religious and feminist.

Although born in the South in a racist atmosphere - she rejected the racist attitudes of her family. She felt the tears softly passing a mother's cheek and developed a conscience and a responsibility leading to membership in the Socialist Party in 1909. She defended the workers of the world, called for a general strike against war and rejoiced at news of the great October Revolution in 1917. Although less vocal after 1920, she expressed herself sufficiently to acquire a dossier in the Federal Bureau of Investigation (Christie,J. 1987, p. 125) in most of her time led by the criminal Edgar B. Hoover.

At the end of a century where the world is full of people selling their beliefs and ideals for a bottle of Coca Cola or a MacDonald hamburger, it is strange to open the book of history, seeing a woman living in a state where capitalist and imperialist ideology was (is) the community's soul, seeing a woman keeping faithfully to her belief in socialism to the end.

Yes, Helen Keller was severely hearing impaired but, contrary to many hearing people, she heard the weak sobbing of a suffering world.

Yes, Helen Keller was blind but, contrary to many sighted people, she had a vision.



Helen Keller in 1912

Photo: Perkins School for the Blind

The author has come to two conclusions.

The first *conclusion* is that questioning and doubting the intellectual abilities of Helen Keller is legitimate for at least three reasons.

The first reason is that very few people stood close to her, and much of what Helen Keller said passed via or by their interpretations. Thus what was Helen Keller and what was them, is difficult to say.

The second reason might be based on the criticism of Cutsforth: What is the degree of "verbalism" in her "personality"?

The third reason is that when somebody is presented as a genius, as a giant, as a titan, it is wise to be very suspicious. Most cases are bluffs, fakes, frauds. This is a part of the conclusion since the author not only in the beginning of his study, but a long time during the study, was convinced that "the story of Helen Keller" was a fairy tale, *simply because it was so unlikely to be true*. This "story" deals with a blind and severely hearing impaired girl obviously learning faster and deeper than the vast majority of sighted and hearing children!

Helen Keller was often presented to the public as a miracle, as a saint. And both in her lifetime and today two extremely different opinions on her exist: The one as the divine Miracle, the Saint - the other as the overdone parrot.

There is nothing miraculous with Helen Keller. She was overdone by many of her contemporaries.

She was spoiled. Many of us are. She had her outbursts of feelings, her tantrums.²⁷ Many of us have. She died as a "vegetable".²⁸ Many of us will.

The second *conclusion* is simply that the story of Helen Keller *became* true because of two main reasons: (1) The available data on her early childhood demonstrate *a child with exceptional intellectual abilities combined with a stubborn will*.²⁹ (2) The available data also demonstrate *an exceptional teacher in a one-to-one relation lasting day (and night)³⁰ for many years*. This teacher used a method making it possible for the pupil on the basis of her natural (obviously exceptional!) possibilities *to develop her intellectual abilities, which were not in-*

²⁷Thinking of the five years - from 2 to 7 - when she had such enormous problems in expressing her needs and feelings - it is almost unbelievable that she did not become either totally broken or simply developed some type of "mental illness."

²⁸An expression used by one who knew her.

²⁹Lash is probably right, therefore, in his conclusion on "the love story" of Helen Keller. When Helen Keller was 36 she fell in love with Peter Fagan, then 29 years of age. He had been John Macy's assistant and at a time he became Helen's secretary. We know very little about Fagan. He was described to Nella Braddy as a "violent" socialist. The story about their love became public and Helen Keller's mother was very much against the relationship. It seems clear she wanted to keep Helen away from Peter. She took Helen to Alabama. It is said that Peter came after her, but was threatened by her brother, Warren, with a gun. Some days after this event Helen had packed her bag and waited for him the whole night, but he did not come. "It is a terrible picture to me," wrote Nella Braddy at the end of her notes on the episode made in January 1927, "of the blind deaf-mute girl waiting on the porch all night for a lover who never came." (In Lash 1980, p. 448). However, much of this story still lies in mystery. Would it have ended in the way it ended if Helen had been quite determined, if she really had made up her mind? Knowing about her temperament and her strong will, this is unlikely. By the end of January 1917 Anne and Helen are planning to move together again. Lash is right, saying:

"There was no mention of Peter Fagan. Indeed, there was no place for him. If he and Helen had married, he, too, would have discovered - as John had before him - that he had married an institution whose nucleus consisted of Teacher and Helen, and this was an atom not to be smashed." (Lash 1980, p. 449).

³⁰They slept in the same bed in the garden-house. To avoid misunderstandings: Nothing indicates, as far as the author knows, a homosexual relationship.

born but were acquired in and through Helen Keller's activity and communication with other people, above all Anne Sullivan.

John Macy points out that many writers seem to throw us from one horn to another of a dilemma - either a born genius in Helen Keller, or a perfect method in the teacher. Both things may be true at once, says Macy (in Keller 1922, p. 381). In this conclusion, however, we disagree. *Helen Keller was not born a genius, no-one was or is.* Helen Keller became an exceptional personality in and through her activity on the basis of natural possibilities and *a teaching method which in fact also was developed in Anne Sullivan's activity with Helen Keller.* This method included almost chronic conversations, explorations, common activities and friendship throughout days, weeks, months, years.

Anne Sullivan's contribution

Before we let Anne Sullivan speak for herself, we give the opportunity to John Macy. He points out that Dr. Howe was the great pioneer on whose work that of Miss Sullivan and other teachers of the deaf-blind immediately depended. Too much cannot be said in praise of Howe's work, according to Macy. However, the reader should bear in mind Cutsforth's criticism of Howe.

As an investigator Howe always kept the scientist's attitude. He never forgot to keep his records of Laura Bridgman in the fashion of one who works in a laboratory. The result is, his records of her are systematic and careful. From a scientific standpoint, Macy states, it is unfortunate that it was impossible to keep a complete record of Helen Keller's development like that of Laura Bridgman's. This in itself is a great comment on the difference between Laura Bridgman and Helen Keller, Macy says. Laura always remained an object of curious study. Helen Keller became so rapidly a distinct personality that she kept her teacher in a breathless race to meet the needs of her pupil, with no time or strength to make a scientific study. Anne Sullivan was also a modest person. She obviously did not like to put herself in the first line. Exaggerating and boasting was not her style. The following extracts of some of her letters and reports was published in 1902 as the last part of Helen Keller's *The Story of My Life*, together with letters by Keller and John Macy's comments edited by him. It is this book we refer to as Keller 1922 (republished this year and several other years). John Macy tells:

"Although Miss Sullivan is still rather amused than distressed when some one, even one of her friends, makes mistakes in published articles about her and Miss Keller, still she sees that Miss Keller's book should include all the information that the teacher could at present furnish. So she consented to the publication of extracts from letters which she wrote during the first year of her work with her pupil. These letters were written to Mrs. Sophia C. Hopkins, the only person to whom Miss Sullivan ever wrote freely. Mrs. Hopkins has been a matron at the Perkins Institution for twenty years, and during the time that Miss Sullivan was a pupil there she was like a mother to her. In these letters we have an almost weekly record of Miss Sullivan's work. Some of the details she had forgotten, as she grew more and more to generalize. Many people have thought that any attempt to find the principles in her method would be nothing but a later theory superimposed on Miss Sullivan's work. But it is evident that in these letters she was making a clear analysis of what she was doing. She was her own critic, and in spite of her later declaration, made with her modest carelessness, that she followed no particular method, she was very clearly learning from her task and phrasing at the time principles of education of unique value not only in the teaching of the deaf but in the teaching of all children. The extracts from her letters and reports form an important contribution to pedagogy..." (Macy in Keller 1922, p. 301).

Macy points out that it was Dr. Howe who made Miss Sullivan's work possible; "but it was Miss Sullivan who discovered the way to teach language to the deaf-blind." (Macy in Keller 1922, p. 302).

This is a very important statement from Macy. The author was highly surprised reading it, since it is the general, commonly held, opinion that Howe was the first succeeding in teaching language to a deaf-blind person. We will turn to this later, because this has to do with the fundamental principles of Anne Sullivan's teaching. These will be revealed in the following excerpts and, instead of having it explained here and now, the reader will have the opportunity to make a personal exciting discovery.

Anne Sullivan's method with her own words³¹

In the first letter dated March 6, 1887, three days after her arrival in Tuscumbia she says (the headlines by the author of this book):

Anne Sullivan begins at once spelling in Helen Keller's hand.

"...She is very quick-tempered and wilful, and nobody, except her brother James, has attempted to control her. The greatest problem I shall have to solve is how to discipline and control her without breaking her spirit..."

She helped me unpack my trunk when it came, and was delighted when she found the doll the little girls sent her. I thought it a good opportunity to teach her her first word. I spelled 'd-o-l-l' slowly in her hand and pointed to the doll and nodded my head, which seems to be her sign for possession. Whenever anybody gives her anything, she points to it, then to herself, and nods her head. She looked puzzled and felt my hand, and I repeated the letters. She imitated them very well and pointed to the doll. Then I took the doll, meaning to give it back to her when she had made the letters; but she thought I meant to take it from her, and in an instant she was in a temper, and tried to seize the doll. I shook my head and tried to form the letters with her fingers; but she got more and more angry. I forced her into a chair and held her there until I was nearly exhausted. Then it occurred to me that it was useless to continue the struggle - I must do something to turn the current of her thoughts. I let her go, but refused to give up the doll. I went downstairs and got some cake (she is very fond of sweets). I showed Helen the cake and spelled 'c-a-k-e' in her hand, holding the cake toward her. Of course she wanted it and tried to take it; but I spelled the word again and patted her hand. She made the letters rapidly, and I gave her the cake, which she ate in a great hurry, thinking, I suppose, that I might take it from her. Then I showed her the doll and spelled the word again, holding the doll toward her as I held the cake. She made the letters 'd-o-l' and I made the other 'l' and gave her the doll..."(In Keller 1922, pp. 305-306).

Still the first letter:

Helen remembers and makes associations but does not understand that the spelled words are names of things.

"Yesterday I gave her a sewing-card to do. I made the first row of vertical lines and let her feel it and notice that there were several rows of little holes. She began to work delightedly and finished the card in a few minutes, and did very neatly indeed. I thought I would try another word; so I spelled 'c-a-r-d'. She made the 'c-a', then stopped and thought, and making the sign for eating and pointing downward she pushed me towards the door, meaning that I must go downstairs for some cake. The two letters 'c-a'. you see, had reminded her of Friday's 'lesson' - not that she had any idea that *cake* was the name

³¹The author of this book has not seen the original letters, the amount of "editing" by John Macy - and Anne Sullivan herself - has therefore not been scrutinized. Macy himself tells : "For the ease of the reader I have, with Miss Sullivan's consent, made the extracts run together continuously and supplied words of connection and the resulting necessary changes in syntax, and Miss Sullivan has made slight changes in the phrasing of her reports and also of her letters, which were carelessly written. I have also italicized a few important passages." (p. 303).

of the thing, but it was simply a matter of association, I suppose. I finished the word 'c-a-k-e' and obeyed her command. She was delighted. Then I spelled 'd-o-l-l' and began to hunt for it. She follows with her hands every motion you make, and she knew that I was looking for the doll." (p. 306).

Tuscumbia, Alabama, March 11, 1887:

Anne Sullivan holds the opinion that to make real progress with Helen disciplining her is a requisite. The moving to the garden-house.

"I very soon made up my mind that I could do nothing with Helen in the midst of the family, who have always allowed her to do exactly as she pleased. She has tyrannized over everybody, her mother, her father, the servants, the little darkies who play with her, and nobody had ever seriously disputed her will, except occasionally her brother James, until I came; and like all tyrants she holds tenaciously to her divine right to do as she pleases..."

I saw clearly that it was useless to teach her language or anything else until she learned to obey me. I have thought about it a great deal, and the more I think, the more certain I am that obedience is the gateway through which knowledge, yes, and love, too, enter the mind of the child...

Captain Keller... suggested that the little garden-house at the 'old place' be got ready for us...I hurried the preparations for our departure as much as possible, and here we are." (pp. 308-309).

Same letter as above:

Five days after Anne Sullivan arrived Helen knows several words, but still does not understand naming.

"Helen knows several words now, but has no idea how to use them, or that everything has a name. I think, however, she will learn quickly enough by and by. As I have said before, she is wonderfully bright and active and as quick as lightning in her movements." (pp. 310-311).

March 20, 1887:

A turning point in Helen Keller's behaviour.

"The wild little creature of two weeks ago has been transformed into a gentle child. She is sitting by me as I write, her face serene and happy, crocheting a long red chain of Scotch wool. She learned the stitch this week, and is very proud of the achievement. When she succeeded in making a chain that would reach across the room, she patted herself on the arm and put the first work of her hands lovingly against her cheek. She lets me kiss her now, and when she is in a particularly gentle mood, she will sit in my lap for a minute or two; but she does not return my caresses. The great step - the step that counts - has been taken." (pp. 311-312).

Same letter as above:

Progress, but still no idea of naming.

"Helen has learned several nouns this week. 'M-u-g' and 'm-i-l-k,' have given her more trouble than other words. When she spells 'milk', she points to the mug, and when she spells 'mug', she makes the sign for pouring or drinking, which shows that she has confused the words. She has no idea yet that everything has a name." (p. 312).

In a letter, March 28, 1887:

"We began the lesson as usual. I gave her an object, and she spelled the name (she knows twelve now)." (p. 314).

In a letter, April 3, 1887:

Anne Sullivan is the creator of the conversational method.

"The hour from twelve to one is devoted to the learning of new words. But you mustn't think this is the only time I spell to Helen, for I spell in her hand everything we do all day long, although she has no idea as yet what the spelling means..." "...I like to have Helen depend on me for everything, and I find it much easier to teach her things at odd moments than at set times." (p. 315).

In the same letter as above:

Quantitative, but no qualitative progress.

"On March 31st I found that Helen knew eighteen nouns and three verbs. Here is a list of the words. Those with a cross after them are words she asked for herself: *Doll, mug, pin, key, dog, hat, cup, box, water, milk, candy, eye (x), finger (x), toe (x), head (x), cake, baby, mother, sit, stand, walk*. On April 1st she learned the nouns *knife, fork, spoon, saucer, tea, papa, bed*, and the verb *run*." (p. 315).

April 5, 1887:

The turning point. Helen Keller learns that everything has a name.

"I must write you a line this morning because something very important has happened. Helen has taken the second great step in her education. She has learned that *everything has a name, and that the manual alphabet is the key to everything she wants to know*."

In a previous letter I think I wrote you that 'mug' and 'milk' had given Helen more trouble than all the rest. She confused the nouns with the verb 'drink'. She didn't know the word for 'drink', but went through the pantomime of drinking whenever she spelled 'mug' or 'milk'. This morning, while she was washing, she wanted to know the name for 'water'. When she wants to know the name of anything, she points to it and pats my hand. I spelled 'w-a-t-e-r' and thought no more about it until after breakfast. Then it occurred to me that with the help of this new word I might succeed in straightening out the 'mug-milk' difficulty.³² We went out to the pump-house, and I made Helen hold her mug under under the spout while I pumped. As the cold water gushed forth, filling the mug, I spelled 'w-a-t-e-r' in Helen's free hand. The word coming so close upon the sensation of cold water rushing over her hand seemed to startle her. She dropped the mug and stood as one transfixed. A new light came into her face. She spelled 'water' several times. Then she dropped on the ground and asked for its name and pointed to the pump and the trellis, and suddenly turning round she asked for my name. I spelled 'Teacher'. Just then the nurse brought Helen's little sister into the pump-house, and Helen spelled 'baby' and pointed to the nurse. All the way back to the house she was highly excited, and learned the name of every object she touched, so that in a few hours she had added thirty new words to her vocabulary. Here are some of them: *door, open, shut, give, go, come*, and a great many more." (pp. 315-316).³³

The reader should compare Anne Sullivan's thinking in the following passage with that of the Hofsteaters³⁴ (see above, in the chapter on deafness).

April 10, 1887:

Anne Sullivan reflects on her method

"I have decided not to try to have regular lessons for the present. I am going to treat Helen exactly like a two-year old child. It occurred to me the other day that it is absurd to require a child to come to a certain place at a certain time and recite certain lessons, when he has not yet acquired a working vocabulary. I sent Helen away and sat down to think. I asked myself, "How does a normal child learn language?" The answer was simple, "By imitation." The child comes into the world with the ability to learn, and he learns of himself, provided he is supplied with sufficient outward stimulus. He sees people do

³²R.Th.E.: Notice that Anne Sullivan is contradicting herself: in the letter of April 3, she tells that Helen knows the noun "water". Is Anne Sullivan now lying? No, but the author interprets her data in another way than she does herself. In describing our comprehension of the development of language, we can see that this contradiction is not a contradiction in Anne Sullivan's mind, it is a contradiction of real life, it is a syncretism in Helen Keller's concepts that the author has seen in many deaf-blind persons telling us something of the development of language. A very short explanation: A child - sighted or blind - can understand many words before he understands words as *symbols*. The example above indicates that Helen Keller begins to comprehend on a symbolic level. Therefore, Helen Keller might have understood the connection *w-a-t-e-r* (fingerspelling) and the real object water in a more limited sense before she understood the connection on the symbolic level. In fact, this development is very likely.

³³R.Th.E.: See also Helen's own description of this in the section "The myth".

³⁴And, by the way, also Sophia Alcorn.

things, and he tries to do them. He hears others speak, and he tries to speak. But long before he utters his first word, he understands what is said to him. I have been observing Helen's little cousin lately. She is about fifteen months old, and already understands a great deal. In response to questions she points out prettily her nose, mouth, eye, chin, cheek, ear...She obeys many commands like these: "Come", "Kiss", "Go to papa", "Shut the door", "Give me the biscuit." But I have not heard her try to say any of these words, although they have been repeated hundreds of times in her hearing, and it is perfectly evident that she understands them. These observations have given me a clue to the method to be followed in teaching Helen language. I shall talk into her hand as we talk into the baby's ears. I shall assume that she has the normal child's capacity of assimilation and imitation. I shall use complete sentences in talking to her, and fill out the meaning with gestures and her descriptive signs when necessity requires it; but I shall not try to keep her mind fixed on any one thing. I shall do all I can to interest and stimulate it, and wait for results." (p. 317).

April 24, 1887:

Helen has up to this time used one word sentences. The first example of more than one word sentences.

"Like her baby cousin, she expresses whole sentences by single words. 'Milk,' with a gesture means, 'Give me more milk.'..."

Friday we went down town and met a gentleman who gave Helen some candy, which she ate, except one small piece which she put in her apron pocket. When we reached home, she found her mother, and of her own accord said, 'Give baby candy.'" (p. 318).

In the following months Helen learned adjectives and adverbs, conjunctions, numerals, etc. The principal new learning (by teaching!) was *reading* and *writing*.

May 22, 1887: "We have reading lessons every day." (p. 322).

She soon reads raised letters and braille. Three months and a half after the first word was spelled into her hand, she wrote her first letter - on June 17, 1887; twenty-five days later, on July 12, 1887, while she was on a short visit away from home, she wrote to her mother, and in September the same year she wrote to the blind girls at the Perkins Institution. This latter letter is worth mentioning because she tells about a variety of subjects. Last, but not least, the letter a month later, on October 24, 1887, demonstrates a breakthrough in her mode of expression. In her first report to the Perkins Institution Anne Sullivan tells about the teaching/learning of reading and writing.

First report 1887:

Anne Sullivan is teaching Helen to read and write.

"I now thought it time to teach her to read printed words. A slip on which was printed, in raised letters, the word *box* was placed on the object; and the same experiment was tried with a great many articles, but she did not immediately comprehend that the label-name represented the thing. Then I took an alphabet sheet and put her finger on the letter A, at the same time making A with my fingers. She moved her finger from one printed character to another as I formed each letter on my fingers. She learned all the letters, both capital and small, in one day. Next I turned to the first page of the primer and made her touch the word *cat*, spelling it on my fingers at the same time. Instantly she caught the idea, and asked me to find *dog* and many other words. Indeed, she was much displeased because I could not find her name in the book. Just then I had no sentences in raised letters which she could understand; but she would sit for hours feeling each word in her book. When she touched one with which she was familiar, a peculiarly sweet expression lighted her face, and we saw her countenance growing sweeter and more earnest every day. About this time I sent a list of the words she knew to Mr. Anagnos, and he very kindly had them printed for her. Her mother and I cut up several sheets of printed words so that she could arrange them into sentences. This delighted her more than anything she had yet done; and the practice thus obtained prepared the way for the writing lessons. There was no difficulty in making her understand how to write the same sentences with

pencil and paper which she made every day with the slips, and she very soon perceived that she need not confine herself to phrases already learned, but could communicate any thought that was passing through her mind. I put one of the writing boards used by the blind between the folds of the paper on the table, and allowed her to examine an alphabet of the square letters, such as she was to make. I then guided her hand to form the sentence, 'Cat does drink milk.' When she finished it she was overjoyed. She carried it to her mother, who spelled it to her.

Day after day she moved her pencil in the same tracks along the grooved paper, never for a moment expressing the least impatience or sense of fatigue.

As she had now learned to express her ideas on paper, I next taught her the braille system. She learned it gladly when she discovered that she could herself read what she had written; and this still affords her constant pleasure. For a whole evening she will sit at the table writing whatever comes into her busy brain; and I seldom find any difficulty in reading what she has written." (pp. 338-339).

A last important passage from a paper Anne Sullivan prepared for the meeting at Chautauqua, in July, 1894, of the American Association to Promote the Teaching of Speech to the Deaf:

Anne Sullivan on language.

"Language grows out of life, out of its needs and experiences. At first my little pupil's mind was all but vacant. She had been living in a world she could not realize. *Language* and *knowledge* are indissolubly connected; they are interdependent. Good work in language presupposes and depends on a real knowledge of things. As soon as Helen grasped the idea that everything had a *name*, and that by means of the manual alphabet these names could be transmitted from one to another, I proceeded to awaken her further interest in the *objects* whose names she learned to spell with such evident joy. I *never taught language for the PURPOSE of teaching it*; but invariably used language as a medium for the communication of *thought*; thus the learning of language was *coincident* with the acquisition of knowledge. In order to use language intelligently, one must have something to talk *about*, and having something to talk about is the result of having had experiences; no amount of language training will enable our little children to use language with ease and fluency unless they have something clearly in their minds which they wish to communicate, or unless we succeed in awakening in them a desire to know what is in the minds of others." (p. 375).

John Macy's evaluation of Anne Sullivan's method

John Macy summarizes some of Anne Sullivan's methodological principles, saying that she began where Dr. Howe left off. He invented the instrument, the physical means of working, but the teaching of language is quite another thing than the mechanical means by which language may be taught. By experiment, by studying other children, Miss Sullivan came upon the practical way of teaching language by the natural method. It was for this "natural method" that Dr. Howe was groping, but he never got this idea, that a deaf child should not be taught each word separately by definition, but should be given language *by endless repetition of language which it does not understand*. And this is Miss Sullivan's great discovery (cf. later similar theoretical assumptions: Alcorn, Hofsteaters). If we look upon Anne Sullivan's theoretical assumptions on language acquisition as a hypothesis, i.e. that the "natural method" also could be applied by fingerspelling instead of hearing and speaking, the experience of Hofsteater can be seen as a corroboration of that hypothesis.

Here and now, then, the reader can understand the statement of Macy that "it was Miss Sullivan who discovered the way to teach language to the deaf-blind."

If that is correct, it is evident that what is possible for a deaf-blind person should also be possible for a deaf person, which also is demonstrated in the experiment of Hofsteater's parents.

Miss Sullivan holds the opinion, Macy continues, that a teacher should never talk to the child about things distasteful or wearisome to him. Akin to this idea of talking to the child about what interests him, is the principle never to silence a child who asks questions, but to answer the questions as truly as possible; for, says Miss Sullivan, the question is the door to the child's mind.

Miss Sullivan knew what so many people do not understand, that after the first rudimentary definitions of *hat, cup, go, sit, the unit of language, as the child learns it, is the sentence, which is also the unit of language in our adult experience*. We do not take in a sentence word by word, but as a whole. It is the proposition, something predicated about something, that conveys an idea.

The manual alphabet was not the only means of presenting words to Helen Keller's fingers. *Books supplemented, perhaps equalled in importance, the manual alphabet, as a means of teaching language.* Helen sat poring over them before she could read, not at first for the story, but to find words she knew; and the definition of new words which is implied in their context, in their position with reference to words known, added to Helen's vocabulary. When at the age of 14 she had had but a few lessons in German, she read over the words of "Wilhelm Tell" and managed to get the story. Of grammar she knew nothing and she cared nothing for it. She got the language from the language itself, and this is, according to Macy, next to hearing the language spoken, the way for anyone to get a foreign tongue, more vital and, in the end, easier than our schoolroom method of beginning with the grammar (Macy in Keller 1922, pp. 379-380).

The author has, however, through his study of Helen Keller's development and the method of Anne Sullivan, come to the conclusion that Macy's statement about Helen Keller's acquisition is imprecise, partly wrong, and has to be corrected as follows:

It is correct that Anne Sullivan taught Helen Keller language in the sense of performing a conversational activity in which Helen learned to develop her language. It is, however, incorrect that Anne Sullivan taught Helen language in the meaning of teaching language to a person that had no language. We have demonstrated (see Appendix) that Helen Keller had a language when Anne Sullivan started to work with her. What Anne Sullivan did was, being precise, to teach Helen Keller the **English** language.

The influence of Ragnhild Kaata on Helen Keller's learning of speech

Helen Keller tells about Ragnhild in a letter to Mr. William Wade, June 5, 1899:

"The other day, I met a deaf Norwegian gentleman, who knows Ragnhild Kaata and her teacher very well, and we had a very interesting conversation about her. He said she was very industrious and happy. She spins, and does a great deal of fancy work, and reads, and leads a pleasant, useful life. Just think, she cannot use the manual alphabet! She reads the lips well, and if she cannot understand a phrase, her friends write it in her hand; and in this way she converses with strangers. I cannot make out anything written in my hand, so you see, Ragnhild has got ahead of me in some things..." (Keller 1922, p. 256).

As we already know, it is not corroborated that the method later named as the "Tadoma method" has its origin in Hamar, Norway. On the other hand, Helen

Keller resolved to emulate Ragnhild Tollefsdatter; she heard about Ragnhild 9 years before the above quoted letter. We know that the knowledge about Ragnhild's speaking gave Helen a great impulse. Helen had learned different types of communication (tactual, braille, Morse, etc.), however, speaking was ever on her mind. In her own words:

"It was in the spring of 1890 that I learned to speak. The impulse to utter audible sounds had always been strong within me. I used to make noises, keeping one hand on my throat while the other hand felt the movements of my lips..."

In 1890, Mrs. Lamson, who had been one of Laura Bridgman's teachers, and who had just returned from a visit to Norway and Sweden, came to see me, and told me of Ragnhild Kaata, a deaf and blind girl in Norway who had actually been taught to speak. Mrs. Lamson, had scarcely finished telling me about this girl's success before I was on fire with eagerness. I resolved that I, too, would learn to speak. I would not rest satisfied until my teacher took me, for advice and assistance, to Miss Sarah Fuller, principal of the Horace Mann School. This lovely, sweet-natured lady offered to teach me herself, and we began the twenty-sixth of March, 1890.

Miss Fuller's method was this: she passed my hand lightly over her face, and let me feel the position of her tongue and lips when she made a sound. I was eager to imitate every motion and in an hour had learned six elements of speech: M, P, A, S, T, I. Miss Fuller gave me eleven lessons in all. I shall never forget the surprise and delight I felt when I uttered my first connected sentence, 'It is warm.' " (Keller,H. 1922, pp. 58-60).

However, it was Anne Sullivan, who, by her unremitting discipline, carried on the success of these first lessons (Macy in Keller 1922, p. 384). This she did, although the author of this book through his reading of her comments on Helen's speaking has a strong feeling that Anne was not too happy over this "speaking". The reason for that is clear: The central communication mode in Anne's method was fingerspelling.

The Hofgaard/Fuller method and the Tadoma method

The Horace Mann School for the Deaf was formerly the Boston School for Deaf Mutes, where Bell had taught under Sarah Fuller as a young man. Still, it is fair to say that some hold the opinion that only Sarah Fuller, Teacher and those close to Helen could understand her. Her speech tended either to sound singsongy when she read out loud, or to lack expression, especially when she raised her voice. Helen's failure to speak well was a lifelong frustration.³⁵ She entered the Wright-Humason School in New York in the fall of 1894. The school had made a specialty of lip-reading and voice-culture. Dr. Humason tried to improve her voice. John Macy says of her speech that some understood her readily; others did not. Her friends grew accustomed to her speech and forgot that it was different from that of anyone else. According to Macy, children seldom had any difficulty in understanding her. He says, "I am told that Miss Keller speaks better than most other deaf people." (In Keller,H. 1922, p. 385).

To participate without help in a conversation based solely on speech, Helen Keller did not only have to speak herself, she also had to understand the speech of other people through speech-reading (lip-reading) using her fingers. We know that this often also was not a success. She "heard" some people in that manner but other people said they had no success in making her "hear" them (Macy in Keller 1922, p. 391).

³⁵The author had great problems understanding her speech listening to a recording of it. In this record she also expressed great bitterness not to have learned speaking as a little child, reflecting over what she then could have achieved. (Recording heard on May 31, 1993, in an US (Boston) radio show on Helen Keller's life.)

Helen Keller was not taught speech-reading (lip-reading) and speaking in the way Sophia Alcorn taught. Keller started speaking at once. It is probably wrong to believe that Kaata and Keller always used the same positions of their finger and hands when lip-reading. One way of speech-reading (lip-reading) for Helen Keller was with her thumb on the other person's throat (larynx), and the other fingers of that hand over the person's cheek so near the mouth that a finger or two could feel the movements of the lips. Sometimes the fingers were also on the mouth. *This is similar to the way Ragnhild Kaata did it.* Ragnhild placed her fingers against the underlip of the other person, but a photograph shows no fingers on the other person's throat.³⁶ Both Ragnhild and Helen's positions of the fingers are somewhat different from the usual mode later based on Alcorn. It is, however, worth mentioning that the ways of speech-reading always were very individual for the person using the Tadoma method (see later on that matter).³⁷

As we already know (see above), Sophia Alcorn's teacher was Miss Caroline Yale. Was there any link between Helen Keller and Caroline Yale? This should be a task for American scholars to find out. Before we know that, we do not know if Helen Keller has influenced the development of the Tadoma method. At the present time, then, it is justified to speak of the "Hofgaard/Fuller method" (in Helen Keller's education) and the Tadoma theory, i.e the Tadoma method in deaf education and the Tadoma method in deaf-blind education.

In the history of deaf-blind education two important changes at Perkins must be mentioned.

In the year 1931 a special department was opened with teachers trained in speech building for schoolroom instruction and attendants to care for the children outside of the classroom instead of employing a teacher for each pupil. In making this fundamental change, it was hoped to secure more skilled teachers on a professional basis and by distributing responsibility to avoid both the loneliness of Laura Bridgman after her school work terminated and the life-long dependence of Helen Keller upon first Mrs. Macy and later Miss Thomson (Farrell,G. 1956, p. 32).

The Tadoma method in deaf-blind education

The other change at Perkins is very interesting seen in the light of the "great controversy" in the education of deaf people: the oralist question. Farrell states that a vital change was made at Perkins to make speech work through oral instruction the main medium of communication. Spelling in the hand was no longer taught to those who could develop speech, and manual signs were not encouraged. The aim was to make communication as normal and natural as possible, so that anyone, not only those who knew the manual alphabet, could talk with the children. In earlier years, this had not been thought possible, but its practicality had been proved, and could be demonstrated by several accomplished children, according to Farrell (1886-1968)³⁸. The secret of the success of the new

³⁶The photograph is shown in Hansen's article on Ragnhild Kaata (1930).

³⁷ In Miss Petra Heiberg's report, she tells that Ragnhild "placed her fingers against the underlip of her interlocutor." Hansen, however, referring to the report, emphasizes the difference to Helen Keller, continuing the above quotation as follows: "(unlike Miss Keller, who places her hand on the cheek so near the mouth that a finger or two can feel the movements of the lips-A.H.)" (Hansen 1930, p. 225).

³⁸Gabriel Farrell was an outstanding educator of blind and deaf-blind people. He played an important role in many progressive changes at Perkins School for the Blind. He changed the traditional school policy of segrega-

method was vibration, and Farrell claims that it has become, in a large measure, sight and sound to the deaf-blind pupils (Farrell,G. 1956, pp. 32-33). Obviously, at Perkins they adopted the method developed by Sophia Alcorn (see chapter about the history of deaf education), which will be documented in the following. Farrell is an authoritative source for the thirties. He was the director at Perkins (from 1931 to 1951). Gabriel Farrell became the fourth director of Perkins (the former were Howe, Anagnos, and Allen) (Stuckey,K.A. 1990).

In the general teaching of deaf-blind children the approach was also changed from the method developed by Howe with Laura Bridgman. Farrell describes the method as follows: Instead of beginning with objects and having the pupil learn their names as in the past, commands are now opening wedges. Most teachers begin with the command to bow. The beginning pupil places his fingers on the teacher's face, feeling both the vibration of the muscles of articulation and the lip positions used in forming the elements of speech. The teacher will say "bow" distinctly, while she pushes the child's body into a bowing position. This is done again and again, until the muscular pattern of bowing is associated with the vibrations felt as the command is spoken. Sometimes it takes months of daily work to get this idea into the child's mind, but after the first command is understood, the more complicated commands become progressively easier to teach (Farrell,G. 1956, p. 33).

In teaching speech the child has to be taught how to form his lips and to hold his tongue in order to make the fundamental sounds. In the program at Perkins the deaf-blind child was first taught to hear through vibration and then to build word meaning into the delicate varying vibrations of the throat muscles. Then he had to be taught to reproduce with his own vocal cords sounds thus heard. In practice, the deaf-blind child places his hand on the teacher' jaw, with the thumb over the lips, and feels the movement of the sound to be replicated, including lip and breath movements.

According to Farrell, this method was originally developed in the 1930s by Miss Sophia Alcorn, for many years a teacher of the deaf in the Detroit public schools, and modified considerably by Miss Inis B. Hall, the first head of the deaf-blind department at Perkins (Farrell,G. 1956, p. 34). Farrell says 1930s³⁹, but the beginning is in fact before 1920. Already before 1920 Sophia Alcorn worked with the deaf-blind girl Oma at Kentucky School for the Deaf. In 1926 she came to the Day School for the Deaf in Cincinnati, and in fall 1927 she started her work in the Detroit Day School. Inis B. Hall had worked together with and was a friend of Sophia Alcorn.

Similar teaching principles were developed in the Soviet Union where they at one time used electrical wires connecting the larynx of the speaker and the listener in the teaching and learning process. However, in the Soviet Union they seemed to follow another main road in the teaching of deaf-blind people, more emphasizing fingerspelling.

ting boys and girls in residential schools for the blind. Farrell also was the one who was responsible for the establishing of a deaf-blind department at Perkins. He contributed to establishing the International Conference of Workers for the Blind which held a meeting in Oxford, England in 1949. His journalistic skills led to the establishment of the Perkins magazine *The Lantern*.

³⁹Allow a digression: A reputed *present* encyclopaedia says the Tadoma method came into origin in 1945 - it is interesting how fast our historical knowledge deteriorates!

Why the name "Tadoma"?

The Tadoma method is also called the "Tadoma vibrotactile method"⁴⁰, and, as we already know and do not recommend, the "Hofgaard method". In its deaf-blind version it is also termed "Hall-Alcorn method".

Two of Alcorn's pupils were Tad Chapman, a deaf-blind boy, and Oma Simpson, a deaf-blind girl. Sophia Alcorn therefore called the vibrotactile method "Tadoma".⁴¹

Tad and Oma were the two deaf-blind children with whom Miss Sophia Alcorn first successfully used the method (Stenquist 1974, p. 23). She started with Oma and in 1921 with Tad. Why not let Sophia Alcorn tell the story herself:

"It was my privilege to teach Oma Simpson, a deaf-blind pupil in the Kentucky School for the Deaf for ten years. After proving to the authorities of the school that the oral method was practical in her case, her education was carried on altogether through the tactile sense - that is, she understood all speech through vibration and learned to speak through the sense of touch. Her speech was most intelligible and her speech-reading was truly remarkable.

She made use of the following means of receiving speech:

1. by putting her thumb on the mouth of the speaker, 2. by putting her hand on the cheek, 3. by putting her hand on the back of the neck of the speaker, 4. by putting her hand on a paper tube while sentences were spoken into it.

In January 1921, the education of another blind-deaf child, Tad Chapman, was entrusted to me. Similar methods were used with him, except from the beginning his instruction was given entirely through the tactile sense. After a demonstration with Tad in New York in 1927, many educators of the deaf asked why one so seriously handicapped could accomplish so much more than the deaf child." (Alcorn,S.K. in "Tadoma Method of Teaching Speech to Deaf Children", p. 1).

There are several outstanding teachers of the Tadoma-method in deaf-blind education that should be mentioned. Besides Inis B. Hall, we have knowledge of Gertrude Stenquist (Sinclair), the teacher of Leonard Dowdy; Alice Carpenter, one of the teachers of Robert J. Smithdas; Mrs. Maurine Nilsson Gittzus, the teacher of Juanita Morgan; and Mrs. Rose M. Vivian, once Supervising Teacher in the Deaf-Blind Department of Perkins School for the Blind.

Gertrude Stenquist (Sinclair): One of the pioneers in using the Tadoma method

The author met Gertrude in May 1993⁴² and had a long and lively talk.

Gertrude was born on July 10, 1912, in Waltham, Massachusetts. She graduated from Radcliffe College, now Harvard University in Cambridge, as BA, and then from Simmonds School of Social work as BS (Bachelor of Science). She took two courses while she was at Perkins. She took a Harvard course under Dr. Allen and Miss Laingworthy "Education of the Blind". She also took a course in teaching the deaf which Perkins paid for. After being at Perkins for a long time, Gertrude received a master's degree (MA) in special education in 1959.

While she was at Simmonds School, Gertrude had a field trip to Perkins and thought "that's where I want to be a social worker". She applied, but Gabriel Farrell, the director, said they had one. However, they had many requests from parents of deaf-blind children who had heard about Helen Keller, so they needed a

⁴⁰Do we in the Tadoma method find the traces of Bonet?

⁴¹Source: Gertrude Stenquist (Sinclair), interviewed on May 19, 1993, at Perkins School for the Blind.

⁴²Back in Norway, the author received the sad message that Gertrude (MacDonald) Stenquist (Sinclair) died at her home in Waltham on Friday January 14, 1994.

teacher for them. There she started as an apprentice for Inis B. Hall, the teacher of deaf-blind students. Gertrude was at Perkins School for the Blind from 1934 to 1975. She worked with several deaf-blind people, one of her students being Leonard Dowdy who was at Perkins when she came there. She started to work with him when she worked as an apprentice for Inis. He was then six and a half years old, but Inis Hall had worked with him since he was 5. When Gertrude started with him he comprehended approximately 200 words taught by Inis Hall.

Oma was not at Perkins when Gertrude was there, but Tad was there when she arrived. Gertrude lived in the beginning in one of the cottages at Perkins.

The author asked Gertrude to tell him about her use of the Tadoma method.

It is difficult to describe the Tadoma method used in deaf-blind education because it was individualized, adapted for each child. Every teacher also used it individually. We therefore can see many differences in the description of it, both the process and, for example, the use of the hands.

Gertrude told that, when she was asked, "how did you do it?", she said: "I just did it."

The following could indicate some steps, but the variation must be stressed:

1. Speech sounds imitation

The start might be that the child (he) held his fingers on her face when she (Gertrude) made speech sounds. Then the child was to try to imitate the sounds. His fingers could then be led to his own face. The teaching could have the form of play, "It was much of a game".

Also the position of the fingers on the other person's face could be flexible, the thumb on the lips (sometimes between the lips) to feel the expulsion of breath and the movements of the lips, the two first fingers on the cheek, the next on the jaw and the last one on the side of the throat. It could take a long time before the child imitated the sound, and the first time was a "golden moment".⁴³

2. Words and action

The first word could be "bow" or "jump". She said the word with the pupil's fingers on her face and then bowed or respectively jumped (herself) and tried to make the pupil do the same, e.g. in jumping also pulling the pupil up. Even for bright pupils this sometimes had to be done many times before the child understood he was expected to imitate the action.

3. Words and objects

Very soon (for example also as early as words and action), the attempt was made to connect words with objects. This was done with objects in a box or plate on the table before the child ("ball", "spoon", "top", etc.). The word might be said with the fingers of the child on the teacher's face and the fingers were led - hand over hand - to the object. The task would be that the child instructed by the word should give the object to the teacher.

4. Words-action-imitation of words

⁴³About the position of the hands, Vivian (1966) tells:

"The child...places his thumb on the lips of the speaker and his fingers lightly on the cheek - spreading from the cheekbones down to the jawbone just below the ear.

In a recent research project conducted in this department, the following observation was noted and warrants further special attention. (R.Th.E.: The source is Hofgaard Method of Speechreading: An Experimental Study of the Reception of Speech Through Touch. Term paper. Church, C., Cypers,R., Horner,C., Raeburn,R., May, 1964)

'...the two thumbs were placed over the lips extending from the chin to the upper lip, the fingers were spread out, fanwise, across the cheeks, and reached down to the neck.

'...the adult subjects experimented with various hand positions. All subjects evolved the same hand positions. The fingers were widely spread, the little finger of the right hand resting lightly on the hollow below the thyroid cartilage. The thumb spanned the lips. The remaining fingers of the right hand rested on the upper neck and cheek. The left hand was placed in a similar position but with the thumb on the corner of the mouth. The little finger did not extend as far down the neck.' "(Vivian.R. 1966, pp. 734-735).

By and by the attempt was made that the child also should connect the action with the word and imitate the word. It could last a long time (many, many, many "jumps" and "bows") before this moment was achieved.

5. Introduction of braille.

After a while *braille* was introduced. The child was given the word e.g. "ball" written in braille on a little piece of paper and was led to put this piece of braille on the top of the ball. This was done together with saying the word (child's fingers on the teacher's face), then picking up the braille piece and putting it on the object. Thus the connection word-braille-object by and by was established.

6. Introduction of sentences.

The sentences was simple in the beginning. It should be stressed that Gertrude spoke sentences very early (just like Anne Sullivan did it in fingerspelling) but without attempting to make the child imitate them. But when the child mastered single words, she attempted to achieve the imitation of sentences. Also this was done together with braille and objects:

"This is a book" - spoken, in braille, and together with helping the child touch the book.

Going through these steps could take more than a year.

Concerning fingerspelling, Gertrude said that they did not encourage fingerspelling because they thought this could interfere with speech. Fingerspelling was the last *resource*.⁴⁴ Gertrude was not certain if fingerspelling really had this effect. *However, it was the opinion at that time.* Gertrude also mentioned the same as already Howe had done, that *signing* was a problem, because it was so easy and you could express a whole sentence with one sign ("I want to go to the restroom", why then speak the whole sentence?). If a child learned to sign it would be very difficult to motivate the child to learn to speak.

Gertrude stressed that they taught one-to-one, i.e. one teacher - one student. As we know, this is important.⁴⁵

The Tadoma method: For whom?

A combination of Tadoma-learned speech and fingerspelling was the primary means for teaching language to deaf-blind children for three decades at Perkins Institution (later School) for the Blind. Both these modes require a high level of tactile and cognitive discrimination skill on the learner's part, and thus deaf-blind education was most successful with those more cognitively intact (Collins,M.T.; Zambone,A.M., p. 6). This is important. We hear about the successes by the Tadoma method but not about the failures. In fact, there are not so many failures in *deaf-blind* education. The method was applied to relatively few and not always as a success. However, the problem is more that the method obviously is appropriate for very few.⁴⁶ Rose M. Vivian's words should be remembered: "When Miss Inis B. Hall became the first head of the then newly-established Deaf-Blind Department at Perkins School for the Blind in 1932, the Tadoma Method was used exclusively with students capable of learning speech..." (Vivian,R. 1966, p. 734).⁴⁷ The question is, however, what was (and is) the criterion for the capability of learning speech?

Robert J. Smithdas - the deaf-blind director and poet

⁴⁴R.Th.E.: All the Tadoma-educated persons the author has knowledge of also can use fingerspelling.

⁴⁵Interview with Gertrude Stenquist (Sinclair) May 19, 1993, at Perkins School for the Blind.

⁴⁶Notice, however, the interesting research on the Tadoma method made in the United States (Reed,C., Durlach,N., Braida,L. 1989; Chomsky,C. 1986; and other works).

⁴⁷The author has interpreted this statement as follows: Some - or many - deaf-blind children were regarded as incapable of learning speech.

Robert J. Smithdas was born June 7, 1925, in Brentford, PA, a suburb of Pittsburgh.⁴⁸ He is today (1993) Assistant Director of the Helen Keller National Center for Deaf-Blind Youths and Adults (HKNC) at Long Island, New York. On December 13, 1975, he married Michelle Craig, also deaf and blind. She is an instructor at HKNC. They live in their own home in Port Washington, Long Island, New York.

At the age of four and a half, Robert contracted cerebro-spinal meningitis. In the sense that he obviously had acquired a well developed language as old as more than four, he is not of the *same* interest as Laura Bridgman, Helen Keller, or Leonard Dowdy in the history of deaf-blindness. Smithdas, however, stands on his own legs. If you have seen him once, you understand he wishes to be evaluated according to the same scale as sighted and hearing people. If you have read his poems, you understand that he easily passes such an evaluation.

His formal schooling began at Western Pennsylvania School for the Blind. After leaving Western Pennsylvania School for the Blind, Smithdas attended Perkins School for the Blind in Watertown, Massachusetts.

Among his favourite teachers at Perkins was David Abraham, an Englishman who specialized in teaching industrial arts.

It is said that Smithdas has a superb manual dexterity, but it was his academic accomplishments that convinced his teachers that he should go on to college.

After graduating from Perkins in 1945, Smithdas was accepted for training in workshops of The Industrial Home for the Blind (IHB). He received a fellowship for attendance at St. John's University in New York. He was assisted by an undergraduate student who was sighted and hearing and who communicated classroom lectures to him using the manual alphabet. A large corps of volunteers transcribed all of his textbooks into braille. In 1950, Smithdas received his bachelor of arts degree, cum laude, from St. John's University. Three years later, he became the first person who was deaf-blind to earn a master's degree. He achieved this distinction at New York University, where he specialized in vocational guidance and rehabilitation of the handicapped. It is interesting to note that this achievement came nearly fifty years after Helen Keller had received her bachelor's degree from Radcliffe, and thus refuted the longstanding contention that no other deaf-blind person could complete a college education. However, this contention was not world-wide, because at that time the Ukrainian Olga Skorokhodova already was a reputed researcher. That does not diminish the achievements of Smithdas. He absolutely deserves his three honorary degrees: Doctor of Letters from Gallaudet College, Washington, D.C.; Doctor of Humanities from Western Michigan University, Kalamazoo, Michigan; Doctor of Humane Letters, from his alma mater, St. John's University.

Robert J. Smithdas worked for The Industrial Home for the Blind, in the agency's Community Relations Department from 1950 to 1960. From 1960 to 1969 he was associate director of Services for the Deaf-Blind. In 1962 he was engaged in a research and demonstration project, conducted by IHB. He was re-

⁴⁸The author met Robert Smithdas in New York (Long Island) May, 1993. The information about him is based on that meeting, his autobiography *Life at My Fingertips*, and a typewritten and undated "Biography of Dr. Robert J. Smithdas". At this meeting Smithdas spoke to the author with a very intelligible voice, but the author's questions were transmitted to him by an interpreter through fingerspelling. Speech-reading by the Tadoma method was tried (the author spoke, Smithdas speechread) but was no success.

sponsible for providing rehabilitative counselling and consultation services in addition to his major activities in community relations. Later, he played a vital role in the development of legislation which was enacted as part of the 1967 Amendments to the Vocational Rehabilitation Act, and which authorized the establishment of HKNC where he presently is Assistant Director.

Robert J. Smithdas has, besides his honorary degrees, received a lot of awards. He has been a member of several important committees. What is more impressive, in the author's opinion, is that he can travel independently, using public transportation, including subways, and that he lives together with his wife in their own home where they are also known for their gourmet cooking.

In 1960, Robert J. Smithdas was elected to membership in the Poetry Society of America and was honoured as Poet of the Year for 1960-61. In addition to his autobiography, *Life at My Fingertips*, published in 1958, he is the author of two collections of poems, *City of the Heart*, published in 1966, and *Shared Beauty*, published in 1982.

Leonard Dowdy - deaf-blind before the age of one year

Leonard Dowdy was born on July 15, 1927 in Sedalia, Missouri.

He was born as a normal, healthy and active baby. He was the first child of young, American parents. Then he was stricken with what was diagnosed as "brain fever and sleeping sickness" or possibly meningitis.

It is now generally agreed that Leonard's illness was spinal meningitis. However, there is some confusion in the records concerning whether he was nineteen or twenty-one months old at the time of onset. Mainly, the records indicate that Leonard became ill at nineteen months of age and remained so, in a coma, until he was twenty-one months old (Stenquist,G. 1974, p. 16).

After his illness, and without sight and hearing, Leonard gradually recovered strength, interest in his surroundings and the ability to move about. He became very active and made every possible effort, with determination and vigour, to explore the world about him. Often, his mother had to tie a rope around his ankle and then to a tree in order to keep him from running off alone. At the suggestion of Miss Busch, a home teacher in the Sedalia, Missouri area, Leonard's mother wrote to Helen Keller, asking her to recommend a teacher for Leonard. Gertrude Stenquist, in her book about Leonard Dowdy, refers to some letters which are of historical interest, since they touch both the "great controversy" and the question of money, always important in capitalist USA.

Miss Rebecca Mack, a wealthy, partially sighted and partially hearing woman who devoted time and money on behalf of the deaf-blind, has written as follows, in a letter to Mrs. Rena Goodwin in 1968:

"She (Helen Keller) recommended me....That is not surprising since she has been my dearest friend for more than forty years....Mrs. Dowdy wrote to me immediately for help....Through correspondence with her, I was able to give Leonard his pre-school training, including training in self-care, and it was thought that I would take him home a few years later and teach him myself, a thing I wanted to do.

...However, I knew and know only the manual method....

When Leonard was four, I went to Sedalia and spent a week with him and his family and I was thrilled and amazed at his progress. His mother had done a wonderful job and while she gave me the credit, it was she who deserved it....

After being with him for a week, his mother and father asked me if I were going to take him home with me and teach him....'No', I replied, 'He is much too bright for the manual method and must be taught orally by the vibration method....

Miss Busch and I, between us, got him admitted to Perkins Institution for the Blind in Watertown, Massachusetts." (Stenquist 1974, p. 17).

On June 15, 1932, Miss Busch wrote the following in a letter to Perkins:

"I have been informed that you will in the fall have a Department for the Deaf-Blind. I have in mind a five-year-old boy who lost both his sight and his hearing as a result of meningitis. This child's father has been out of work for about two years and is having quite a struggle. The child, however, is so anxious to learn and is so normal in every way that we are endeavoring to give him every opportunity. Do you charge tuition fee? Although many are interested in him and are anxious to teach him we have been unable to meet their prices which include instructor, materials, lodging, etc.

Please let me hear from you..." (Stenquist 1974, p. 17).

Dr. Gabriel Farrell, Director at Perkins, responded favorably and indicated that he would like to have Leonard enter Perkins but that a shortage of funds prohibited offering a full scholarship. Miss Busch then worked to promote interest in Leonard and she was instrumental in persuading the Missouri Legislature to appropriate a sum of money for tuition for Leonard at Perkins.

Miss Inis B. Hall, the person who was to head the newly formed Department for Deaf-Blind children at Perkins in the fall of 1932, visited Leonard at his home and was strongly impressed by his capabilities and potential. She recommended his enrollment at Perkins and he entered the Department on October 3, 1932 (Stenquist 1974, pp. 17-18).

But did Leonard Dowdy really become deaf-blind?

No early reports of visual and auditory acuity are available. Stenquist tells that perusal of school medical records, correspondence and teacher reports suggests that there was no change in sensory impairment from the onset of deafness and blindness at nineteen months. The author agrees that one may then assume with confidence that the description of his vision and ocular pathology written in May, 1936, by Dr. Trygve Gundersen, a Perkins consultant, was essentially descriptive of his childhood state also:

Diagnosis: "disorganized globes following spinal meningitis"

Acuity: Nil

Right eye: clear cornea, pupil bound down to calcareous lens

Left eye: clear cornea (a few scars in upper area), central anterior synechia, lens cataractous

Similarly, an air conduction, pure-tone audiogram made in May, 1964 at Perkins may be taken as an indication of his hearing levels from nineteenth months on:

	Ear	250	500	1000	2000	4000	8000	Hz
(ASA 1951)	Right	70	90	-	-	-	-	dB
	Left	75	95	100	-	-	-	dB

Thus, this indicates that Leonard Dowdy really was totally blind (probably with no central or peripheral vision) and profoundly deaf (averaged, he has a profound hearing loss even in his best ear; in both ears he has some low frequency hearing). Leonard did not use amplification during his school years nor afterwards. He used a hearing aid in his left ear for a trial period in 1967 as an adult, however, he returned to a totally tactile orientation. He did, however, use the Phipps Unit (a bone conduction vibrator) for periods of instruction in school (Stenquist 1974, pp. 19-20).

The author has not met Leonard. However, he has met several of his friends, including his teacher, Gertrude. He is described as a wonderful person with one great sorrow in his life: that he never got a job that could have been a real challenge to his knowledge and abilities. Gertrude tells:

"The early adult years were particularly turbulent. After leaving Perkins in 1948 at the age of twenty-one, he stayed only six months at the Industrial Home for the Blind where there were problems because of his dissatisfaction with his work and his desire for more independence. He then went to work on his grandfather's chicken farm for a short time in Sedalia, Missouri; letters written by him then are full of the frustration he felt at 'so much dirt and mud to walk in' and 'so few eggs'. Next, there was the grim and lonesome experience of working in a broom factory in Kansas City and living in a boarding house. After that, there was a period of teaching handwork in the Iowa School for the Deaf until the job became too much one of 'frustrating bead-stringing'.

Back in Kansas City and alone again, good fortune came in three ways: Leonard was hired by the Peterson Manufacturing Company, where he continues to work; a good friend told him 'all about Kansas City' and helped him in mobility to the extent that he could travel to and from work alone, a most gratifying accomplishment for him; he met Betty Kahn at a social club for deaf persons and they were married five months later. These events inspired elated and joyful letters, as well as happy conversations when we were together.

Through the years since then, there have been times of discouragement due particularly to his strong desire to change from his production line job (assembling tail lights for trucks) to work involving machinery. Because of safety laws for handicapped people, this has not been permitted and he has been extremely disappointed. Understandably, this frustration and others experienced from day to day have caused periods of anger and depression. He has written to me of his pent-up feelings and, with regret, of his vented feelings resulting on a few occasions in broken braille writers and typewriters. These times have been few, however, and usually he faces life sturdily and maturely. He shows an abundance of grit and of 'what it takes' to cope with life in darkness and in silence.

I have seen him at his job communicating with his co-workers by banging on the table in Morse Code; I have seen him socializing and laughing uproariously with the other men at lunch time. I have seen him in his kitchen at home, helping his wife prepare the meal and wash the dishes. I have seen him raking leaves in his yard and putting screens on his windows. I have seen him answering the doorbell after feeling the air from the electric fan which is hooked up to the bell. I have seen him sitting with Betty on a couch in their home - each reading a braille book or magazine and stopping at times for finger-spelled conversation and for smiles and laughter." (Stenquist 1974, p. 6).

Today (1993) Leonard is retired and lives together with his wife in their own home.⁴⁹

Ivan Sokolyansky and Alexander Meshcheryakov - the famous Soviet teachers of the deaf-blind

Less known are the developments in the (former) Soviet Union and Great Britain. However, they are worthy of mention.

Ivan Sokolyansky - the school in Kharkov

The first attempts to educate deaf-blind people in Russia were made in the early years of the twentieth century by a charitable body in St. Petersburg. Post-

⁴⁹Betty Dowdy is a remarkable person who deserves much credit in her own right, according to Gertrude Stenquist. She was born deaf and attended Central Institute for the Deaf in St. Louis and then went on to Gallaudet College, during which time she had to cope with failing vision due to retinitis pigmentosa (Usher syndrome). Since then, her sight has diminished progressively and she is now totally blind. Nevertheless, she went to work each day, folding linens, sterilizing instruments and doing other tasks at the Kansas University Medical Center (Stenquist 1974, p. 42).

revolutionary development of specialized methods and state provision for deaf-blind people was initiated by Ivan Sokolyansky (1889-1960). After 1917 he became a leading figure in the development of special education in the Ukraine.



Ivan Sokolyansky – the famous Soviet educator of deaf-blind children

Arnfinn Vonen brought this photo from Russia in 1996

In 1923 Sokolyansky established a school-clinic for deaf-blind children in Kharkov, one of only 65 establishments for handicapped children in the whole of the country at that time. By the 1930s work at the school-clinic was attracting international attention. But the war brought tragedy - the Nazis ransacked the building and murdered all but one or two of its pupils. Sokolyansky himself survived the war and restarted his work with deaf-blind people at the Defectology Institute in the 1950s. His contribution to defectology in general and to deaf-blind education in particular was considerable.

Alexander Meshcheryakov and the Home for Deaf-Blind Children in the monastery town of Zagorsk

Sokolyansky's successor was Alexander Meshcheryakov (1923-74), who graduated from the psychology department of the Philosophy Faculty at Moscow University and worked from 1952 at the Defectology Institute. He took over as

head of research into education of deaf-blind people in 1961. During the thirteen years until his early death he made major methodological developments to Sokolyansky's work, travelled widely (including visits to Britain in 1962 and 1967) and wrote over 80 research papers. His closest colleague was a surviving pupil of the Kharkov school-clinic, the previously mentioned Olga Skorokhodova.

In 1963 the Home for Deaf-Blind Children in the monastery town of Zagorsk⁵⁰ came into existence. The Home, run by the Ministry for Social Welfare but with full defectological input from the Ministry of Education, was the centre for practice and curricular development in Soviet education of deaf-blind people. The building, standing back from the busy main road from Moscow into the town, is, according to Mike Lambert, old, cramped and visually unremarkable. But its role is impressive - it has residential provision for 55 children 'with severe defects of sight and hearing, but with the potential for normal intellectual development'. As a large specialized school for such children there is nothing quite like it anywhere in the world, according to Mike Lambert (Lambert,M. 1988, p. 123-125).

The work of Meshcheryakov in the words of the great Soviet psychologist Alexander Zaporozhets

Meshcheryakov based his methods of educating deaf-blind children on Marxist theory in its special interpretation called "the theory of human activity".

In the research of Vygotsky, Leontiev, Rubinstein, Luria and others it was demonstrated that object-orientated activity plays a decisive role in the individual's mental development. The psyche is understood as "psychic activity". The activity is not activity in general, animals are also active. The activity of human beings is specific to humans. It is characterized as a co-operative activity making objects (e.g. in working activity) and using objects in all other activities. In principle, activity is always co-operative and including communication. Whoever wants to understand human beings must study and understand specific human activity.

The great Soviet psychologist Alexander Zaporozhets, interpreting the work of Meshcheryakov, put forward the crucial question: how should the residual sensory capacities of the deaf-blind child be used in order to transform the child from a passive object of external influences into an active subject bringing its own influence to bear on the environment and at the same time coming to know and understand the properties of that environment? Zaporozhets says:

"In his approach to this crucial question and his definition of the initial source of development for the individual consciousness Dr. Meshcheryakov showed rare insight and a profound understanding of the problem. He shows the fallacy of the tendency, widespread in the West, to start work with developing in deaf-blind children the powers of speech, which is allegedly bound to awaken the 'soul' within."

In contrast to the advocates of this theory, Dr. Meshcheryakov holds that the seeds of mental development in the deaf-blind child should be fostered by initiating him into the most elementary and common-place forms of day-to-day human activity, which is seen by the idealist psychology as paltry, vulgar and unimportant in relation to the emergence of the human spirit, but which in actual fact plays a decisive part in the initial stages of man's development. A child has to learn to use correctly the simplest products of human labour before he can learn to create these through his own work." (Alexander Zaporoz-

⁵⁰The Home for Deaf-Blind Children is now called The Rehabilitation Centre for Deafblind Children (Engl. transl.) and Zagorsk is now called Serviev Posad (Brown,N. 1993, p. 3).

hets in "The work of Alexander Meshcheryakov", a preface in Meshcheryakov 1979, pp. 6-8).

Meshcheryakov's method

It might help the comprehension of Meshcheryakov's ideas to quote Zaporozhets' interpretation of his method:

"Initially, the child is taught elementary skills of self-care: as he learns to satisfy his everyday needs, the child comes to master objects that constitute part of man's day-to-day existence (cup, spoon, clothes, furniture, toilet articles, etc.), acquainting himself with their special features and the ways they should be used. As the result, the initial chaos of muddled, constantly changing tactile impressions, which follow one another in no apparent order and which arouse predominantly passive reactions of self-defense, sorts itself out, so to speak, and adds up to a picture of the external world filled with human objects that are characterized by relatively stable, unchanging properties and possess strictly defined and socially established significance. In this way the first glimmerings of human consciousness emerge.

While emphasizing the decisive importance of training in the skills of self-care during the early stages of a deaf-blind child's rearing, Meshcheryakov rejects the behaviourist, vulgar-mechanistic interpretation of this process. The goal here should not be to train in the child, by means of mechanical repetition, certain skills that are no more than automatic reflexes, but rather to organize the child's sensory and object-orientated activity aimed at the satisfaction of his essential needs and thus to encourage the child actively to master human methods for the satisfaction of these needs, making use of the necessary objects.

In view of the complete helplessness of an untrained deaf-blind child, activity of this kind can initially only be effected with the help of another person - a teacher - who has to assume the major share in carrying it out. In doing so the teacher has to keep a careful watch so as to spot even the slightest manifestation of initiative on the child's part, and then at the first possible opportunity to transfer to him at least a tiny part of the function being carried out. Gradually the child's part in the joint activity will increase, and the subsequent emergence of conscious independent activity by the child is made possible.

Dr. Meshcheryakov goes on to show how, as deaf-blind children's scope for communication with those around them is widened and they gradually move on from elementary acts of self-care to more complex forms of everyday practice and are eventually introduced to collective, socially useful labour, the vital prerequisites for the emotional and intellectual advancement of these children, for the development of their human minds are created. He demonstrates that it is on the basis of the children's practical experience and meaningful pursuits that stable concepts of objects around them are built up, followed by a capacity to establish and use the correlation between these objects, which signifies the advance from perception to thought.

Dr. Mescheryakov's practical work has provided experimental substantiation, more convincing than anything yielded by research into development and instruction of normal children, of the main tenet of the dialectical-materialist theory of knowledge and psychology to the effect that the subject's ideal, mental activity takes shape on the basis of his practical material activity and emerges as a result of the infinitely complex process of internalizing external activity.⁵¹

While attaching due importance to instructing deaf-blind children in speech skills, Dr. Meshcheryakov exposes the fallacy of the anti-Marxist claim put forward by representatives both of idealist and mechanistic psychology to the effect that it is his mastery of words that renders man human and that the miraculous intervention of speech can of itself bring to life human consciousness. Analysis of the wealth of factual material obtained by Dr. Meshcheryakov in the course of research shows that words can only assume their full significance and play their vital role in a child's intellectual activity and in the

⁵¹The author of this book refutes Vygotsky, Piaget and others in their conception of "internalizing external activity". The theory of internalization is not held by Rubinstein and the author joins him in his comprehension of activity from the beginning of individual life as a specific human "interchange", "interaction" (German: Wechselwirkung).

volitional regulation of his behaviour, if they serve to accumulate his experience in sensory and object-orientated activity and in meaningful communication with others around him." (Zaporozhets in Meshcheryakov 1979, pp. 8-10).

In Appendix IV we will let Meshcheryakov speak for himself, outlining "certain general principles concerning the initial stage of development of a deaf-blind child".

Some principles in Mescheryakov's method of developing mental processes in the deaf-blind child

- A child manifests from the very moment of its birth the need for movement. This spontaneous need cannot in itself give rise to any object-linked human behaviour. The emergence of human behaviour and mental processes in a deaf-blind child from the outset of his development consists in the assimilation of human experience, concentrated, firstly, in the objects required for the satisfaction of his physical needs (e.g. food), secondly, in the instruments or tools necessary for the satisfaction of these needs (e.g. spoon), and, thirdly, in the modes of action linked with these instruments or tools.

- To develop orientative skills a deaf-blind child is first familiarized in the course of his practical activities with the objects situated in the immediate vicinity of the place where he sleeps, and from there his "territory" is gradually extended.

- To find his way, stability of the deaf-blind child's tangible environment is essential. Without that he cannot develop proper skills in spatial orientation.

- When working on the formation of new skills it often becomes necessary to root out well established habits (e.g. feeding by adults).

- In the ontogenesis of a deaf-blind child the first activity which emerges is that directed towards the satisfaction of his primary physical needs. Therefore, self-care is the first activity which a child masters, and it is the first type of work within his capacity.

- Self-care activities are taught the child first individually, then extended to embrace a group, when, for example, one child helps another get dressed.

- The self-care activities give rise to cognitive activity. As the range of means used in this cognitive activity is perfected, it starts to extend beyond the utilitarian requirements of the activity in the pursuit of which it first emerged, and gives rise to an independent superstructural need for discovery or learning.

- A child acquires skills in stages. At the beginning of self-care training an adult must carry out all actions. At this stage, there is no joint action. At the next stage there emerges the first activity on the part of the child, who carries out certain operations involved. The child's share is small and his activity minimal, but the important thing is that there is activity on his part and it can be extended. The adult, restraining his own activity, encourages that of the child, and organizes joint action in such a way as to have the child's share continuously increasing.

After the fall of the Soviet Union, serious criticism has been put forward concerning Sokolyansky/Mescheryakov's theory and methods (see below).

Interlude

The philosophy of total communication seems today (1993) to form the basis of the education of multi-sensorily impaired people in many developed countries. The Tadoma method, however, seems to have disappeared in the deaf-blind education. The author has neither observed it taught nor used in conversation in the several deaf-blind departments in several countries he has visited. The reason

is certainly not "a hygienic one" as was told him in one institution. The reason is simply that it does not work for the majority of multi-sensorily impaired children.⁵² The deaf-blind population has changed in many countries. As far as we know, Bridgman's and Keller's brains seemed to be "normal" except for the sensori-neural visual and hearing losses. In the former Soviet Union assessments were made to distinguish deaf-blind children from mentally retarded children. (Meshcheryakov quoting Sokolyansky: "The deaf-blind child possesses a normal brain and the potential for normal mental development." (Meshcheryakov 1979, p. 29).

The majority in the prelingually deaf-blind populations at present - in those countries the author knows - has severe additional impairments including brain dysfunctions. That might not merely lead to the disappearance of methods that still would be valuable, if not for the majority, then for some few. Worse is perhaps the inappropriate use of parts of the old theories and methods due to the survival of some unchallenged elements.

The history of deaf-blind education can be classified according to the *results* and the *characteristics* of the deaf-blind population.

The first epoch was the whole history of total "darkness" with no shooting stars and in fact no population. They were the people legally thrown into the ditches, left alone in the woods. This characterized the thousands of years before Howe and Laura Bridgman made the deaf-blind person visible for the general population. Only with awareness of this population does it come into existence.

The second epoch was characterized by a population of deaf-blind people without other impairments. Other deaf-blind people did - as a main rule - not exist. The others were not deaf-blind, they were cretins, idiots, oligophrenes, feeble minded and lunatics. This epoch was also the epoch of the few stars - of Laura Bridgman, Ragnhild Kaata, Helen Keller, Olga Skorokhodova.

The third epoch was initiated in the 1950s. A new deaf-blind education came into existence: The substantial multi-sensorily impaired population with a variety ranging from "pure" deaf-blindness to multi-impairments including sensory impairments. As a rule, in the second epoch congenitally deaf-blind persons did not "exist", they were not recorded. The congenitally deaf-blind persons came into existence in the third epoch. The first national registration of deaf-blind people in the world - in Norway 1976/77, demonstrated that 202 deaf-blind persons were recorded, of them 29 congenitally deaf-blind persons. None of the latter were older than 40 years, 20 of the 29 fell in the group 0-16, 8 in the group 17-30, and 1 in the group 31-40 (Friele,B.; Green,W.; Nordeng,H. 1976/77, p. 9).

Especially two persons took care of the legacy of the past: Nan Robbins and Carol Crook. They initiated this new epoch.

The great teachers of deaf-blind people taught in accordance with their presuppositions concerning their pupils. In that sense they looked upon their pupils as *unique* human beings. The legacy of the past is not uncritically to use a certain kind of methods. It is to continue the tradition of teaching in accordance with the presuppositions, the specific conditions of the individual, and thus promoting the development of the individual's own activity in which the result will be a unique personality.

⁵²Some elements of the Tadoma method have survived in the teaching of speech to deaf people but the author knows of no institution where it is used *in toto*.

Nan Robbins and Carol Crook (Johnson)

There were two persons, Nan Robbins and Carol Crook, who really related their activity to the rich traditions and comprehended the legacy of the past while realizing that a fundamental change of the dominating methods was necessary. In the late 1950s Nan Robbins and Carol Crook (then Johnson) at Perkins School for the Blind initiated a new chapter of deaf-blind education, understanding that the Tadoma method was not the best method of teaching many of the deaf-blind children. Although methods changed, at Perkins and in other parts of the world, the reasons and basis were never fully understood and only parts of the new teaching strategy became the basis of deaf-blind education.

In the education of deaf-blind persons Nan Robbins and Carol Crook play an outstanding role. Robbins and Crook worked together at Perkins School and supplemented each other in a very productive way, both with a theoretical and practical comprehension and contribution. Robbins was strongest on theoretical development and in systematizing experiences in a written form. Crook had the greatest abilities in practical realization of theory and possessed a sensitivity to children that only the exceptional teacher has.

Nan Robbins and the "dramatic successes" in educational results

Nan Robbins attended the first class for teachers of deaf-blind persons in the world in 1957. This course was a co-operation between Perkins and Boston University. The basic philosophy was the oralist, the Tadoma method. However, Nan Robbins understood already in the beginning of the 1960s that the oral method did not work for everybody.

She pointed out in written form as early in 1964:

"Until about eight to ten years ago, the field of the education of the deaf-blind was a very small and selective one...Children who could not learn easily and quickly by the Vibration Method were, for the most part, not retained - simply in order to best utilize precious teacher time and energy.

Gradually the over-all picture has changed. Here at Perkins, due to our Training Program which makes more teachers available, we have expanded our numbers from 5 students in 1953 to 33 in September of 1963. The expansion of the enrollment potential in addition to the fact of the existence of actually very few truly deaf-blind children - that is, children with specific and selective sensory deficits in vision and in hearing - has changed the nature of the over-all student enrollment. Very simply, with our increase in potential capacity, we began to take children beyond those very limited few who were only deaf and blind, who were socially responsive and who responded readily to instruction in speech and language." (Robbins,N 1964, pp. 1-2)

Robbins stresses that

"the very conditions which have been responsible for the handicaps of more than 2/3 of our children in the Department are those conditions which are like to cause central nervous system damage. We should not, then, be surprised if the greater portion of our children do not act like the traditional deaf-blind child - like the traditional deaf-blind image of Helen Keller - or like children with relatively simple cochlear or nerve deafness. We should expect educationally complicating conditions of the central nervous system.

It seems only to be expected that conditions which cause a child to suffer a severe congenital disorder in both vision and hearing cannot be so specific in its effect. In other words, severe congenital cases of auditory-visual deficits are likely to exhibit learning problems above and beyond those to be expected from deficient visual and auditory acuity.

The 'dramatic successes' of the Deaf-Blind Department have always been with children who are adventitiously handicapped. Many of these children had meningitis during the first year and a half. It is these children, who, for the most part, have learned to

speak very well using the Vibration Technique, have not been behaviour problems, have wanted to learn, and have consistently made progress. It is the congenitally handicapped - of which group the population is tremendously larger - who make up the incidences of diagnostic difficulties and of educational difficulties. But it is also this congenital group who have - in general - never been carried through a long-term educational program from 5 years to perhaps 21 years, as have the adventitiously handicapped children..." (Robbins,N. 1964, pp. 2-3).

Robbins was right: the "dramatic successes" in educational results have always been with children who are "adventitiously handicapped":

Laura Bridgmann (1829-89, US) sickened at an age of 20 months first, then severely at 26 months of age.⁵³

Helen Keller (1880-68, US) was 19 months when she became ill. Leonard Dowdy (1927-, US) lost his sight and hearing at the age of 21 months caused by meningitis. Robert J. Smithdas (1925-, US) was nearly 5 years old when he lost his sight and (most of, later nearly all) hearing. These are famous persons educated at Perkins (US), but in fact the same could be said about the "dramatic successes" in other countries. The famous Norwegian Ragnhild Kaata (1873-1947) - the first speaking deaf-blind person in the world - was between 3 and 4 years old when she lost her sight and hearing, and last, but not least, the well known Ukrainian Olga Skorokhodova (1914-82) lost her sight and (most of, later all?) hearing at the age of 5.⁵⁴

Nan Robbins and Carol Crook seriously tried to understand the problems Peggy Freeman in the UK and Johannes van Dijk in Holland later would work so hard to understand, the problem of the uniqueness of the congenitally impaired child, of the stages in the development of communication and language and the question of appropriate means in teaching for such a child. And this they did already in the late 1950s.

Which inferences did Nan Collins and Carol Crook make on the basis of their observations? Already *before* the great Rubella epidemic (1963-65) in the United States - which in fact really led to the coming into existence of the new deaf-blind population - Nan Robbins in co-operation with Carol Crook developed a new concept of deaf-blind education. Their capital principles might be summarized as follows:

1. The comprehension of every child as a *unique human being*. Expressed as a question: "Who are you?" Answering that leads to the conclusion of the necessity of an individual learning and teaching strategy. An appropriate educational strategy, the best mode of communication, etc., for one child may not be appropriate for another.

2. To understand the individuality and its possibilities, especially the following knowledge is necessary:

- a) knowledge on blindness; i.e. the degree and functionality of the child's vision

⁵³We should also remember Howe's words about her intellectual condition before she was ill: In an Appendix to the Sixth Annual Report 1837 (Perkins Institution for the Blind) Howe says about Laura Bridgman that "when she attained her second year she was more intelligent and sprightly than common children; she could already prattle some words, and had mastered the difference between A and B." (Howe,S. 1849, p. 114).

⁵⁴"In reality Skorokhodova became deafblind not earlier than at eight and a half...or, according to other data, she became blind when she was five and her hearing became worse at the same time, but she became deaf seven years later..." (Sirotnik, Shakenova 1991, p. 9)

b) knowledge on deafness; i.e. the degree and functionality of the child's hearing

c) knowledge on neurology; i.e. the degree and type of neurological dysfunctions beyond the peripheral impairments of vision and hearing.

c) knowledge on psychology of human beings; comprehension of the *normal* development of human beings and the child related to that.

3. To understand the possibilities of individual knowledge in the individual's surroundings is also important, since development always will be as an interaction (e.g.: will the family of this child ever learn signing to their child?).

On the basis of this theory Robbins and Crook changed the training for teachers of deaf-blind children. The training course was transferred to Boston College where both Robbins and Crook taught. Robbins and Crook were not anti-oralists. But they were not anti-manualists either. The legacy of the past was for them to develop methods appropriate for a new deaf-blind population.

The co-operation of Robbins and Crook came to an end when Robbins stopped working at Perkins. Crook continued, but only fragments of their understanding and approach became the policy in education of deaf-blind people.

When Robbins and Crook developed their theory and practice at Perkins, the dominating ideology was an oralist one. Thus, when they advocated signing as most appropriate in some cases, it was not at once accepted.

Subsequently, signs which were used in the sign language of the deaf were adapted to be used tactually, and kinds of sign language were the predominant communication mode taught to the children who were born during the Rubella epidemic in the US. Collins and Zambone point out that during this period, most deaf-blind programmes aspired to a philosophy of total communication, meaning that simultaneous speech, signing, natural gesture, pictograms, and fingerspelling were all to be used in varying combinations as necessary to communicate with the child (Collins,M.T.; Zambone,A.M., p. 6). Total communication as a *programme*, however, was only one aspect of Robbins' and Crook's approach. In fact, it is not a part of the theory, it is a consequence of the theory. It should be stressed that, conversely to many other educational strategies, the teaching strategies of Robbins and Crook were really based on *a conception, a theory of general human development, of the interaction between the individual and the environment, of the specific structure of the impairment, of the uniqueness of the individual*.

Robbins and Crook had a clear understanding that we should *generally* distinguish between

a) "peripheral" deaf-blind persons with no neurological dysfunctions (i.e. "Helen Keller" types), and

b) visually and hearing impaired persons with neurological dysfunctions.

In further developmental assessments they then came to the *unique individual* ("Who are you?") as a basis for education.⁵⁵

Robbins and Crook ended one epoch and introduced a new one in the education of deaf-blind people. Their deep comprehension is at the end of the twentieth century still not the general foundation of deaf-blind education.⁵⁶

⁵⁵The author met Carol Crook April 1, and Nan Robbins April 2, 1993.

⁵⁶The so-called "progress syndrome" or Enerstvedt syndrome still seems to be widespread among workers with (esp. congenitally) deaf-blind people. This syndrome can be described as follows:

Some aspects of deaf-blind education in the last half of the twentieth century

IAEDB - the International Association for the Education of Deafblind People

From 1900 until the 1960's only a few schools taught deaf-blind children, the most notable being Condover Hall⁵⁷ in the United Kingdom, the Zagorsk School near Moscow, the Perkins School in the United States, and St. Michielsgestel in the Netherlands. In 1968, these few schools began a professional association, which later became known as the International Association for the Education of the Deaf-Blind (IAEDB), for the purpose of sharing methods and promoting services to the population (Collins,M.T.; Zambone,A.M., p. 1). The present name of this international organization is the International Association for the Education of Deafblind People. It is a non-profit organization working for the improvement of the conditions for deaf-blind people in many parts of the world. The association plays an important role in initiating and co-ordinating work and research in the field of deaf-blindness.

Deaf-blind education in the United States of America

In 1946, the American Foundation for the Blind turned its interest to deaf-blind people and set up a new programme known as the Helen Keller Department for the Deaf-Blind. The Helen Keller Department has become an active centre promoting the interests of multi-sensorily impaired people.

The Rubella epidemic which struck the United States from 1963 to 1965 focused national attention upon the thousands of deaf-blind children expected to result from that epidemic and the impending educational crisis these children would face when they reached school age. Prior to the Rubella epidemic there was a dearth of educational programmes for deaf-blind children. By 1968 only 250 of 600 known school-age deaf-blind children benefited from educational programmes (Dantona,R. 1986, p. 69). The new attention due to the epidemic had as a result that federal funding and legislation led to the creation and development of a network of multi-state regional centres for deaf-blind children. Within a compa-

Definition: The syndrome is characterized by the following features: A strong irresistible desire to observe and notify progress in the abilities of students, clients, patients etc., and a reluctance (in severe cases: blindness) to take note of deteriorating conditions.

The syndrome is insidiously progressive. It has a raised prevalence among tutors, but also teachers and managers may suffer from it (especially those whose job is to convince local communities that it is better for the student to be in their care than at a cheaper place).

For management the syndrome may be mentally fatal, since management has very few possibilities to be aware of it before it is too late. "The progress syndrome" has also severe effects, especially mental, on tutors. The tutor may, however, more easily be aware of the symptoms since he really knows the student and he is the one who really understands him and thus has the possibility of taking the curative medicine *Conscientia* in due time. This medicine, however, has no curative effect on management.

The cause of the syndrome is not yet fully explained. It is probably due to a virus infection from mainly two virus types, often associated. The infection may occur already in childhood through the so-called "Protestant working ethos virus". (This is a group of vira, in which the most severe is the "Calvinist working ethos virus".) The tutors can also be infected by the management who may be a carrier of the so-called "Moneta virus".

The author had a mild infection as an adult in 1988, and is now immune. Today it is possible to be immunized through inoculation of the vaccine *Professionalissimo*.

The syndrome was discovered in 1988 by Enerstvedt, and is therefore also called "Enerstvedt syndrome". At present (1994) incidences have been reported from several countries of the world.

⁵⁷A school for blind children with additional handicaps with 175 children in residence in 1952. However, according to Farrell p. 43, only three were deaf-blind.

ratively short time, from about 1970 to 1975, most States had developed specialized programmes for the deaf-blind, within residential schools, State institutions for the retarded, and many public (mainstream) schools. The same period saw the establishment of several university programmes to prepare personnel. (Collins 1992 in Brown 1993, p. 31). In February 1980 the number of deaf-blind children between the ages of zero and twenty-one reported by the Centers for deaf-blind children in the US was 5990.⁵⁸

In the period 1970 to the nineties Perkins School for the Blind was central in deaf-blind education. Brown also mentions the California School for the Blind (Brown 1993, p. 32). A comprehensive rehabilitation, research and training facility was established in 1967 by an act of the US Congress: Helen Keller National Center for Deafblind Youths and Adults (HKNC). Founder of the centre was Dr. Peter J. Salmon (1895-1981).

The Perkins School for the Blind in the United States

In the United States there are probably several institutions educating deaf-blind people. The author does not know the quality of their work. In the very brief historical overview presented here, with no claim of completeness, the author again calls attention to the Perkins School for the Blind. The institution has several programmes. One of them is the programme for deaf-blind persons ages 5-22. In 1990 the deaf-blind program had 55 students with varying degrees of hearing and visual loss. This is one of the largest programmes for deaf-blind people in the US. One third of the students in the program are deaf-multihandicapped with minor visual impairments. Important are also the clinical services at Perkins and the training of educators of blind or deaf-blind children. The school also functions as New England Regional Center for services to deaf-blind children, that means for more than 200 deaf-blind students. Last, but not least to mention, is the Howe Press at Perkins with its Perkins Brailler and other products.

The American Association of the Deaf-Blind (AADB)

Worthy of mention are also the attempts of self-organizing deaf-blind people. An example is the American Association of the Deaf-Blind (AADB)

AADB is a nonprofit organization dedicated to the advancement of the economic, educational and social welfare of deaf-blind persons (Sardegna,J., Paul,T.O. 1991, p. 13). It traces its ancestry from the formation of the American League for the Deaf-Blind in 1937. This organization was founded by Mr. Francis Bates and incorporated in the State of New Jersey on February 20, 1940. The stated purpose of the League was to establish a national home for deaf-blind persons. In 1948 the League's purpose was changed to make it a purely service organization. The League attempted to assist deaf-blind persons in whatever way possible - loaning of Braille books, print-to-Braille or Braille-to-print transcription of personal papers, shopping services and the like. At the end of the 1940s considerable confusion arose in regard to the League and its mission. Many deaf-blind people who received the League's quarterly Braille magazine "The Braille Bulletin Board" thought they were members of the League, even though the league was not a membership organization. In 1950, therefore, it was decided to "deactivate"

⁵⁸R.Th.E.: Notice that Dantona states that the number of deaf-blind children is 5998 on page 73 (Dantona,R. 1986).

the incorporated League and form a membership organization to be known as the American League of the Deaf-Blind. The organization publishes a quarterly magazine whose first issue came in September 1962. After the first two issues of "The Voice of the Deaf-Blind" the magazine became known simply as "The Voice." The first open convention of deaf-blind persons was held August 4-10, 1975, at Highbrook Lodge, a 50-acre recreational estate operated by the Cleveland Society for the Blind near the town of Chadron, Ohio, about 30 miles east of Cleveland. Thirty-eight deaf-blind⁵⁹ delegates from 15 states, the District of Columbia and Canada took part in this historic first convention. The American Association of the Deaf-Blind had 300 members in 1982 (Macdonald,R.J. 1982).

American influence on deaf-blind education

According to Brown, it is difficult to give an overview of the influence in Europe of the American experience, since the diversity of programmes and the greater influence of mainstream psychologists did not lead to an approach as clearly defined as the ones arising in different parts of Europe. It did provide, however, a diversity of research material. "The major acknowledged influence as far as European practice is concerned has been the dissemination of behavioural techniques for skills teaching..." (Brown 1993, p. 32). The behaviouristic influence came from American psychology in general, but Brown is right that not all deaf-blind programmes in the US were predominantly behaviourally orientated (Brown 1993, p. 32).

However, the epidemic in the US had another important effect on Europe.

By the early fifties the viral nature of rubella was finally established, but it was another decade before the virus could be isolated. Isolation of the virus was essential if a protective vaccine was to be developed. The Rubella epidemic promoted investigations. A major breakthrough in research took place in 1966 when Meyer, Parkman and Panos, discovered a rubella vaccine which afforded immunity (Meyer et al. 1966, in Dijk 1991). This led to a number of countries adopting a vaccine programme (Dijk,J. van 1991, p. 13). The vaccination programmes were inspired by the US experience.

Deaf-blind education in Europe

According to Brown, in most of Europe, despite the rubella epidemics of the 1960s resulting in an increase of numbers of deaf-blind children, there was no comparable increase such that national programmes were triggered, except for vaccination programmes. Individual service providers were largely left to their own devices, looking to the US for information or to one another. In Britain, for instance, a few special schools, run by voluntary organizations, usually residential and for deaf or for blind children, continued their separate programme developments (Brown 1993, p. 33). A most widespread influence initially was that of a founder member of Sense, The National Deafblind and Rubella Association, Peggy Freeman, parent of a rubella deaf-blind daughter and also a teacher of the deaf, whose book *Understanding the Deaf/Blind Child* (1975) gained an international reputation (Brown 1993, p. 59). However, Meshcheryakov and Olga Skorokhodova had visited England in 1967, and "Meshcheryakov's lectures and writings at that time had greatly influenced programmes in the few British deafblind units." (Brown 1993, p. 34).

⁵⁹ The author does not know whether they were congenitally or adventitiously deaf-blind persons.

According to Brown, in some European countries there were national or nationally recognized centres of excellence,

"one of the most influential from the point of view of British practitioners being the Rafael deaf-blind department at the Instituut voor Doven, St. Michielsgestel in the Netherlands... Work was also going on in Germany, Scandinavia, Belgium and Italy, but there was not such European-wide influence from those centres, nor widespread knowledge of what was developing until the 1980s." (Brown 1993, p. 33).

"Zagorsk" does not tell us very much of the *general* level of deaf-blind education in the former Soviet Union. However, "Zagorsk" has been a great inspiration for deaf-blind education in Europe. Norman Brown is right when stating that "many of the arguments and theories underlying 'the Van Dijk method' and the Nordic approach are in close harmony with those of the Russian psychologists." (Brown 1993, p. 34).

Brown points out that John McInnes and Jackie Treffry have had a considerable impact on European, notably British, thought in the area of congenital deaf-blindness. Working from a base at the W. Ross Macdonald School in Ontario, Canada, McInnes and Treffry were refining their own discoveries with programmes for deaf-blind children, leading to publication in 1982 of their book, *Deaf-Blind Infants and Children: A developmental Guide* (Brown 1993, p. 49).

At present, the mid-nineties, at the edge of a new century, the twentyfirst, there exist special institutions for deaf-blind people in many of the so-called developed countries. Still, however, we find the education for deaf-blind persons as departments in schools or institutions either for deaf people or for blind people.

The degree of public responsibility for the education of deaf-blind people may be seen as a sign of the developmental stage of a society. It seems that very few countries of the world have reached a stage where this education fully is the responsibility of the community (state or local administration).

Johannes van Dijk - a pioneer in deaf-blind education

In Western Europe, the education of deaf-blind persons in the Netherlands at the Instituut voor Doven at St. Michielsgestel in the Netherlands is already mentioned. This is a Catholic Institute (primarily for pupils with hearing impairment) with some 450 pupils, most of whom are residential. The institute is divided into nine separate schools. One of these is the Rafael School, a school for auditorily-visually impaired children, with 40 children (1985). The reputation of the Instituut voor Doven is above all linked to the name Johannes van Dijk, a great researcher and educator of deaf-blind children.

Dr. Johannes van Dijk was born in the Netherlands in 1937. After gaining his teacher's certificate in 1957 and his head master's certificate in 1958, he was appointed teacher of the Deaf at the Instituut voor Doven in St. Michielsgestel. He specialized in teaching the deaf-blind from 1963-1964 at Perkins School for the Blind in Massachusetts. He was appointed head of the deaf-blind department at the Instituut in 1965. Johannes van Dijk has published books and articles of great importance for the education of deaf-blind children. A classic is *Rubella Handicapped Children*, published in 1982. He is the founder of the "van Dijk method", also called "the Hollandic method" or the "Conversational method".

Kurt Vinterhøj - great inspirer of deaf-blind education in Scandinavia

In the last part of the twentieth century Kurt Vinterhøj was the great inspirer of deaf-blind education in the Scandinavian countries.⁶⁰ His efforts and achievements characterized the work with congenitally deaf-blind children from the 1970s and up to the present time in Scandinavia.

Kurt Vinterhøj - from May 1993 director at Nordisk Utdannelsessenter for Døvblindepersonale (NUD)⁶¹, Dronninglund, Denmark - was born on March 6, 1946, in Vejle, Denmark.

The seventies were the time of the children of the Rubella epidemics - in the past a "non-existent" group in the meaning that the children's position very often was the "horizontal" one with no education adapted to their special needs in the special schools of that time. The first task was simply to get them on their feet. Kurt Vinterhøj contributed to the gradually departure from the traditional "class room" education which was replaced by a functional language education, i.e. an education of language in the daily activities of the children. The dominant oral method in the version of sign-supported speech was succeeded by methods based on the philosophy of total communication using all the available modes and tools (material signs, bodily fixated manual signs, manual alphabet, drawings, voice, writing) in the interaction and communication process.

The seventies was the summit of radical behaviourism in the education of children who had a mental retardation.

The influence of Kurt Vinterhøj had the consequence that the education of deaf-blind children left this radical behaviourist foundation much earlier than was the case for other comparable groups.

Norway: The Norwegian Central Team for the Deaf-Blind

In Norway the Directorate of Health (Helsedirektoriatet) initiated an investigation of the occurrence of deaf-blindness in 1976/77. Although some figures of the occurrence were known in other countries, information was limited. In Sweden approximately 500 deaf-blind persons were recorded in different registrations (6 per 100 000), in Denmark 133 deaf-blind were known (3 per 100 000), however, a total registration was not attempted. In the investigation in Norway - where William Green played a central role - 260 persons were visited and interviewed. This investigation is mentioned in this book for two reason. Firstly, because it is likely to be the first investigation of that kind in the world. The occurrence was found to be 202, i.e. 5 per 100 000. Secondly, in the course of the investigation the Norwegian Central Team for the Deaf-blind (Statens Sentralteam for døvblinde) was founded in 1977. The team is responsible for a national registration of deaf-blind people in Norway (Friile,B.; Green,W.; Nordeng,H. 1976/77).⁶²

⁶⁰Very likely, the correct term would be "Nordic countries" (Denmark, Sweden, Norway, Finland, Iceland) instead of "Scandinavian countries" (Denmark, Sweden, Norway). However, the author is not informed about the deaf-blind work in Iceland and Finland.

⁶¹NUD - Nordic Staff Training Centre for Deaf-Blind Services.

⁶²Thanks also to William Green (interview) for information.



Deaf-blind education at Skådalen, Oslo, Norway, in 1985

Photo: Per-Anders Rosenkvist/Samfoto, Oslo

Influenced especially by van Dijk and Vinterhøj, the psychologist Anne Nafstad has been (and is) the inspirer and conductor of the development of (congenital) deaf-blind education in Norway. For making the institutional foundations of this education possible Knut Arnesen, the principal of the School for the Deaf at Skådalen, should be acknowledged. At this school a department of education of congenitally deaf-blind children was founded. Today (1995) this school, under the name of Skådalen Resource Centre for Special Education of the Hearing Impaired and the Deaf-Blind, directed by Arnesen, holds the national responsibility for the education of congenitally deaf-blind children in Norway.

Sense - The National Deaf-Blind and Rubella Association in Britain
Brown informs us that

"in Britain until recently, all special units for deaf-blind children were run by voluntary bodies as parts of schools for the deaf or for the blind, with the exception of Carnforth School in Scotland, which still remains the only purely deaf-blind school in Britain. Most deaf-blind children were (and still are) educated in schools for children with special needs and most congenitally deaf-blind adults found their way into mental handicap hospitals if they could no longer be cared for by parents." (Brown 1993, pp. 58-59).

Formative influences in Britain were drawn from abroad, from individual experience, and from the current educational practice rather than from British psychological investigation and theory. It was not until the mid 1980s that significant professional literature began appearing in Britain and deaf-blindness gained widespread attention. "There has not been, therefore, a psychologically orientated approach equivalent to the clearly identifiable contributions of the Russian, Netherlands, Canadian and Nordic models." (Brown 1993, p. 60).

An example of the work in Britain is that of Sense.

Sense - The National Deaf-Blind and Rubella Association - was founded in the 1950's as a self-help organization for parents of rubella handicapped children. Sense is a voluntary organization, a charity organization. Today, Sense

- * offers help and advice from birth to deaf-blind children and their families through the Family Advisory Service;
- * supports families through a national network of parents' self-help groups;
- * advises on suitable schooling and after-school placements;
- * helps families to obtain disability benefits and provides information on training, respite care, new legislation and other relevant areas;
- * runs holidays for deaf-blind children and young adults;
- * advises teachers and local authorities on how best to educate and provide for deaf-blind people;
- * provides rehabilitation and training for deaf-blind young adults, and runs courses for others seeking to do so;
- * provides long-term residential care in group homes for deaf-blind adults;
- * campaigns to ensure that all legislation recognizes the specific needs of deaf-blind people;
- * works with local authorities and other voluntary organizations to develop services for deaf-blind people (SENSE 1989-90, p. 2).

Sense has today (1991) five residential centres in the UK.

Sense Midlands - located in Birmingham - is one of the major departments for further education and rehabilitation for deaf-blind young adults in Europe. The Department provides residential further education for 36 deaf-blind people who have additional learning difficulties. The background of the students, whose ages range from 16 - 42, is various. Some of them come from long stays in mental handicap hospitals, others from training centres and special schools. A student's placement in the Department generally lasts about 5 years during which time he or she follows a structured learning programme which is individually tailored. Particular emphasis is placed on developing communication, mobility and basic life skills. Facilities on site include a swimming pool, gym, arts and crafts room, classroom and two multi-sensory rooms. Sense in the Midlands has a staff of 200 - including administration, house tutors, teachers, etc. The ethos of Sense in the Midlands is the belief that deaf-blind people have the right to live as full and as independent a life as possible. A part of their long-term objectives is the wish to ensure all their deaf-blind young adults access to suitable permanent residential care. In that spirit the organization in co-operation with other private and voluntary organizations is trying to provide their students with accommodation in group homes, "Homes for Life". The first of them was finished in autumn 1990, for 14 deaf-blind adults.

Without doubt it can be said that The Department of Further Education and Rehabilitation at Sense in the Midlands in the United Kingdom at present is one of the leading centres in Europe for the education of deaf-blind people. The site is an area of creative work, learning, teaching, training and also, to a certain degree, of research.

One may say, Sense does the work the community should have done. However, although Sense is a charity organization, it is also selling its services. The greatest part of the organization's income comes from the community in form of

fees for residential services (49%). 40% comes from fundraising, 8% from grants, and 3% from interest and sundry income (SENSE 1989-90, p. 13). Thus, it would be misleading to call Sense a purely "private" organization. To a very high degree it is a "public" organization.

The Nordic influence

In general, the Scandinavian countries seem to have reached the highest level of a public responsibility. These countries are nearest to the ideal "for all", or "for everyone". In many other countries the deaf-blind people mostly are found in institutions which probably do not work with deaf-blind people on the basis of a specific deaf-blind conception.

This assumption is not identical with an assertion that the top level of deaf-blind education is found in the Scandinavian countries. Quality of education depends on many factors, not only on "public responsibility". It is quite possible that the general level of education may be low, but the top level still high.

Actual examples of non-governmental deaf-blind education are Perkins in the US and the work of Sense in the UK (see above).

A Nordic person should be careful in evaluating the Nordic influence on "the world". Therefore, an extract of Norman Brown's view of the matter follows:

In 1981 The Nordic Minister's Council established a training course for personnel working in the deaf-blind field, to bring together people from the five Nordic countries and from all disciplines. This led to the establishment of the Nordisk Uddannelsessenter for Døvblindepersonale (The Nordic Staff Training Centre for Deafblind Services) at Dronninglund in Denmark (Brown 1993, pp. 55-56).

All the Nordic countries have national programmes of services for deaf-blind children and adults with recognized centres and peripatetic services. The work of involved psychologists and researchers, however, had not been widely disseminated until the establishment of the Nordic Staff Training Centre in Dronninglund (Brown 1993, p. 56).

The unity of aim and awareness that must have been present sufficient to encourage joint Ministerial action in establishing the Centre has continued with the result that The European Communities Deafblind Secretariat has in 1993 decided to locate its European Coordinating Unit for Staff Development in Deaf-blind Services at the Nordic Staff Training Centre (Brown 1993, p. 56).

The Nordic Staff Training Centre "with its Library, Resource and Study Centre, is emerging as the focus and main point of dissemination for Europe of psychological thought concerning deafblind people." (Brown 1993, p. 57).

Communication theories in the education of deaf-blind people in the last half of the twentieth century

It is impossible to give credit where credit is due concerning the contributors to current communication theories in deaf-blind education. Instead of being very superficial in the presentation of many, we will rather point out some essential parts in the thinking of a few contributors. A crucial problem in deaf-blind education is always the questions: *Where to start, and how to find the next stages?* Those questions will be emphasized in our presentation.

In England Peggy Freeman made a lasting contribution.

The Canadians *McInnes* and *Treffry* have been influential in several anglo-saxon countries and they have clearly inspired *Tony Kirk* in Birmingham.

We will present Kirk's attempt to build an educational practice on a theory of stages in development.

In Birmingham we also find the fresh and original attempt of developing a stage-oriented teaching practice by two young teachers, *Lynne Silverstone* and *Kathy Norris*.

In the seventies the Danish *Kurt Vinterhøj* was very influential in the Scandinavian countries. His contribution should not sink into oblivion.

The United States is a *continent*. We have chosen some thoughts of *Stillman* and *Battle* to represent it.

Last, but not least, both in Europe and in US *Johannes van Dijk* was and is influential. It seems right to end the overview with him and the tradition from him, exemplified by *Ton Visser*.

Peggy Freeman's impressive contribution

In the 1960s, Peggy Freeman in the UK described some methods for teaching prelinguistic, anticipatory behaviour to infants, a foundation upon which language can be built. She suggested a system of tactile cues which help the infant anticipate what will occur next, given that he cannot see or hear, and therefore gets no notice of events about to happen. The ability to anticipate events and changes becomes the building block upon which a language system can be erected (Freeman 1985 in Collins,M.T.; Zambone,A.M., p. 7). Peggy Freeman was herself the mother of a Rubella child - Bunty. Freeman was infected by the rubella virus very early in pregnancy. She has made an impressive contribution to the development of education of multi-sensorily impaired people.⁶³ In 1971 she wrote that it had been "17 years of learning what I *should* have done, and on Bunty's part, hard years of trying to respond to teaching that was either unsuitable, too advanced or given her when it was past the best time for that particular phase of learning." (Freeman,P. 1971, p. 2).

Peggy Freeman does not say much on the question of stages of communication. The following statements tell us her general opinion on development:

"We all know that children develop their skills in a certain order - we would not, for instance, expect a child to run before he could walk. Thanks to years of careful child study child specialists have been able to provide us with a description of the step by step sequence of development which is common to *all* children and these steps are *our* day-to-day goals. The deaf/blind child will walk before he runs, but he is going to take longer to learn to walk and much longer than the average child to learn to get from walking to running. He is unlikely to get as far along the sequence as a child who sees and hears properly, but he must still follow the same sequence at his own pace...he will probably never read Shakespeare, but reading Shakespeare is not essential to a happy and satisfying life." (Freeman,P. 1975, p. 2).

Freeman is of the opinion that, "We all have to progress through certain levels in order to develop communication by words whether these words are spoken or signed." (Freeman,P. 1975, p. 34).

It is possible to interpret her view as a statement of the development of three levels from lowest to highest: 1) The level of signals, 2) the level of natural gestures, 3) the level of a sign system (manual signs, manual alphabet, speech). The pre-lingual levels are levels 1 and 2 and they will be emphasized here:

⁶³See also later in the book.

1. Signalling is exemplified as follows:

"The child can lead you to a place where something he needs is kept (fridge for milk), will put your hand on something he wants manipulated for him (a button done up, a toy car wound up), will anticipate events from clues in the environment (sits to table when aware of table being set). At this level communication is related to something actually present at the time, the child is not holding pictures, words, signs or any other kind of representative inner thought in his mind." (Freeman,P. 1975, p. 34).

2. Natural gestures

"are the movements a child makes to express something in his mind for which he yet has no word (he spreads his arms wide to tell us how big something is). It shows that thoughts are forming in his mind and that he wants to communicate these to you. He may or may not have to see others make these movements, but they are used by him spontaneously. The appearance of natural gestures is an indication of potential for language and a readiness for us to begin to teach this by signing or speech..." (Freeman,P. 1975, p. 34).

McInnes and Treffry - their theory of stages applied in many countries in deaf-blind education

McInnes and Treffry do not present a version of a developmental theory on communication. That may also be seen as a healthy scepticism to "grand theories". However, they point out some types of communication. Although these types do not necessarily represent stages, their presentation clearly indicates a view on development:

Signal

For many multi-sensory deprived children who are functioning at an extremely low level the simple body signal (e.g. a specific motion to indicate stop or start) may be the level of communication at which the child is capable of functioning.

Gestures

We all use gestures: a shake of the head for yes or no, a hand wave for greeting, etc. Young babies are often taught to wave good-bye long before they are capable of vocalizing the words. Gestures should be used when appropriate with the MSD (multi-sensory deprived) child to establish or reinforce the concept of communication and to begin to allow him to have some control over his interaction with the environment. Many gestures may lead to formal signs. Other signs are more appropriate simply because they are the natural thing to do.

Class cues

Such cues may be introduced before, at the same time, or after gestures, depending on the individual child. The purpose of a class cue is to indicate *a set of coming actions* to the child so that he may begin to anticipate events. For example, mother may use a large, rough towel to indicate the act of bathing. She can give the towel to the child when he is in the living room, in the family room, or even when in the car. When the child feels the towel he will understand that he is going to be bathed. (Cf. "objects of reference").

Gross signs

It is necessary to adapt formal signs. McInnes and Treffry call these adaptations 'gross signs' to draw attention to the fact that simply acquiring a knowledge of the signing techniques used with the deaf is not sufficient. They have found from experience that when a child learns to use his residual vision, these gross signs may often be refined to the formal signs (i.e. the manual communication used by the deaf) without difficulty.

Fingerspelling

There are two methods of fingerspelling: the two-hand method and the one-hand method. McInnes and Treffry have used both methods successfully with many children and have found that in some cases, as the children progress, they will acquire both methods and use the one which is appropriate in an individual situation.

Speech

On the very problematic subject of speech McInnes and Treffry say that they are aware of the controversy among those working with the deaf as to the advisability of introducing signing if there is any possibility of speech. However, one only has to attempt eye contact with many MSD children to realize how difficult speech acquisition through a strictly 'oral' approach would be. These MSD children can often accept looking at hands long before they can tolerate eye contact. In addition, it appears that signing as a 'back-up' helps reinforce the spoken word for many MSD children. It is not unusual for those MSD children who have some residual hearing to sign and say many of their communications simultaneously and eventually to drop the signing except in stressful situations. They cannot subscribe to any approach which puts forth an either/or choice for the individual MSD child.

Print-Braille

Several factors must be considered when a decision is being made as to whether a child will be introduced to print or braille as a medium of written communication (e.g. the amount of residual vision, the stability of the eye condition, the ability to receive and integrate tactile information and to make the fine discriminations necessary to read braille, the child's general level of functioning) (McInnes and Treffry 1982, pp. 58-60).

McInnes' and Treffry's conception of the development of communication is clearly a normative, an educational one. It is obviously based on a theory of normal development, however, utilized in a productive way.

Regardless of which type the MSD child is - hypoactive or hyperactive - they state, the first step is to make contact with him and begin to establish an emotional bond. If you succeed in establishing an emotional bond with the child, the child will progress through eight stages. These are stages of *interaction*. The concept of *interaction* then is their most general concept - activity in general is at its most general level *interaction*.

This interaction has three main developmental stages:
the *co-active*, the *co-operative*, the *reactive*.

At this point it is necessary to clarify an important matter: These concepts are concepts from the intervenor's (teacher, tutor etc.) point of view. The *intervenor* is *co-active*, *co-operative*, *reactive*. At the highest stage the child is not reactive but *independent*, he has an independent activity. The activity of the child then has developed from a co-active through a co-operative to an independent activity. McInnes and Treffry illustrate the stages with the completion of a task:

Co-active: intervenor and child act as one person during the activity

Co-operative: intervenor provides the child with sufficient support and guidance to ensure success

Reactive: the child completes the task independently (McInnes, pp. 15-34).

In the conception of McInnes and Treffry the concept of *reactivity*, of the *reactive environment*, is a crucial one:

"For the multi-sensory deprived child it is important to provide an environment that is *reactive* rather than directive in nature. All intervenors who work with the MSD child, whether parents, teachers, or others, form an important part of the reactive environment. They must constantly strive to provide situations which will stimulate the child to interact with the environment, solve problems, and attempt to communicate. Every effort at communication, especially in the young or low-functioning MSD child, must meet with success. *Dialogue* at the appropriate level is a goal of the reactive approach. It is all too easy to direct and 'do for', rather than allow the necessary time and effort to 'do with' the MSD child." (McInnes and Treffry 1982, p. 34).

Interaction is the most general concept in the understanding of McInnes and Treffry, as we pointed out above. It is, however, also the characterization of the highest level in the process. This is not a formal contradiction, it is rather the other way around: Before the highest stage is achieved, the interaction is virtually not mutual, not reciprocal in the highest sense. There is an important difference, as McInnes and Treffry correctly assert, between *an adult co-acting with the child and the adult and the child interacting*.

McInnes and Treffry point out the following on stages of interaction:

"Care must be taken to see that the child understands the environment into which he is entering. When the child apparently is unable to receive or to express language, it is vital that he be encouraged and helped in the exploration of his environment. The planned, gradual widening of relationships must closely approximate the developmental pattern of the non-handicapped child. Unless social and emotional growth are fostered with care and understanding, frustrations and the resulting emotional problems will block development in all areas. Until the child gains confidence through experience, we can anticipate that specific stages will occur in each new interaction with the environment. The child will

- 1) *resist* the interaction,
- 2) *tolerate* the interaction co-actively with the intervenor,
- 3) *co-operate passively* with the intervenor,
- 4) *enjoy* the activity because of the intervenor,
- 5) *respond co-operatively* with the intervenor,
- 6) *lead* the intervenor through the activity once the initial communication has been given,
- 7) *imitate* the action of the intervenor, upon request,
- 8) *initiate* the action independently.

The child will resist the activity

The non-handicapped child initially refuses to enter into some activities and enters into others reluctantly because mother 'says' he must, and the emotional bond which he has formed with mother or father makes him feel somewhat compelled to try. This emotional bonding, a normal part of the process of social and emotional growth, is an important motivational factor. The MSD child, although deprived of many of the extrinsic motivational factors normally operable in new situations, can be motivated to make repeated trials through the emotional bond which he has formed with his intervenor. When the child resists an activity or new experience, do not insist. Switch to a related activity which he enjoys and return to the new activity when the tension is gone. The child must be relaxed and secure when the new activity is introduced. Be sure that he understands what response you want from him. This communication will often be accomplished by your working through the activity with the child on your lap and in contact with your hands.

The child will tolerate the interaction co-actively with the intervenor

At the next stage, the child will begin to tolerate the introduction of the new activity. He will participate in the activity for short periods of time because of the rewarding, warm contact with the intervenor, not because of the satisfaction which he will derive

from attempting to complete the activity successfully. At this stage the support should continue to be co-active. Work slowly from a known activity to the new activity. When the child resists strongly, change to an activity he enjoys.

The intervenor should never attempt to continue the activity if she herself becomes tense. She will transmit the tension to the child and may possibly destroy much of the good work that she has accomplished. The child will eventually tolerate the activity. The intervenor must constantly bear in mind that it is her relationship with the child which is providing the motivational force for the child to continue to try. If she pushes too hard at this stage, she will undermine the relationship and set up a negative reaction to the activity which will take a long time to overcome. At this stage the objective of all activities should be promoting the growth of a bond between the intervenor and the child.

The child will co-operate passively with the intervenor

We are now entering the transition stage from the co-active to the co-operative mode. The perceptive intervenor will note the change in the child's responses and will make a corresponding change in the method of interaction. She will probably find it most advantageous to continue to work from behind the child after the appropriate communication has taken place.

Change from a hands-on-hands approach to a hands-on-wrist approach. Apply only the amount of pressure and guidance necessary to encourage the child to continue the activity. Do not rush the withdrawal of support and guidance or expect consistency in the level of guidance required between sessions or, in fact, between individual attempts. Be lavish with your praise during and after each attempt. At the same time, be prepared to switch to another activity when you become aware that the present activity is no longer eliciting co-operation.

The child will enjoy the activity because of the intervenor

The child has now reached the stage of enjoying a specific activity and responding to it beyond a general level of response to the intervenor. He is able to relax, partly because of his familiarity with and understanding of the activity and partly because it is related directly to appropriate participation by the intervenor. He is still passive, but he will exhibit definite enjoyment when the specific interaction begins. He is aware of the activity and understands it. The intervenor, still working from behind for most activities, will gradually withdraw her guidance to a finger-thumb touch on the wrist and then eventually to an elbow-touch signal to begin and sustain the activity.

The child will respond co-operatively with the intervenor

He will follow the adult lead with little direction or need for encouragement. The intervenor may now work beside the child or even in front of the child during the activity.

The child will lead the intervenor through the activity once the initial communication has been given

The child can now take the lead in the activity. Contact is still essential but is minimal. The child is now anticipating the sequence and directing it to a successful conclusion. The intervenor must be sure that he is aware, through exploration, of the result of each attempt.

The child will imitate the action of the intervenor, upon request

The child will go through the sequence of the activity independently when given the appropriate communication. The intervenor should begin to introduce slight variations in the sequence and should use the activity at this point to pose a problem which needs to be solved by the child. These interaction sequences should vary in complexity according to the level of functioning of the child in the specific activity.

The child will initiate the action independently

The final stage is reached when the child demonstrates that he has integrated the response required by the activity by initiating the sequence independently to solve problems or for his enjoyment." (McInnes and Treffry 1982, pp. 36-39).

Tony Kirk - his work regarding teaching of the deaf-blind child

Tony Kirk is guiding the education of communication at Sense in the Midlands, Birmingham, England. Kirk has studied several assessments made for use

in deaf-blind education. He found out, however, that none of the assessments "really seemed to meet my requirements." (Kirk,T. 1990-91, p. 19).

The reason why is not the poor quality of the assessments (although many of the existing assessments really are poor!). It is more likely that the following limitation, acknowledged by its producers, is valid not only for the Callier-Azusa Scale, but is very typical for assessments:

"The Callier-Azusa Scale is not a teaching curriculum. Its purpose is to provide the assessment information necessary to synthesize developmentally appropriate activities for a child. It is not intended to tell the user what activities to carry out with the child." (Stillman,R.D. 1966, p. 2).

As a consequence of that, Kirk has more systematically tried to develop and present the possible, the hypothetical stages of the real communication process, which *then also may be the possible educational (teaching) and learning stages.* This is described as follows:

Firstly, in a manner appropriate to a person with some residual vision and thento a person without any vision, Kirk has showed a possible route from signal to symbol for

- (1) multi-sensorily impaired persons with some residual vision
- (2) multi-sensorily impaired persons without residual vision (blind)

Secondly, Kirk has described a developmental assessment based on the same stages. (The assessment was intended to give an approximate idea of where the student should be in the order). Thirdly, Kirk has described how an educational process aiming to proceed from signal to symbol can be carried out.

This educational process has been carried out at Sense in the Midlands.

We will firstly present an outline of the stages, then very briefly present the principle of the assessment, and later turn to a more comprehensive consideration of the educational process.

Tony Kirk has identified the following stages from signal to symbol in the communication process:

Stage 1. Intuitive.

The person is able to communicate with those tutors who know him really well. Few obvious signs of communication are apparent, the tutor just knows what the student wants. It is at this level that the teacher has to initiate much of the communication. The resonance phenomenon (van Dijk) gives this as the level at which dialogue begins to develop.

Stage 2. The use of an object.

The student uses an object to indicate what is wanted, e.g. cup for a drink, coat for a walk.

Stage 3. The use of a representational object.

The student is able to use an object to represent a need or activity, e.g. toy cup for a drink, coat material for a walk.

Stage 4. 2D representation of the object. (R.Th.E.:2D - two-dimensional)

The object representing the student's needs or wants are presented in 2D. The visual defects of the student will influence the representation, whether it is visual or tactile. There appear to be several sub-stages at this level.

For a student with some remaining vision:

4.1 Using a colour picture of the object.

This needs to be as close to lifesize as possible and to be clear and well defined.

4.2. Using a black and white image.

A photocopy of the object seems to be good at this stage.

4.3. Tracing around the object to form an outline drawing.

Trace over the black and white picture to enhance the outline.

4.4. Removing the black and white image to give an outline picture.

4.5. Reducing the size of the image.

4.6. Removing some of the lines to give a more symbolic representation of the object. This may take several stages to complete.

4.7. Representational drawing of the object.

4.8. Adding word to the pictures.

For the visually impaired student (R.Th.E.: meaning the student who cannot utilize visual information) stage 4 becomes:

4.1. Using a 2D representation of the object (clay relief model). This can be mounted on card.

4.2 The thickness of the section of the clay is reduced to give a thinner picture.

4.3 A card picture is used to replace the clay.

4.4 A raised line image is produced giving a "line drawing".

4.5 Some lines are removed to leave the major ones as a symbol.

4.6 Braille dots could be introduced onto the picture.

Stage 5. Signing

(Kirk 1990-91, p. 24-25).

Tony Kirk presents the principle of the assessment as follows:

"Having produced the developmental order for the acquisition of communication, the next stage was to see if it was possible to assess where the students were in that order. To do this a developmental assessment, based on matching skills, was produced. This was based on the hypothesis that if a student could match, for example, pictures to objects then they were probably able to use the picture to represent the object." (Kirk,T. 1990-91, p. 28).

The theory of stages from Tony Kirk is the basis of an educational program. This programme is - cf. also van Dijk's programme - not a sequence of communication activities to be carried out in isolation, but a method that as an ideal should establish the structure of all of the person's daily activities. As mentioned above, this program is tried in practice at Sense in the Midlands. We will not present this program in its totality but only give an example of how the three first of the assumed stages influence an educational process.

At the first stage, the so-called "intuitive" stage, massage could play an important role to break down tactile defensiveness and create an awareness of people.

At the second stage, "the use of real objects" stage, the student uses real objects to communicate his needs. A cup may then mean "I want a drink", the plate "I want some food", etc.

At the third stage, "the use of an representational object" stage, the teacher introduces objects which represents the student's needs or certain activities. The objects are not arbitrarily chosen: they are the objects used at stage one (see above), but now reduced to, for example a toy cup ("I want a drink"), a toy plate ("I want some food") (Kirk,T. 1990-91, p. 53-54).

Tony Kirk has used two methods in the teaching process on this stage:

The first is that the representational

"objects are carried in a suitable bag and are available to the student at all times. The staff are asked to respond to the objects if the student removes them from the bag." (Kirk,T. 1990-91, p. 54).

This is training in natural situations, the situations of daily life.

The second method is special training. The author has participated in this, and it goes as follows: A box is placed on a table, the student and the teacher (or house tutor) are sitting on chairs. The bag contains: A piece of coat material ("I want to go for a walk"), a toy plate ("I want some food"), a toy cup ("I want a drink"), a plastic beaker ("I want a cold drink"), an air freshener ("I want to go to the toilet"), a little bottle ("I want a hand massage"), a plastic square from a foot spa ("I want a foot spa"). The student will get what he takes up from the box. If he takes the cup, he gets a drink, if he takes the air freshener, he is followed to the toilet, etc. This goes on through 15 minutes. This training could be done once every day.

The learning principle seems clearly to be the behaviouristic operant conditioning, also called operant reinforcement. In the beginning it is quite arbitrarily what the student takes up, but through the positive consequence, e.g. "drink", the object is getting a meaning through repetitions. At the end the student does not arbitrarily take an object, he intentionally chooses one, i.e. the one that will satisfy his need. If he wants a drink, he takes up the cup.

Lynne Silverstone and Kathy Norris - promising contribution to the theory of stages

At Sense in the Midlands, there is, however, also another attempt to construct an educational process based on a theory of stages and using a theory of learning more similar to the human-activity theory.

It is being developed by Lynne Silverstone and Kathy Norris. Their interpretation and practice is a promising contribution to the theory of stages. However, this is a comprehension developed in practical work with deaf-blind students. It is therefore also a concept of *educating* communicative abilities developing from signals to symbols (which may be both manual signs, tactile and other pictures, etc.).

Lynne Silverstone started her work with the communication process at Sense in the Midlands in 1987. Later she was joined by Kathy Norris. They have developed a training programme based on learning principles similar to those in the tradition of the human activity theory (Rubinstein, Vygotsky, A.N. Leontjev, Luria, Dawydov, Lompscher, Enerstvedt etc.). This is amazing, since they did not know this theoretical tradition when they developed their programme.

The programme is based on a concept of necessary stages from signal to symbol. We will here and now give a presentation of their learning and teaching theory.⁶⁴

Lynne Silverstone and Kathy Norris are making unique programmes for every student. This is very important, and means for example that one student may start on level 3 and end on level four, while another student may start on level 2, etc.

In this presentation, we concentrate on what is typical for

⁶⁴They have not described their methods in written form. The presentation is an interpretation won through the author's observation of their practice and several discussions with them. However, it is possible that Silverstone and Norris would disagree with this interpretation.

- a) persons with no residual vision (and usually very poor hearing too, because if the hearing impairment is minor, there is a possibility to use speech);
- b) persons with some residual vision.

It should be specified emphasized that this educational process contains a specific teaching of communication, a teaching process, closely connected and integrated with the students daily life activities. This also means that the daily life activities play an important role in the specific teaching process.

The following is a short presentation of the theoretical foundation of their teaching process which is based on their concept of *the specific way of human learning*.

The process is built on four main principles:

a) The first and most basic principle is that human learning is specific to humans and cannot be reduced to the general behaviouristic principles of reinforcement of behaviour. The specific human cognitive activity, that of using symbols, has to be learned in the manner humans are learning, not in the manner of learning in other species (which, however, also is specific, i.e. different for each species). The human learning of symbols is by "making alike, similar, identical".

b) The second and also a basic principle, following, but not identical with the first, is *that the students are involved practically in making all the symbols*, i.e. the students are learning in and through their activities at every stage. This is the basic principle in the theory of human activity: the specific human cognitive faculties come into existence in the activity and only in the activity.

c) The third basic principle is the principle of total communication. At every stage not only one, but two or more communicational systems are used. This is a basic principle not because the aim is an exaggerated learning of abilities, but because it is a *means* in the learning and teaching of *the principle of representation*. E.g.: The tactile picture for "cook" is "spoon in a bowl". When learning this the student is also taught the manual sign for "cook". This is like holding a bowl in the left hand and moving the right hand as if stirring in the bowl.

d) The fourth basic principle is that the teaching process is a part of a whole, where motivation is created not only in the separate teaching process, but in the process of daily life activities where the student has the possibility of understanding the use of what he is taught.

The stages 1 through 4 are identical for both persons with and without residual vision.

Stage 1 - The stage of responding to body posture and first natural gestures

This stage will start with a situation which is known to the student, a situation the student feels security in, accepts and enjoys. To achieve this, importance is attached to activities which are very structured. E.g.: "feet in water". Anticipation is built up in the student by means of a teacher responding to the student, responding to every tiny movement in an appropriate way. This may include "joining in" self-stimulation, hand-over-hand movements and, especially important, responding to the eventual first natural gestures.

Aim: To achieve the first principle of representation in the student: *representation by body posture and first natural gestures*.

Stage 2 - The stage of situational object representation

At this stage objects and actions with everyday objects are introduced. E.g.: Sponge in the water - hand over hand miming the washing process, brush - hand over hand brushing of hair with brush. Instead of using their own bodies, the students are now using objects. (For students with some hearing: Use of musical instruments, e.g. shaking of bells.)

The student is trained in the human use of objects, i.e. the transition of physical objects to social objects is promoted. The first minimal anticipation connected to objects is produced in the educational process.

Aim: To achieve the second principle of representation: *The representation in the situation by "objects of reference"*.

Stage 3 - The stage of non-situational object representation

At this stage a wider range of objects and use of objects is introduced.

Different objects are used in activities which may be labelled as "manipulating with objects". E.g.: putting balls on sticks. The ball may then be used as object of reference. Massage - the "Massage bottle" with oil may be used as an object of reference. Now the objects are used outside the situation, anticipating the situation. The object which ultimately will be the so-called "object of reference" should *always* be one which is used in the activity, or is part of the activity. The best object to use is, if possible, an essential one, e.g. the top of a bottle because without the activity of taking off this top it is impossible to get the lemonade, juice etc. Thus the object of reference is part of the activity, but gradually distanced from the activity, i.e. a spatial and temporal distancing are produced.

Aim: To achieve the third principle of representation: *The principle that objects can represent activities also when given outside the activity (outside the situation), i.e. also when spatial and temporal distanced.*

Stage 4 - The stage of model representation

At this stage the student will make models of objects.

This stage has two major steps.

Firstly the student will - helped by the teacher - reduce the size of the objects, understanding through tactile exploring and using of the smaller objects as objects of reference that the real objects and the smaller representations are "similar", "the same", "identical".

Secondly the student makes the objects, e.g. the bottle and the ball etc., in clay. This will be done with as many objects as possible, including for example the hands of the student. Through tactile exploring the student will feel that the representation and the object are "similar", "the same", "identical".

Aim: To achieve the fourth principle of representation: *The principle that a model can represent activities.*

The stages from 5 onwards are different for people with and those without residual vision.

For students with residual vision:

Stage 5 - the production of the cognitive ability of making "alike", "similar", "same", "identical" in the student

At this stage the student with the help of the teacher

a) makes a cardboard square.

b) makes a stencil with a hole produced with scissors in the cardboard, i.e. the student cuts a (hard) paper with scissors following the shape of the object. The hole will be identical with the shape of the object. E.g.: cutting around a knife.

c) glues the substance of the hole (i.e. the hard paper knife he just cut out), which has the same shape as the object, besides the hole on the cardboard.

d) fills in the hole in the stencil by scribbling on a paper under the hole (if it is difficult for the student to hold a colour pencil, the student may use a sponge). The student (still with help) tries to scribble only inside the hole, and thus he sees that what he is scribbling is identical with the shape of the object, e.g. the knife.

e) glues the scribble on the cardboard besides the paper knife.

f) makes (still with help) a photocopy of the object, e.g. the knife. The photocopy (which the reader should understand always is the same size as the object) is a page with the copy of the object.

g) cuts out with a scissor the photocopy of the object, i.e. cutting around it, for instance around the knife.

h) glues the photocopy of the knife on the cardboard besides the hole.

This may be done with several objects, for example also with the students hand.

Aim: To achieve, through the students own *manual activity*, his own making and creating a two-dimensional object of the three-dimensional real object, the student's own *cognitive activity*

of making the "alike", the "similar", the "same", the "identical", i.e. the *cognitive making* of "similarity", "sameness", "identity" of the two-dimensional object and the three-dimensional object.

Stage 6 - the production of the cognitive ability of making two two-dimensional objects "alike", "similar", "same", "identical".

This stage presupposes that the student can match the object to the photocopy of the object, for example, that he can match a knife to the photocopy of the knife.

Then the student traces the photocopy with the help of the teacher, e.g. "hand over hand" and/or through imitation. The tracing can for example be done on a transparent paper with the photocopy under it. On this stage it is possible to go from the outline to the reproduction of details on the photocopy, e.g. the label on a bottle.

Aim: To achieve the cognitive activity of making the "alike", the "similar", the "same", the "identical" of two two-dimensional objects.

Stage 7 - producing the understanding of the photograph as a representation

When the student has the cognitive ability to make two-dimensional objects "identical", he can understand a photograph in full size. Since he now has the ability of understanding the identical nature of two-dimensional objects, he can, through comparing a full size photograph with a reduced size photograph, make the identification between the full size and the reduced photograph. Photographs are usually much smaller than the real objects, so not until this stage can the student understand photographs.

Aim: To achieve the understanding of the photograph as a representation

Stage 8 - producing a communication system, a language on the situational-representational level.

Since the student has the ability of understanding the significance of two-dimensional objects, he now also can understand the transition from a photograph to a picture, for example a drawing of an object (a knife, a cup, etc.)

At this stage, therefore, the student through teaching can learn to use photographs and/or pictures (drawings) of objects in a communicational system.

At this stage the student can move from the prelingual stage of communication to a level of language, a language where the basic components are not abstract symbols - the highest level of symbols, but situational representations. This is a necessary step towards a language on a higher level.

Aim: To achieve a language on the situational-representational level.

For students without residual vision (and normally also without any hearing):

Stages 5-8

Here starts a long development that leads to the *tactile* picture and the use of this in a language on the situational-representational level. However, the logic in the development is described above. Therefore, we only describe some differences due to the blindness.

At stage 4 the student made a model of an object, for example a little chair in wood.

At stage 5 he makes (hand over hand) an *outline* of the chair on a piece of paper. The outline is cut out and glued to a cardboard and then the student can match the two-dimensional shape to the three-dimensional model, i.e. this is the cognitive making of "identity" between the three-dimensional object and the two-dimensional outline.

At stage 6 the student (with help) is making a free-standing flat model which is a shape of the real object. This is done with several objects, e.g. a person, trousers, a cardigan, a cup. These free-standing flat models are then reduced in size, i.e. the student is making two-dimensional objects "identifiable". At stage 7 then the student is making a full-size tactile representation, which gradually will be reduced to what is called a "tactile picture".

At stage 8 the student can move from the prelingual stage of communication to a level of language with help of the tactile pictures, the language called language on the situational-representational level.

The basic learning principle should be stressed once more in a very briefly version:

a) The human learning of symbols is by "making alike, similar, identical".

b) The students are involved practically in making all the symbols, i.e. the students are learning in and through their activities at every stage.

c) At every stage not only one, but two or more communication systems are used. This is a basic principle because it is a *means* in the learning and teaching of *the principle of representation*.

d) The teaching process is a part of a whole, where motivation is created not only in the separate teaching process, but in the process of daily life activities where the student has the possibility of understanding the use of what he is taught.

The stages 1 through 4 are identical for both persons with and without residual vision.

Kurt Vinterhøj

Kurt Vinterhøj combined a high level of theoretical insight and a deep comprehension of the educational consequences of theory.

He based his philosophy especially on three pillars

- a) a European humanist tradition
- b) the theory of dialectical materialism in its activity version (dejatelnost, Tätigkeit) inspired by Vygotsky, Luria and also Piaget
- c) specific theories of developmental processes in childhood, especially the acquisition of language.

In the publication "The Linguistic Development of the Multi-Handicapped"⁶⁵ he presents a theory of stages in normal development based on Myklebust and Luria as well as an educational approach based on this comprehension and on the knowledge from Vygotsky, Meyers, Hammil, Osgood and Wepmans. Of lasting value is Vinterhøj's emphasizing of the importance of the interchange between mother (care-person) and child. It is in this interaction that the development of language occurs. In this interchange the child firstly develops a knowledge, a comprehension and performance, characterized by *signals*, in which the child reacts and acts phonetically on a word which is mentally linked to the object in a situation. The signal level is seen as a step towards the formation of *symbols* where the child can talk about things which exist outside a concrete situation. In this process the child also acquires an inner language which as a product of a long process also gets a leading function in the activity of thinking.

Vinterhøj was of the opinion that it is of vital importance to evaluate on which level the child with a hearing and visual impairment exists in the interaction process. The reason why is that it is not possible for them to jump over a level. They have to pass the lower level before reaching the higher level. Concerning levels, Vinterhøj made use of the Vygotskian theory of sequences in development. What the student can do together with the teacher in a truly co-operative interaction he can do independently in the next sequence (Vinterhøj 1988, pp. 49-58).

Vinterhøj succeeded in making practical use of the theories. Based on them he developed schedules and suggested materials for activities with objects which were meant to facilitate the way from signals to symbols. For example, to facilitate the perception of *time* and *space* and the *comprehension of symbols* he proposed the extensive use of boxes with material objects indicating the activities of the next hours (a line of boxes for the activities of that day), the next week, the next month. In the first day box there could be a material object indicating ("symboli-

⁶⁵ ("Multihandicappedes sprogudvikling", Vinterhøj 1988).

zing") "swimming", in the next in line an object indicating the activity after that - "eating", etc.

Stillman and Battle

Robert Stillman is the editor of the famous "Callier-Azusa Scale".⁶⁶

In the introduction to the *Callier-Azusa Scale-H* - an assessment scale designed to offer the educator and clinician a comprehensive, developmentally-based framework for viewing the communicative abilities of deaf-blind and severely/profoundly handicapped persons - Stillman and Battle state that a description of the theoretical foundation of the Scale may be found in "Developmental assessment of communicative abilities in the deaf-blind" (Stillman,R.D. and Battle,C.W. 1985, p. II). This theoretical foundation is a theory of *normal* development. However, good comprehension of this development seems to be lacking in deaf-blind work. Piaget's well-known theory is often the foundation, and this is of course a good foundation. Stillman and Battle's perspective, however, represents new insights worthy of recognition. We will therefore in Appendix V give a short description of their opinions extracted from that source.

Stillman and Battle developed the very important concept "'splinter' skills". "'Splinter' skills" are skills which usually appear following training to perform specific behaviours or when obtaining food, physical stimulation or extrinsic reinforcement is the goal of the behaviour observed (Stillman and Battle 1984). Isolated "splinter" skills occur frequently among deaf-blind individuals. "Splinter" skills, however, are rarely a true indicator of the child's level of ability since they do not predict the child's performance beyond a restricted context (i.e. situations in which need gratification or extrinsic reinforcement are available). Because the purpose of developmental assessment is to deduce an individual's abilities through the observation of behaviour rather than to document the presence of specific behaviours, according to Stillman and Battle, the distinction between communicative abilities and communicative behaviours is critical (Stillman,R.D. and Battle,C.W. 1986, p. 322).

Stillman and Battle have a considered opinion regarding the difficult question of the relation between normal development and the development in deaf-blind children:

"...it is generally assumed that there is a chronological age-related correspondence between physical and mental development, that sensory and motor abilities are intact, and that there is a core of early experiences common to all children. The validity of these assumptions, however, cannot be assured among the deaf-blind. For example, among deaf-blind children, physical maturation often exceeds cognitive development..."

Furthermore, specific sensory and motor impairments frequently restrict or alter the ways in which cognitive and communicative abilities are expressed. Finally, the early experiences and opportunities for the deaf-blind child to interact with the social and materi-

⁶⁶Callier-Azusa Scale

One of the developmental assessment scales designed specifically for use with the deaf-blind is the Callier-Azusa Scale, Edition G. This scale approaches the assessment of communicative abilities, through the separate assessment of expressive and receptive communication, cognitive abilities and social skills. Edition H is a major revision and reorganization of the scale. The Callier-Azusa Scale-H is an assessment scale designed to offer the educator and clinician a comprehensive, developmentally-based framework for viewing the communicative abilities of deaf-blind and multihandicapped individuals. The scale (H) is composed of a hierarchical progression of items within four developmental domains: *Representational and Symbolic Abilities, Receptive Communication, Intentional Communication and Reciprocity*.

al environment generally differ considerably from his normally developing counterpart." (Stillman and Battle 1986, p. 333).

Johannes van Dijk and his successors - the stages of communication in "the van Dijk method", or "the Hollandic method", or "the conversational method"

Johannes van Dijk - rather an educational method than a theory of pre-linguistic stages

During the 1960's Johannes van Dijk of St. Michielsgestel in the Netherlands further developed prelinguistic methods which were widely used in various forms and in many countries. Van Dijk met Robbins and Crook and there was a mutual influencing among them although van Dijk does not mention this.

It is important to realize that van Dijk rather has presented an educational method than a theory of pre-linguistic stages. However, van Dijk has a theory of pre-linguistic stages of communication and his method based is on that theory. Perhaps it is more correct to say that van Dijk has put forward an educational method in which there are some elements of a theory of pre-linguistic stages. Following Stillman and Battle, van Dijk's program is not a sequence of communication activities to be carried out in isolation, but a methodology that establishes the structure of all of the child's daily activities (Stillman,R.D. and Battle,C.W. 1984, p. 163).

The first time van Dijk, to the author's knowledge, puts forward a theory of stages is in 1965 in "The First Steps of the Deaf-Blind Children towards Language" (Dijk 1965).

It would be wise to quote him from this presentation. He says:

"I think we over-emphasize gestural and oral communication. There are many levels of communication before these and we must not omit them. We all know of the 'signal behaviour' which you get with a child when language has been imposed on him before he was mature enough to understand it. So I say: 'Be patient. Do not miss out the stages.'

What are the stages? First there is the co-active movement and the development of the body schema which I have already described (R.Th.E.: Dijk had earlier stated that to develop the body image of the child we must move with him in giving him experiences.) I must emphasize that this is not imitation which comes later and has an element of reflection in it and an element of 'distance'. You are *there* and I am *here*.

After co-active movement comes the important step of non-representational **Reference**. This non-representational reference is a part of normal development, as, for instance, when a mother just refers her baby to things - bottle, etc. With our deaf-blind children we can use the body, e.g. 'These are my arms.' 'These are your arms.' (This is *not* matching.) Then you work with the child making sculptures of the body. You indicate: 'Here are my legs and here are your legs', and then refer to the sculpture, hoping that the child will develop more reflective attitudes. The child *understands* that you are pointing to something.

Next comes the step of imitation when the child follows your example. You move part of your body, he moves his. You make a drawing and in his attempts to draw he may reveal the problems of an aphasic, partially-sighted deaf child, especially in asymmetrical movements. Here he must check his pictures with himself and find out the position of his limbs.

Following imitation comes the stage which some child psychologists consider to be crucial in the development of symbol-consciousness - the natural gesture. These natural gestures can only arise through experiencing their motor qualities. In every natural gesture of the normal child a motor component has been crystallized out of the totality of the action. You may object that a normal child does not use gestures, but he does. And this use of gestures precedes speech. Many times he will just be babbling until the gesture comes as the crystallizing point. Werner states that it is impossible for a child to acquire

language without passing through the stage of natural gestures. It is, therefore, difficult to understand why some educators of the deaf, and even of the deaf-blind, are against introducing natural gestures.

Using natural gestures we have, in our school, after almost two years of work in the development of the body schema and the motor qualities of gesture, got six of our rubella children to the stage of using nouns.

The child's natural gestures are crystallization points towards the use of words. Instead of pulling you to the tap to get some water, a child can make use of his natural gesture for 'drink', or instead of taking you to the cupboard when he wants a ball he can make his gesture for 'ball'.

There are two important factors in the development of natural gestures - *de-contextualization* and *de-naturalization*. In de-contextualization the child may use the gesture in anticipation (when he stops outside the door of the kitchen and makes the sign for 'drink'); or he may use a gesture learned at school in a different situation, e.g. at home. In de-naturalization, the child, instead of making the full natural gesture, begins to make a slight movement only. This slight movement may seem to be quite arbitrary, but its basis is a motor component of the original full gesture. For example the complete natural throwing gesture which may have indicated 'ball', becomes simply a small movement of the hand, which is becoming something very like a symbol.

Now has come the time for the slow introduction of the word through speech, finger-spelling, reading." (van Dijk 1965, p. 48-49).

The reason why different readers of van Dijk interpret him differently is of course that they rely on different works of him. Based on the work from 1965 we come to the stages

- 1) co-active movement;
- 2) non-representational reference;
- 3) imitation;
- 4) natural gesture.

In the development of natural gesture there are two important factors: de-contextualization and de-naturalization.

In 1965 van Dijk does not mention "resonance" at the first stage.

This seems to be a reasonable interpretation of van Dijk anno 1965. Other interpreters also have come to the same conclusion, for example Tony Kirk (1990-91). Stillman and Battle (1984, p. 163) and Mette Hogstad (1990, p. 19), however, have another interpretation and the reason is that their interpretations are based also on later works of van Dijk.⁶⁷

It is quite obvious that van Dijk in his many years of research and experience has changed his opinion on the question of stages.

Van Dijk did not present a full-fledged theory of stages in 1967 either. However, he had then adopted several of the terms from Werner and Kaplan's *Symbol Formation* which he called "indispensable to our topic and for anybody who might wish to acquire insights into the development of symbols into the child's mind..." (van Dijk 1967).

Now he uses the term "resonance" and the concept of *distancing* has become a crucial one. With the danger of oversimplification we could join the common interpretation (e.g. Stillman and Battle, Hogstad) speaking of four sequential levels: resonance, co-activity, imitation, gestures. (Stillman and Battle 1984, p. 163; Hogstad,M., p. 19).

⁶⁷They may be interdependent in that way that Hogstad refers to Stillman and Battle's interpretation.

Johannes van Dijk: Basic steps in the development of communication

Although van Dijk never has given a systematic version of a developmental theory (see also below), he indicates it on several occasions, for example also in 1986. What he himself calls "the basic steps in the development of communication", he for example describes as follows under the heading *Anticipation*:

"By means of structuring the daily activities around 'highlights', the child may anticipate the coming events. In this anticipatory situation the child might initiate a signal himself, e.g. if he wants water in the bathtub he might touch the faucet. This touching movement is reinforced by turning on the water. From that moment the teacher accepts the child's signal. At the next bathtime the teacher first waits to see whether the child will make the signal again. If the child does not produce the signal, the teacher may initiate it by taking the child's hand.

There are some children who will hardly ever take the initiative for making a signal to satisfy certain needs. In these cases the teacher has to invent a signal and lead the child. The most effective signals are those which are centred around the body. We have found that tapping on the mouth for food is an 'easy to learn' signal; so are: tapping on the breast for going out (buttoning the coat); moving both hands vertically down the body (taking off pants); horizontal movements in the mouth (brushing teeth); vertical movements on the child's body (washing).

It is important that for this type of child the gestures are easy to execute. Therefore it is more appropriate to start with the communication gestures within the motoric competence of the individual child. The objection that different gestures are used in each unit, ward or home is not relevant. The number of gestures in the initial stage are so limited that they can easily be learned by the staff. More important is that the child gets the notion that with relatively little effort he is able to signal his basic needs to his environment.

In the development from signal to symbol it is important that the child discovers the similarity between the gesture and what it depicts, e.g. between 'hands making a sliding movement' and the activity of playing on the slide. Whether or not the child discovers this similarity is largely dependent on his intelligence.

The basic steps in the development of communication as described above are in line with the levels in the evolution of the human forebrain. In human ontogeny the first signals are manual gestures, which the infant makes to satisfy affective needs. Gestures develop first because neo-cortical components of the pyramidal motor systems that control hand-arm activity, mature first (Lamendella 1977, p. 195)." (Dijk,J.van 1986, p. 377-378).

It seems that van Dijk in 1986 means that gestures appear at an earlier stage than after the imitation stage (level).

In 1988 van Dijk clearly refers to three stages or levels:

The resonance level which is a pre-conscious level characterized by the child's "reflexive reactions to stimuli";

the level of co-active movement which is an "extension of resonance but the difference is that the child is more conscious of the 'turn-taking' aspect...";

the imitation level, where imitation is defined as "a higher-order activity and an extension of co-active movement. The child is able to follow the actions of the teacher without any physical support." The imitation level has two sub-levels:

"Parallel Imitation: The teacher chooses movements from the child's repertoire of movements. The teacher makes the child very aware that the child must imitate what the teacher does. The imitation is immediate and parallel: very little time elapses between what the teacher initiates and what the child initiates.

Deferred Imitation: A temporal distance is gradually introduced. Precision of imitation is not the focus: the focus is the child's observation and internalization of the teacher's demonstrated actions. The teacher begins with gross symmetrical movements and progressively adds fine asymmetrical movements to be imitated." (Dijk,J. van 1988, p. 1-3).

In 1988 it is obvious that van Dijk does not look at gestures as coming into existence at the fourth level. Talking about characterizing activities as "especially important toward the development of symbolic language", he says that encouraging the child to realize and use a typical or characteristic attribute can be accomplished through (1) a natural gesture, (2) an associative object (objects of reference), (3) a smell, (4) a taste, (5) a texture, (6) a sound, (7) a picture (drawing), (8) a 3 dimensional model (made from clay, and/or (9) a written, spoken, and/or finger spelled word." (Dijk,J. van 1988, p. 5).

These points should not be interpreted as developmental levels or stages. However, there is a tendency. It is not arbitrarily that natural gestures come first and words last.

Van Dijk may be seen as logical inconsistent through the years. That is not the opinion of the author. On the contrary, through new experiences and research van Dijk moves deeper into his subject, excluding wrong parts of his comprehension and including more correct parts. This is the way of science.

More than that: the "contradictions" in van Dijk's work throughout the years are the contradictions of real life. Van Dijk understands the real dilemma: To construct a teaching method for children (deaf-blind or not) you must presuppose stages, or else where are you going to start? Where is "the next step"? On the other hand: What if there is no such typical logic for the development of deaf-blind children? What if we have to challenge the claim of Stillman and Battle: "It is not assumed, nor is there compelling evidence, for a unique course of development among deaf-blind and multi-handicapped individuals." (Stillman,R.D. and Battle,C.W. 1986, p. 319-320).

In fact, we will demonstrate that van Dijk challenges this statement. In 1987 he touches this enormously important question in a conference. He there indicates that the problem has to be posed in another way:

"These children mock all the laws of development. In 'normal' development the child learns first to use body language, and then gradually the natural gestures are replaced by words, and in the case of deaf children with more formal signs and/or speech. This 'logical' road is not always the right one for deaf-blind youngsters.

I have come to the conclusion that there is not such a logical development road for these multi-handicapped persons. And this of course makes assessment, whose purpose it is to predict the child's 'next step', a very hazardous activity. Many curriculae for multi-impaired persons do follow this 'line of development' in which nowadays signing is advocated. In my opinion signing is only one option for the child and certainly no panacea for all deaf-blind persons. I have the feeling, that when there is any vision left, the communication system in which the picture or the written word plays a role is the most important for many of these youngsters. In other words their memory is best supported when they can go for visual clues. For a child without vision there can be some sort of embossed clue, which supports the memory." (Dijk,J. van 1987, p. 9).

Does this exclude the search for "the next step"? No, but perhaps we should look in a different way. Van Dijk's final conclusion is

"that in deaf-blind education one should always be aware of 'the next step'. One can only establish this by studying and observing the child in different circumstances, offering him different experiences and seeing what is most effective in his life." (Dijk,J. van, p. 9).

Did van Dijk put forward a theory of education of deaf-blind people? A systematic method? Yes - and no. We have already touched this question discussing the stages, where we agreed with Stillman and Battle ...

Van Dijk himself states, when telling "What we have learned in 12 1/2 years: Principles of deaf-blind education" in an introduction to Mary Rose Jurgens (1977):

"Mrs. Jurgens has worked with these children for more than ten years. Her intuition and creativity lead to the understanding of these children. Her work, however, would not have been so successful if it had not been supported by sound theoretical principles. These principles used are in accordance with the general idea of the education of deaf children as practiced at the Instituut voor Doven in Sint Michielsgestel... During these years the theory has been enriched through the experience of working with deaf-blind children. In the following paragraphs our ideas on educating deaf-blind children will be explained. These thoughts have developed and are changing as new facts come to light. We are now able to present a complete theory." (Dijk,J.van 1977, p. 1).

Most interpreters of van Dijk, including the author, would perhaps not call his ideas "a complete theory". Van Dijk has never published a systematic theory, if theory is more than some "theoretical principles" and "methodological guidelines". This may sound a negative criticism, but it is not. On the contrary: van Dijk has really understood the complexity of the problems connected with the education of the deaf-blind person. Due to the uniqueness of the people who are defined as deaf-blind, this is perhaps not possible. To make it clear, the author is not the only one expressing the opinion above that van Dijk never has systematically described his theory. The reputed Robert Stillman and Christy Battle are of the same opinion: "...nowhere is Van Dijk's approach completely explicit." (Stillman,R.D. and Battle,C.W. 1984, p. 169).

A problem with great teachers, also of science and education, is that they always get followers who are oversimplifying the ideas of the Titan. The following words of Johannes van Dijk should be memorized:

"One thing is for sure, however, despite all the psychological and educational theories we know very little about these children. We have developed tests to show what the child is unable to do, but do we have an insight into what he is able to do? And after we have found out all these things, do we know which method to use in order to stimulate neurological development? Who knows about the development of these youngsters after their school years? These are all questions we cannot answer. Perhaps time and research in deaf-blind education will unveil some of the solutions to these problems. The last answer will never be discovered, however, because every human being is unique and the deepest meaning of his existence will never be known." (Dijk,J.van 1977, p. 8).

In different publications therefore, van Dijk and his successors stress different aspects of the education. In 1977 van Dijk does not emphasize the same as for example in 1965 or 1986.

This is a possible trap or pitfall in the interpretations not only of the "classics" but of all others. An author cannot repeat himself all the time. Although he may believe that what he wrote 10 years ago still is correct, he cannot write his books twice. The possibility therefore for an interpreter, is always to make "great changes" were there are in reality no changes, for example believing that a change in emphasizing topics is identical with a change of opinion. Or the other way around: Sometimes qualitative changes in opinion may be overlooked, neglected.

Some of us remember the great discussions on what was the correct "Marx" and the discussions on the distinction of the "old" Marx from the "younger" Marx.

Concerning van Dijk the author has found both continuity and development. Van Dijk says in 1977:

"Over the years our teaching methods for the deaf-blind have changed somewhat. This change was necessary because new problems arose and consequently three major periods can be distinguished. The first period was the one in which the motoric development of the child was of major importance. The second period was the one in which the behaviour and personality problems required the most attention. The third period is the early diagnosis of learning disorders and development of adequate therapy." (Dijk,J.van 1977, p. 2).

This quotation may very easily be interpreted as an opinion that motor development of the child is not anymore of importance. This would, however, been a grave error. A closer reading reveals that van Dijk in 1977 as in 1965, believes that only when the child has a solid basis of motor experience it is possible to achieve the purpose of education: to develop in the child images, concepts and communication. Van Dijk is of the opinion that imitation is very important in the learning process:

"The psychology of learning and modern research findings on child language development have shown us how important imitation for learning is." (Dijk,J.van 1977, p. 2-3). And imitating behaviour can be stimulated by moving together with the child. This is precisely also a motoric activity and van Dijk calls it as we already know "Co-active movement".

In 1977 van Dijk stresses the importance of rhythm. This is above all because rhythm plays an important role in shaping the subjective temporal order, i.e. the remembering of successive events. If possible then, the motoric programme should be a motoric-rhythm-auditory training programme. The final reason why there is so much emphasis on motor development in the education of deaf-blind children is that in motor development it is possible to develop natural gestures, as a stage prior to arbitrary signs. From natural gesture one then can move to the more formal system of sign language of the deaf (Dijk,J.van 1977, p. 3).

In 1986 van Dijk strongly claims that in his (their) ideas on the education of severely sensorily impaired children, development of attachment has become a more and more vital issue. His program of stimulation of attachment can be divided into three steps. These "steps" are, however, obviously not meant to be developmental steps.

"Co-active Movement and Responsiveness

Co-active movement means that the teacher 'joins-in' with the activity of the child, e.g. if the child wants to jump, the teacher jumps with him. Daily living activities, especially, give ample opportunity for doing things together (washing the face, brushing teeth, pulling on the socks, etc.) By adequate reaction to the child's co-operation, however minor this can be, an atmosphere of security and confidence will grow. This procedure has been nicely described as our 'hands-on' method because often one has to lead the child's hands through all these activities. The child will become more active himself, when the same activity is repeated day after day, in the same situation, by the same person. We call this:

Structuring the Child's Daily Routine

It has proven a fruitful approach when the day of a multiple sensorily impaired child is built around some important activities, such as taking a bath, mealtime, preparing a snack, going to the swimming pool, preparation for going to bed, etc. By structuring these daily living routines, one builds up a 'chain of expectancies' (Vygotsky 1983). After such a chain is established (e.g. taking the toothbrush, putting paste on the brush, etc.), one leaves out a vital element (e.g. the cup of water). At this moment it is quite possible that an orienting reflex will arise (Berlyne 1960; Mescheriakov 1962). The child will look for the cup, and lead the teacher's hand to the shelf where the cups are kept. Responding to this may establish the bond between child and teacher.

Characterization

Another important element in the bonding process is that a person who is assigned to the child comes to be recognized by a special characteristic. This can be, for instance, the teacher's ear-ring.

When that particular person comes on duty she refers to her body, leading the child's hand over her face, arms and legs, but finally she leads the child to her ear-ring. Immediately after this, they carry out a favourite activity, e.g. jumping on the bed. After this association is established, the ear-ring might be used as an indicator for that particular person. She announces herself by placing the ear-ring in the child's hands. Using this procedure in characterizing special persons, we were able to help the children to differentiate between people. Using a pipe, a particular child got to know his father, a scarf indicated the mother, a small bowl the young sister. These transitional objects are very important in helping the child to overcome separation anxiety, e.g. if he has to live in residence. After the child has associated 'scarf' with his mother, we use this object in preparation for going home. We have made the following arrangements for this system: every day of the week is indicated by a special box. In the box the 'highlight' of that day is indicated by an object. (When there is swimming on Tuesday, the trunks will be in the 'Tuesday' box. When the child goes home on Friday, he will find mother's scarf and father's pipe in that box.) The boxes (called memory boxes, see Jürgens 1977) are lined up and, by referring every day to the 'Friday' box with the parent's attributes, one is able to maintain the child's memories of his parents during the weekdays. We have found this a very good method of stimulating attachment behaviour. In order to be successful, however, one should take the child's developmental level into consideration. A child who has not reached the level of object and/or personal permanence is not ready yet for this type of work.

When the child has residual vision, as many of the so-called deaf-blind children have, one can use drawings of the favourite persons, or photographs as 'objects of reference'. We have found that drawings are often more valuable, because this activity can be carried out together with the child and the characteristic element, e.g. an ear-ring, freckle on the nose, can be emphasized." (Dijk, van 1986, pp. 376-377).

Teachers and tutors from other countries than the Netherlands also denote the educational principles from the Instituut voor Doven as the "Hollandic method".

Ton Visser - the successor of van Dijk

The successor of van Dijk, the outstanding teacher of deaf-blind people and the principal of the Deaf-Blind Department at the Institute for the Deaf at St. Michielsgestel in the Netherlands, Ton Visser - obviously inspired by van Dijk - distinguishes three pre-linguistic stages which deaf-blind children go through:

"As with non-handicapped children, deaf-blind children go through three stages in development of awareness of the world in which they live, and the development of self-help and communication skills. These three stages are:

* **Resonance** - Here the child carries out the different activities that adults do together with him. He is, however, hardly aware of them, and when he is not being 'taken through' an activity he is passive, or stereotypic. All he does is 'resonate'; respond to what is done to him. At this stage, education will be of a very practical nature.

* **Co-active Movement** - In the stage of co-active movement, the child gradually becomes more aware of the things he is doing with the adult, and starts to take an active part in these activities. It is important that the child is continually challenged to do this.

* **Imitation** - After co-active movement we approach imitation, a stage which many deaf-blind children only reach with great difficulty, but which is extremely important for the further development of the child. At this stage things are no longer done together, but successively. First the child does something and the adult copies it, or vice versa.

It is important to be aware of which stage the deaf-blind child is at, and to consider whether to challenge him to enter the next stage." (Visser 1985, p. 7).

Ton Visser does not state gestures as a fourth stage.

Following van Dijk on terminology, Visser calls the method for teaching language and reading the "conversational method". It uses the principles of conversation as the basis of language development. Ton Visser is not only a successor of van Dijk. He has made an original, very valuable contribution to the development of the educational theory and practice used in deaf-blind education. He is certainly not only an interpreter of van Dijk.

The essence of the conversational method at the Instituut voor Doven lies in the continual creation of 'conversational situations', in which whatever the deaf child wants to express is 'seized', and then put into words and language for them in a form that matches their language development.

The basic principle of the conversational method, according to Ton Visser, is to give the deaf-blind children a chance to build up an idea of the world around them. Two key presuppositions then are shaping (1) security for the child through the creation of a (2) predictable world.

Also Ton Visser, like van Dijk, stresses the necessity of a bonding process which leads to attachment, a condition giving the child security, a feeling of being understood, a feeling of being able to influence the environment. To achieve that they build up a very ordered and structured day - a "vital day rhythm" with activities the child enjoys.

Important in the **day rhythm** is

- *order of place - same activity, same place;
- *order of time - a strict time schedule for the activities;
- *order of persons - a restricted number of persons involved in the care.

Ton Visser also believes that children go through stages in their specific development of communication, from signals to symbols. However, as van Dijk and Kirk, he holds the opinion that these stages are unique for each child. The process can start with "objects of reference" or, if the child has some residual vision, as soon as possible with drawing of pictures (e.g. the children's drawing of the objects of reference).⁶⁸

⁶⁸This process , however, is more systematically described by Tony Kirk, and we refer to him on this matter.

Appendices

Appendix II

In Howe's report for the year 1841 on Laura Bridgman

"Some philosophers have supposed that speech, or the utterance of thought by vocal signs, was a human invention, - a selection by man's wisdom of this particular form of communicating thought, in preference to any other form, as that of motions of the hand, fingers, etc.; and they suppose that a community might be formed with a valuable language, and yet without an audible sound. The phenomena presented by deaf mutes, however, contradict this supposition, if I rightly understand them. So strong seems the tendency to utter vocal sounds, that Laura uses them for different persons of her acquaintance whom she meets, having a distinct sound for each one. When, after a short absence, she goes into the sitting room, where there are a dozen blind girls, she embraces them by turns, uttering rapidly, and in a high key, the peculiar sound which designates each one; and so different are they, that any of the blind girls can tell whom she is with. Now, if she were talking about these very girls to a third person, she would make the sign for them on her fingers without hesitation; yet I am inclined to believe that the thought of their vocal sign occurs first, and is translated, as it were, into the finger language, because when she is alone she sometimes utters these sounds or names of persons. She said to me, in answer to a question why she uttered a certain sound rather than spelled the name, "*I think of Jennette's noise, - many times, when I think how she give me good things; I do not think to spell her name.*" At another time, hearing her, in the next room, make the peculiar sound for Jennette, I hastened to her, and asked her why she made it; she said, "*Because I think how she do love me much, and I love her very much.*"

This is not inconsistent with the opinion which I advanced at first, - that she associates her thought *immediately* with her finger language; it only shows that the natural tendency of the human mind is to express thought by some kind of symbol; that audible signs by the vocal organs are the first that suggest themselves; but that, where this avenue is blocked up, the natural tendency or inclination will be gratified in some other way.

I do not doubt that I could have trained Laura to express her thoughts, to a considerable extent, by vocal signs; but it would have been a most rude and imperfect language; it would have been indeed a foolish attempt to do, in a few years, what it took the human race generations and ages to effect.

Some persons, who are familiar with teaching the deaf mutes, have expressed their opinion that Laura already uses language with greater precision than children who have about the same degree of knowledge, but who are merely deaf and dumb. I believe this is true; and it confirms what I think might be inferred *a priori*; viz., that the finger language should be used as much as possible in teaching the mutes, rather than the natural signs, or pantomime. I am aware that I am treading on delicate ground; that the subject involves very nice metaphysical considerations, and has an important bearing upon the whole subject of deaf mute instruction, of which I by no means pretend to be a competent judge; nevertheless, I trust I shall not be deemed presumptuous, if I throw out such thoughts as Laura's case has suggested, in the hope that they may be of some service to others.

The language of natural signs is swift in the conveyance of meaning; a glance or a gesture will transmit thought with lightning-like speed, that leaves spoken language a laggard behind. It is susceptible, too, of great improvement, and, when highly cultivated, can express almost every variety of the actor's thought, and call up every emotion in the beholder's mind; it is like man in his wild state, - simple, active, strong, and wielding a club; but spoken language, subtle, flexible, minute, precise, is a thousand times more efficient and perfect instrument for thought; it is like civilized man, - adroit, accomplished, welltrained, and armed with a rapier.

But it is too late do discuss the comparative merit of vocal language, and the language of natural signs, or pantomime; all the world, except the deaf mutes, use the first; the

mutes are clearly in the minority, and must yield; the majority will not talk to them in the language of natural signs; they must, therefore, make themselves as familiar as possible with arbitrary language, in order to commune with other minds; and to enable them to have this familiar communion, is, I believe, the principal object aimed at in all good schools for the deaf and dumb. But I understand that the educated deaf mutes, generally, are little disposed to talk in alphabetic language; that there are very few of them who, after they leave school, make much use of it; and that moreover, they are not fond of reading, although they have learned to read, and understand what they read, pretty well; they prefer to use the natural signs as a medium for the reception and communication of thought, *because they are most intimately associated with, and suggested by, the thought.* If a deaf mute wishes to say to you, "*He is my friend*", he hooks his two fingers together; the thought of his friend instantly and spontaneously connects itself with this sign; and if he is obliged to express it to you, he can do so only by *translating* this sign into the finger language, and spelling the words, "*He is my friend.*" Now, it seems to me both feasible and desirable to make the finger language so familiar to him, so perfectly vernacular, that his thoughts will spontaneously clothe themselves in it. Why are words in the finger language so familiarly connected with thought by Laura Bridgman? Because she could use but few natural signs, or but little pantomime; and she has been prevented by her teachers from using even that little, so that the current of her thoughts, forced in a different direction, has worn for itself a channel, in which it flows naturally and smoothly.

Common children learn a spoken language from their mothers, brothers and sisters, and companions; and it becomes their vernacular. They go to school, and learn to substitute for these audible signs certain printed characters, so that, when they see them, they shall suggest the audible signs, that is, they learn to read; but they never read with pleasure until the sight of the printed words suggests easily, and without effort, the audible signs. Persons who have learned to read, late in life, or who are little accustomed to read, pronounce every word aloud as they go along; if they are a little familiar with reading; they merely move the lips without uttering the audible signs; and it is only when very familiar with the mechanical process that the eye glances along the page, and the mind takes in the sense rapidly; but even then it is doubtful if the sight of a word, for instance, *horse*, does not immediately suggest the audible sound, rather than the picture of the animal. At any rate, it is very important that a familiar use of the written signs of audible sounds should be had early in life, in order that reading may be pleasant or profitable afterwards.

Deaf mute children, of their own accord, make a few natural signs; they learn some others from imitation, and thus form a rude language, which, on going to school, is amplified and systematized, and which is used with their companions and teachers, until it becomes their vernacular. They learn, at the same time, to use common language in their classes; that is, they learn to read, to write, and to make sentences by spelling words with their fingers; *but this does not come to the vernacular;* they are like seeing children learning a foreign language; they read, write, and speak in it to their teacher, but the moment they are out of the school they resort to the language of natural signs, - of pantomime. When they go away from school, they will not speak in the arbitrary language of signs any more than common children will speak in French, when they can make themselves understood by others; they will not read common books any more than other children, imperfectly acquainted with French, will read French books. Now, as, to oblige a common child to learn French, I would place him in circumstances where he would be required to use it continually, so I would place the dumb child in such circumstances that he would be obliged to use the finger alphabet, writing and reading, until the language should become to him *vernacular*; until the thought of a *horse*, for instance, should instantly be associated in his mind, not with the motion of his two fore-fingers imitating the ears of the animal, but with the word *horse*. Laura has been thus placed by nature; were she only deaf and dumb, she would acquire by imitation the natural signs used by others, and use them herself; but, being blind, she cannot see them, and her teachers carefully abstain from giving her any." (Howe 1849, pp.53-58).

Appendix III

On Helen Keller: Vision, hearing, language, speech

The following should be seen as hypotheses contributing to further discussions on language and thinking.

First some remarks on smell, taste, and touch: Anne Sullivan says in her second report (1888):

"It is impossible to tell exactly to what extent the senses of smell and taste aid her in gaining information respecting physical qualities...Helen certainly derives great pleasure from the exercise of these senses. On entering a greenhouse her countenance becomes radiant, and she will tell the names of the flowers with which she is familiar, by the sense of smell alone. Her recollections of the sensations of smell are very vivid...Her sense of touch has sensibly increased during the year, and has gained in acuteness and delicacy. Indeed her whole body is so finely organized that she seems to use it as a medium for bringing herself into closer relations with her fellow creatures." (Keller,H. 1922, p. 352).

John Macy says Helen Keller was dependent on her sense of smell to an unusual degree, but that as her intellect grew she became less dependent on it. Keller's acute sense of smell may account, however, "in some part for that recognition of persons and things which it has been customary to attribute to a special sense", (Keller,H. 1922, p. 293).⁶⁹

However, it appears, Helen Keller herself very seldom speaks or writes of smell and taste from 7 to 20 years of age. Sometimes she does, however, speak of smelling odours and of likes of special kinds of food (taste?). Macy tells of her smelling:

"Much of her knowledge comes to her directly. When she is out walking she often stops suddenly, attracted by the odour of a bit of shrubbery. She reaches out and touches the leaves, and the world of growing things is hers, as truly as it is ours, to enjoy while she holds the leaves in her fingers and smells the blossoms, and to remember when the walk is done... Miss Keller depends on her sense of smell to an unusual degree. When she was a little girl she smelled everything and knew where she was, what neighbour's

⁶⁹In the Perkins report from 1887 (fifty-sixth annual report) of the director, Anagnos, he let Anne Sullivan give a brief account on Helen's life and education. She says on the "inexplicable" (Helen is then 7 years of age):

"By way of illustration I will give a few of the many instances where she has exercised this inexplicable mental power.

She has never been told anything about death or the burial of the body, and yet on entering the cemetery for the first time in her life, with her mother and myself, to look at some flowers, she laid her hand on our eyes and repeatedly spelled, 'cry,- cry.' Her eyes actually filled with tears. The flowers did not seem to give her pleasure, and she was very quiet while we stayed there.

Her grandmother told Mrs. Keller in Helen's presence that orange peel soaked in wine made a nice flavoring for cake. Mrs. Keller gave Helen the orange peel and showed her how to cut it up and put it into the jar. As soon as Helen had done this, she went to her mother and spelled, 'wine'; nor would she be satisfied until the wine was added to the jar.

One of her dolls was knocked off a table and broken. As we were tired of seeing it lying about Mrs. Adams said to Mrs. Keller , 'give it to Bessie,' - a little negress on the place. Instantly Helen said, with her fingers, 'Helen will give Bessie doll.'

On another occasion while walking with me she seemed conscious of the presence of her brother, although we were distant from him. She spelled his name repeatedly and started in the direction by which he was coming.

When walking or riding she often gives the names of the people we meet almost as soon as we recognize their presence. Frequently when desirous of making suggestions to her, outside of the routine of her studies or her daily life, she will anticipate me by spelling out the very plan I had in mind." (pp. 105-106).

house she was passing, by the distinctive odours. As her intellect grew she became less dependent on this sense." (In Keller 1922, p. 289, 293).

And of her touch:

"Most that she knows at first hand comes from her sense of touch. This sense is not, however, so finely developed as in some other blind people. Laura Bridgman could tell minute shades of difference in the size of thread, and made beautiful lace. Miss Keller used to knit and crochet, but she has had better things to do." (Macy in Keller 1922, p. 290).

On the other hand concerning touch: There are several examples where Helen obviously felt changes in the conditions of other persons by touch, e.g. hand in hand. There is nothing mysterious about that, it is an undisputed fact that emotional conditions have physiological correlates and that changes in the former mean changes of the latter (musculatory, temperature, kinaesthetic). Helen could, hand in hand with another person, e.g., her mother, or Anne Sullivan, ask questions of this type: "What is happening? Are you becoming frightened":

"One day, while she was walking out with her mother and Mr. Anagnos, a boy threw a torpedo, which startled Mrs. Keller. Helen felt the change in her mother's movements instantly, and asked, 'What are we afraid of?'" (Sullivan in her second report 1888, in Keller 1922, p. 353).

It is reasonable to believe this - if not always - had something to do with a highly developed tactile sense activity. She also mastered lip-reading, although how well she did that might be discussed. "In reading my teacher's lips I was wholly dependent on my fingers: I had to use the sense of touch in catching the vibrations of the throat, the movements of the mouth and the expression of the face..." she tells in *The Story of My Life* (Keller 1922, p. 61).

Concerning the questions of vision and hearing, the author has not tried to find early ophthalmologic and audiologic diagnoses.⁷⁰ The reason why is that such diagnoses anyway would be of low reliability and validity (they still are in 1993). The low reliability and validity is due to the extreme difficulty of measurement. Helen Keller seems to have had normal vision and hearing at birth. In 1886, as we know, Dr. Chisholm in Baltimore confirmed what other doctors had said, that Helen would always be blind and deaf. There was an examination when Helen Keller was 8 years of age. Anne Sullivan says in her second report 1888: "Her eyes and ears have been examined by specialists, and it is their opinion that she cannot have the slightest perception of either light or sound." (Keller,H. 1922, p. 352).

We doubt the correctness of this conclusion for heuristic reasons.

1. What was the degree of Helen Keller's vision?

We are sure that Helen Keller had no vision as an adult since her eyes were removed in her adolescence and she received artificial eyes.⁷¹ However, it is her amount of vision from when she was 19 months of age through her childhood that interests us. The dominant opinion seems to be that Helen Keller immediately or very soon, although gradually, after her disease (at 19 months of age) became totally blind. The author has not found any source questioning this.

There can be no doubt that Helen Keller had a sensori-neural visual loss.

The reasons for assuming that she was totally blind:

⁷⁰The author has also not tried to find out if Helen Keller made attempts to use hearing aids. The reason why is that effective hearing aids did not come into existence before she was relatively old.

⁷¹Source: Kenneth Stuckey

The mentioned examination (interpreted by Anne Sullivan) is one reason. There are also other reasons:

In the first letter dated March 6, 1887, to Mrs. Hopkins, three days after her arrival in Tuscumbia, Anne Sullivan tells, "You see at a glance that she is blind." (In Keller 1922, p. 304).

As far as the author knows, Helen Keller herself never gives any impression of being able to see. (The reader must not be confused by Keller's, Sullivan's and other persons use of the term "see", it does not mean visual seeing. For example, this sentence in the same letter as above, is, in the author's opinion, an argument for blindness: "Then she went all round the table to see who was there, and finding no one but me, she seemed bewildered." (p. 307).

The same goes for the following in the letter of March 20, 1887:

"The dog hadn't been in the room more than half a minute, however, before Helen began to sniff, and dumped the doll into the wash-bowl and felt about the room. She stumbled upon Belle (R.Th.E.: Belle, i.e. the dog)... " (p. 312).

Since a dog has light steps, hearing is not likely here, and also not seeing since she "felt about the room" and "stumbled upon Belle".

The reasons against assuming that she was totally blind:

In the same letter mentioned above, Anne Sullivan tells:

"She (R.Th.E.: Helen) felt my face and dress and my bag, which she took out of my hand and tried to open. It did not open easily, and she felt carefully to see if there was a keyhole. Finding that there was, she turned to me, making the sign of turning a key and pointing to the bag. Her mother interfered at this point and showed Helen by signs that she must not touch the bag."

Later in the same letter:

"I spelled 'd-o-l-i' slowly in her hand and pointed to the doll and nodded my head, which seems to be her sign for possession. Whenever anybody gives her anything, she points to it, then to herself, and nods her head."

Later: "I shook my head and tried to form the letters with her fingers..."

And: "I showed Helen the cake and spelled 'c-a-k-e' in her hand, holding the cake toward her." (Sullivan in Keller 1922, pp. 304-305).

What is the meaning of "showed Helen by signs", "showed Helen the cake"? What is "pointing"? Why is Sullivan "nodding" and "shaking" her head? There is here no talking of touch.⁷²

In the same letter (March 6, 1887): "She puts her hands in our plates and helps herself, and when the dishes are passed, she grabs them and takes out whatever she wants." (p. 307).

Are those actions possible for a girl both blind and deaf? (Are they, however, based on hearing, not on vision?)

In her next letter to Mrs. Hopkins, March 11, 1887, Anne Sullivan tells: "It is amusing and pathetic to see Helen with her dolls. I don't think she has any special tenderness for them - I have never seen her caress them; but she dresses and undresses them many times during the day and handles them exactly as she has seen her mother and the nurse handle her baby sister." (p. 310).

Is such behaviour possible for a blind child?

Then we have the very odd possibility: Could Helen Keller see although she believed she was blind?

⁷²In a letter to Mrs. Hopkins, March 28, 1887, Anne Sullivan again tells she is shaking her head (p. 314).

A striking feature of cortical blindness may be the patient's subjective unawareness of his disability (Anton syndrome). Despite being totally blind, the patient believes that he can see (Vaughan,D., Asbury,T. 1977, p. 166). Although very unlikely, we cannot rule out the possibility of the existence of a "converse Anton syndrome" - a cortical dysfunction making a seeing person believe he is blind.

2. What was the degree of Helen Keller's hearing?

The dominant opinion seems to be that Helen Keller immediately or very soon, although gradually, after her disease (at 19 months of age) became profoundly deaf. The hearing impairment, however, is not spoken of in the same manner as the visual loss.

There can be no doubt that Helen Keller had a sensori-neural hearing loss.

The reasons for assuming that she was totally deaf:

The mentioned examination (interpreted by Anne Sullivan). Sullivan also tells about another hearing examination in her report to the Perkins Institution in 1888:

"A striking illustration of this strange power (R.Th.E.: See above on Helen's 'inexplicable mental faculty') was recently shown while her ears were being examined by the aurists in Cincinnati. Several experiments were tried, to determine positively whether or not she had any perception of sound. All present were astonished when she appeared not only to hear a whistle, but also an ordinary tone of voice. She would turn her head, smile, and act as though she had heard what was said. I was then standing beside her, holding her hand. Thinking that she was receiving impressions from me, I put her hands upon the table, and withdrew to the opposite side of the room. The aurists then tried their experiments with quite different results. Helen remained motionless through them all, not once showing the least sign that she realized what was going on. At my suggestion, one of the gentlemen took her hand, and the tests were repeated. This time her countenance changed whenever she was spoken to, but there was not such a decided lighting up of the features as when I had held her hand." (pp. 353-354).

These tests might be interpreted as if she was profoundly deaf, but they are not unequivocal.

The reasons against assuming that she was totally deaf:

In the letter of March 20, 1887, Anne Sullivan tells: "She usually feels the softest step and throws out her arms to ascertain if any one is near her." (p. 312).

Is such a behaviour possible only on the basis of "vibrations"? Wouldn't the description be expressed in another way if smell was the reason?

In a letter to Mrs. Hopkins, May 15, 1888, Anne Sullivan tells:

"I am too happy to write letters; but I must tell you about our visit to Cincinnati...

Wherever she went she was the centre of interest. She was delighted with the orchestra at the hotel, and whenever the music began she danced round the room, hugging and kissing every one she happened to touch." (p. 349).

In her above mentioned report to the Perkins Institution in 1888 Anne Sullivan also tells:

"In the autumn she went to a circus. While we were standing before his cage the lion roared, and Helen felt the vibration of the air so distinctly that she was able to reproduce the noise quite accurately." (p. 361).

Is reproducing a noise quite accurately possible only through vibrations, through airflow to the skin, was it conducted through the ear?

How are we going to interpret the following, expressed by John Macy (when Helen was an adult)?:

"Miss Keller likes to be part of the company. If any one whom she is touching laughs at a joke, she laughs, too, just as if she had heard it. If others are aglow with music, a responding glow, caught sympathetically, shines in her face. Indeed, she feels the movements of Miss Sullivan so minutely that she responds to her moods, and so she seems to know what is going on, even though the conversation has not been spelled to her for some time. In the same way her response to music is in part sympathetic, although she enjoys it for its own sake.

Music probably can mean little to her but beat and pulsation. She cannot sing and she cannot play the piano, although, as some early experiments show, she could learn mechanically to beat out a tune on the keys. Her enjoyment of music, however, is very genuine, for she has a tactile recognition of sound when the waves of air beat against her. Part of her experience of the rhythm of music comes, no doubt, from the vibration of solid objects which she is touching: the floor, or, what is more evident, the case of the piano, on which her hand rests. But she seems to feel the pulsation of the air itself. When the organ was played for her in St. Bartholomew's,* the whole building shook with the great pedal notes, but that does not altogether account for what she felt and enjoyed. The vibration of the air as the organ notes swelled made her sway in answer. Sometimes she puts her hand on a singer's throat to feel the muscular thrill and contraction, and from this she gets genuine pleasure. No one knows, however, just what her sensations are." (Macy in Keller 1922, pp. 279-280).

What is this "feel the pulsation of the air itself."? If it is more than vibration, or something else than vibrations, what is it then? If it is airflow, is it then conducted through the ear, or is it tactually received on some parts of the skin?

The * above refers to a letter from Helen to Mrs. Laurence Hutton (January 2, 1900), in which Helen (20 years of age) says:

"We went to St Bartholomew's Sunday, and I have not felt so much at home in a church since dear Bishop Brooks died. Dr. Greer read so slowly, that my teacher could tell me every word. His people must have wondered at his unusual deliberation. After the service he asked Mr. Warren, the organist to play for me. I stood in the middle of the church, where the vibrations from the great organ were strongest, and I felt the mighty waves of sound beat against me, as the great billows beat against a little ship at sea." (Keller 1922, pp. 263-264).

Of greater interest, however, is Helen's letter to Miss Mildred Keller some months before that (November 26, 1899). In that she says:

"...A week ago yesterday there was [a] great football game between Harvard and Yale, and there was tremendous excitement here. We could hear the yells of the boys and the cheers of the lookers-on as plainly in our room as if we had been on the field. Colonel Roosevelt was there, on Harvard's side; but bless you, he wore a white sweater, and no crimson that we know of! There were about twentyfive thousand people at the game, and, when we went out, the noise was so terrific, we nearly jumped out of our skins, thinking it was the din of war, and not of a football game that we heard." (Keller 1922, p. 263).

Is this vibrations? Airflow? Or is it "verbalism" (cf. Cutsforth)?

3. When did Helen Keller's language come into existence?

In an in-depth On-going analysis of this problem all available literature on the matter should be scrutinized. For the author, while the question of Helen Keller is of principal interest, the *historical* aspects are in the periphery of his research. The interested reader should search for more studies and here some hints follow:

Berthold Lowenfeld was a friend of Helen Keller and he tells us she was first a legend to him. In 1922, when he started his career as a teacher of blind children, he also began to attend lectures at the University of Vienna, particularly those of a then famous teacher of philosophy and psychology, Professor Wilhelm Jerusalem. In one of his lectures he referred to Laura Bridgman and Helen Keller and to their achievements that "reveal the capacity of the sense of touch when unsuppor-

ted by the other senses and the significance of verbal speech in the development of thought in a manner truly marvelous."

Of course, Lowenfeld writes in 1980, I do not remember this quotation verbally after so many years, but quote it from his book, *Introduction to Philosophy* (translated by C.F. Sanders, New York; Macmillan, 1910 and 1932). The two observations Professor Jerusalem made, one concerning the potentialities of the touch sense and the other on the importance of verbal speech for the development of thought processes, accompanied Lowenfeld's professional work ever since he heard him elaborate on them. I should also mention here, Lowenfeld mentions, that Jerusalem was one of the first authorities in Europe who called attention to young Helen Keller's educational achievements in a newspaper article published in 1894, when she was only fourteen years old.

Helen Keller's achievements and implicitly those of her teacher Anne Sullivan were also well-known to the two most important child psychologists of that period, Professor William Stern of the University of Hamburg and Professor Karl Buhler of the University of Vienna. William Stern published in 1905 an extensive article about Helen Keller entitled "Helen Keller: The development and education of a deaf-blind girl as a psychological, pedagogical, and language-theoretical problem." He stressed, according to Lowenfeld, that in spite of the extraordinary and abnormal way of her language acquisition, Helen went through a sequence of steps in her language development that is very similar to that of normal children, though her older age made it possible for her to do it three times as fast. Professor Buhler used Miss Sullivan's report of Helen Keller's acquisition of language as an extraordinary documentation of the symbol-functioning of words as the first step toward the intellectualization of words (Lowenfeld 1980, pp. 187-188).

First of all it is necessary to stress that from birth to 19 months of age (the time of Helen Keller's illness) there is an incredible cognitive development based on vision and hearing (and other senses). In this period of life a child has many experiences in the world. What can be remembered and/or stored of these it is almost impossible to know for sure. Linguistic development starts immediately, firstly in the sense that the child grows up in a linguistic, speaking environment, secondly in the sense that the child very soon begins to make vocalizations (babbling) and also to differentiate and refine these.

Helen (Adams) Keller was able to say a word or two already by the time she was only six months old. Helen says:

"At six months I could pipe out 'How d'ye', and one day I attracted everyone's attention by saying 'Tea, tea, tea' quite plainly. Even after my illness I remembered one of the words I had learned in these early months. It was the word 'water', and I continued to make some sound for that word after all other speech was lost. I ceased making the sound 'wah-wah' only when I learned to spell the word." (Keller,H. 1922, pp. 6-7).

When she became deaf and blind, she very soon lost her ability to speak (not because she became blind, but because of the hearing impairment - which is common). However, Helen learned many signs after that. Helen says:

"Soon I felt the need of some communication with others and began to make crude signs. A shake of the head meant 'No' and a nod, 'Yes', a pull meant 'Come' and a push, 'Go'. Was it bread I wanted? Then I would imitate the acts of cutting the slices and buttering them. If I wanted my mother to make ice-cream for dinner I made the sign for working the freezer and shivered, indicating cold." (Keller,H. 1922, p. 9).

Anne Sullivan tells in an account written for the Perkins Institution Report in 1891: "At the time when I became her teacher, she had made for herself upward of sixty signs, all of which were imitative and were readily understood by those who know her." (Keller 1922, p. 389).

John Macy says, "Mrs. Keller writes me that before her illness Helen made signs for everything, and her mother thought this habit the cause of her slowness in learning to speak." (In Keller 1922, p. 383).

What Mrs. Keller is writing here tells us more of her *expectations* than of the reality of Helen's acquisition of language. It is more likely that she was early in speaking, than late. This, however, is not of the largest importance. What is important is that *Helen Keller both before her illness at 19 months and after comprehended and used many signs. Although she denoted herself as an "animal"*⁷³ *before Anne Sullivan came, this is certainly not true. The highest primates cannot communicate in the manner Helen Keller did in the period from birth (and after the illness) until she was seven years of age. Although a restricted, not fully developed and elaborated, language, it was a language based on manual signs. Obviously this is of great importance for her later development.*

4. What was the role of speech in Helen Keller's acquisition of language?

A part of Helen Keller's language before 7 years of age was her speaking. Except for the word "water" this very soon disappeared after her illness. The word "water" also became distorted - "wah-wah". The important question then is: Was Helen Keller's internal language promoted by her speaking before she was 19 months of age? Was there a connection between the sounds she knew from that time and her concepts expressed by the signs? The impulse to utter audible sounds was strong within Helen Keller both before the age of 19 months and after, according to Anne Sullivan and "...the constant efforts which I made to repress this instinctive tendency, which I feared in time would become unpleasant, were of no avail." (Anne Sullivan in Keller 1922, p. 386).

Laura Bridgman had shown the same intuitive desire to produce sounds, and had even learned to pronounce a few simple words, which she took great delight in using. (Sullivan in Keller 1922, pp. 387-388). The author finds it necessary to make a digression here. Since he firmly believes in the biological foundation of oral language in human beings (cf. Lenneberg, Chomsky), which is also supported both by the "impulses" of Laura Bridgman and those of Helen Keller, he is biased in the sense that his favorite hypothesis would be that there ought to (must) be a connection between Helen Keller's early vocalizations and her concepts. Science, however, is merciless: *Helen Keller's linguistic development, including her speech, before 19 months of age, was of importance as a general cognitive development, a basis, a stage, for later successive stages. When that has been said, except for one unexplained fact, the author has found nothing supporting a connection between Helen Keller's development of her internal and expressive language after 19 months of age and her speech before that time. With one exception there is no reason to believe that the sounds and words*

⁷³Helen Keller calls herself "Phantom" and describes herself before she was taught by "Teacher" as follows:

" "Phantom" I prefer to call the little being governed by animal impulses, and not often those of a docile beast." (Keller,H. 1956, p. 32).

upheld their sign function. There is every reason to believe that they disappeared just because they lost their sign function. We will later argue that Helen Keller's internal language was not sound-based, was unlikely also to have been based on other forms of invisible articulations (movement in larynx, pharynx, tongue, "mouthing", etc.), and was in fact based on her manual fingerspelling.⁷⁴ The only interesting "fact" supporting an argument that the early vocalizations might have been productive for Helen's development of internal and external language is the fact that the turning point, the breakthrough in her comprehension came "through" the only oral word she remembered, although distorted: "water", "wah-wah". Anne Sullivan tells, in the above-mentioned account from 1891, written for the Perkins Institution Report, that Helen after her disease continued to exercise her vocal organs mechanically, as ordinary children do:

"Her cries and laughter and the tones of her voice as she pronounced many word elements were perfectly natural, but the child evidently attached no significance to them, and with one exception they were produced not with any intention of communicating with those around her...She always attached a meaning to the word *water*, which was one of the first sounds her baby lips learned to form, and it was the only word which she continued to articulate after she lost her hearing. Her pronunciation of this gradually became indistinct, and when I first knew her it was nothing more than a peculiar noise. Nevertheless, it was the only sign she ever made for water, and not until she had learned to spell the word with her fingers did she forget the spoken symbol. The word *water*, and the gesture which corresponds to the word *good-bye*, seem to have been all that the child remembered of the natural and acquired signs with which she had been familiar before her illness." (In Keller 1922, pp. 388-389).

With Helen Keller a very important hypothesis put forward by the example of Laura Bridgman is corroborated: *It is possible to reach a linguistic level without vision and/or hearing by tactal-kinaesthetic means.* However, we would emphasize that Helen Keller also was not congenitally deaf-blind. The author has observed many deaf-blind people. *He has not observed one single congenitally totally deaf-blind person reaching a linguistic level.*

5. What was the role of speech in the development of Helen Keller's language and thinking?

We came to the conclusion that it is impossible to demonstrate that speech played an important role in Helen Keller's *acquisition* of language. But what about the later *development* of her language and thinking? We must not forget that Helen Keller was only 10 years of age when she learned to speak (see other sections on that). Helen Keller obviously

a) first perceived and (started to) conceive in imageries, elements of oral language and manual signs,

b) after 19 months in imageries and manual signs, and

c) after learning English she "thought" in an integrated mental activity of imageries and internalized fingerspelling. When she learned to speak, did she then change from internal fingerspelling to internal speech⁷⁵? The author has no answer to this, because he has not found very much evidence supporting one view or the other. We will first try to interpret some of Helen's own words on the subject. Thereafter we will listen to John Macy and Anne Sullivan telling us so-

⁷⁴Cf. the story of Hofsteater.

⁷⁵The concepts *internal language*, *internal speech*, *imagery*, and *internalized fingerspelling*, will be discussed in the next book.

mething of their opinion of the importance of speech for Helen Keller. Although we cannot answer the question, if (and, in that case, when) there was a transition from an internal mode of fingerspelling to internal speech, our following journey will reveal something of immense importance.

In her address at the fifth meeting of the American Association to Promote the Teaching of Speech to the Deaf, at Mt. Airy, Philadelphia, Pennsylvania, July 8, 1896, at 16 years of age, Helen Keller delivered an ardent defense of oralism. There should be no doubt that speech meant very much to her and that it made it easier for her to participate in some conversations especially in the family and with friends. It is more difficult to draw safe conclusions on the importance of her speaking for her thinking. In the address she said: "I can remember the time before I learned to speak, and how I used to struggle to express my thoughts by means of the manual alphabet - how my thoughts used to beat against my finger tips like little birds striving to gain their freedom, until one day Miss Fuller opened wide the prison-door and let them escape." (Keller 1922, p. 392).

This *might* be interpreted as if she at that time - 6 years after the learning of speaking - were thinking in the oral language. However, she does not say that, she is speaking of the *expression* of thoughts. We cannot know for sure if she at *that time* thought in sound-based words and expressed them in speech when speaking, and, when using external fingerspelling, transliterated⁷⁶ them to the manual fingerspelling, or if it was the other way around. Maybe she thought in fingerspelling and expressed that in external fingerspelling when spelling, and transliterated the internal fingerspelling to external speech when speaking.

Certainly, these are important and unanswered questions. Macy points out that it must be remembered that speech contributed in no way to her fundamental education, though without the ability to speak she could hardly have gone to higher schools and to college (Keller 1922, p. 391). Macy, however, does not elaborate why the latter part here should be correct.

Although we cannot be sure of the mode of Helen Keller's cognition, of her imageries, of her internal language, after she learned to speak, this scrutiny has highlighted and promoted consideration of some very crucial aspects of language acquisition and development. Namely: If the author is right in his assumptions and conclusions above on the acquisition and development of Helen Keller's language⁷⁷ (although recognizing that it is very difficult to evaluate: Helen Keller could speak some words before that - see below), we can hypothesize:

a) Before March 26, 1890, Helen Keller's thinking was not based on speech, neither vocalized nor articulated in other inner ways⁷⁸;

b) If speech is necessary to develop any language based on speech, and all languages of the type English, Norwegian, German, etc., - are orally based, or, more precisely, phonetically based, while manual sign languages are not⁷⁹, then

⁷⁶We use the concept *transliteration* and not the concept *translation* since the transition is *in a language* (English), not *from one language to another language*.

⁷⁷We know the exact date of the start of her speech acquisition - March 26, 1890.

⁷⁸The expression "articulated in other inner ways" indicates the possibility of production of a speech sound in which the vocalization is the final product. We know that this (inner) production (movements of larynx, pharynx, etc.) exists in vocalization. It also is possible that at least parts of this production can exist without the final product of vocalization (e.g. in "inner speech"). However, we deny the possibility of that before March 26, 1890, in Helen Keller's case.

⁷⁹The latter might be challenged, the existence in society of oral languages might be a presupposition

there should be a qualitative change in her English language before and after March 26, 1890.

This can be studied, because we have many letters written by Helen Keller before and after that date. As far as the author has observed, there is no such qualitative change. Helen Keller expresses herself at a high level in a rich and fluent English before that date. Helen Keller had acquired the English language before she could speak.

So, if there should be an extremist oralist position asserting that speaking is a presupposition for acquiring any phonetically (orally) based language on a high level, this assertion can be said to be falsified. In fact, the author has not met such a position. If it exists, it is not identical with a real existing position looking upon speech as the *best* means, however, not excluding the possibilities of other means.

The question might now be turned the other way around. Why did Helen Keller learn to speak so relatively well, better than many deaf people? The answer might very well be: *Because she did not merely master a language before that. She mastered the English orally, phonetically based language.*

However, Helen had learned to speak four words after she became blind and hearing impaired and before March 26, 1890. The only words she had learned to pronounce with any degree of distinctness previous to March, 1890, were *papa, mama, baby, sister*. These words she had caught without instruction from the lips of friends, according to Anne Sullivan. It will be seen that they contain three vowel and six consonants elements, and these formed the foundation for her first real lesson in speaking (Sullivan in Keller 1922, p. 390). At least for the two first it is sensible to assume their learning was promoted by the likelihood that Helen could pronounce them before she became blind and hearing impaired. It is hard to believe, however, that those words (and the word "water") should be the main inner organizing vehicle of her English language. There is enough evidence to state that they were not. What was this vehicle? *Was it a manual sign language?*

Anne Sullivan unveils in the account she wrote for the Perkins Institution Report, 1891, what we already know about the role of fingerspelling. Here and now, however, we should look at the following passage in another crucial context (R.Th.E.'s italicizing):

"The acquiring of speech by untaught deaf children is always slow and often painful. Too much stress, it seems to me, is often laid upon the importance of teaching a deaf child to articulate - a process which may be detrimental to the pupil's intellectual development. In the very nature of things, articulation is an unsatisfactory means of education; *while the use of the manual alphabet quickens and invigorates mental activity, since through it the deaf child is brought into close contact with the English language, and the highest and most abstract ideas may be conveyed to the mind readily and accurately. Helen's case proved it to be also an invaluable aid in acquiring articulation. She was already perfectly familiar with words and the construction of sentences, and had only mechanical difficulties to overcome.*" (In Keller 1922, p. 388).

No, it was not through sign language Helen Keller acquired the English language. Although her language before her acquisition of speech never was merely the use of the manual alphabet. She also used gestures and signs. *However, it*

also for manual languages. To be precise: The question here is if the existence of speech is necessary in the individual. The point is that although it could be shown not to be necessary in the individual, that does not exclude the possibility of a necessary existence of oral language in society also for the individual acquisition of a manual language.

was on the basis of the manual alphabet that she learned to read and write - and this order of succession is important - fingerspelling, reading, writing. In that manner she learned to express her eminent thinking in the English language. In fact, it is justified to ask: *Was the high level in Helen Keller's expressions in the English language due to the hindering, the hampering, of her development of the manual sign language caused by her blindness?* Cf. however, both the story of Hofsteater and Lane's opinion of the teaching of Laura Bridgman (see above).

A crucial question is: If fingerspelling of the manual alphabet is very effective in learning a phonetically based language, e.g. English, Norwegian, etc., is the reason then that the alphabet is based upon the phonemes, and that we have thus a link fingerspelling/manual alphabet and phonemes, a link that does not exist in sign languages?

The question above is a very complicated one. How could we explain such a link? The reason might be, not that there is a link to the phonetically (sound) based language because the phonemes are *sound-based*, but rather because there is a higher *sequentiality* in sound-based language than in the manual language and a higher *simultaneity* in the latter than in the former. That means: *The link is the sequentiality of fingerspelling and the sequentiality of phonemes.* We will turn to a more thorough discussion of this hypothesis in our next book.⁸⁰

The case of Helen Keller's acquisition of the English language corroborates a hypothesis that it is possible to develop a high degree of thinking and language related to the phonetically based language through the tactile/kinaesthetic "senses", or more accurately, through tactile (tactual, haptic) and kinaesthetic activity without vision. Hundreds of years before Helen Keller it was known that mastering of an phonetically based language also could be achieved when visual activity was involved, through sign language, although we don't really know the role of fingerspelling in that process and also not the role of the kinaesthetic activity in signing. Julia Brace did not learn English, Laura Bridgman did through fingerspelling, but she never mastered English fluently. However, the hypothesis on the properties of tactual/kinaesthetic activity could be put forward. Helen Keller did master the English language fluently, and with the cautiousness emphasized by our discussion of the possible effect of her early speaking of some words, we pose the hypothesis (in the spirit of Popper): Every human being can acquire thinking and language merely based upon tactual and kinaesthetic activity.⁸¹

The explanation of the effects of *fingerspelling* still is a mystery and should attract the interest of all students of deaf and deaf-blind education. If we, on the basis of the experience of Helen Keller, put forward the hypothesis that it is possible to achieve the same linguistic results when fingerspelling substitutes for hearing and speech, the experience of Hofsteater (see above) can be seen as a corro-

⁸⁰For formulating this hypothesis, the author is indebted to his colleague, the linguist Arnfinn Vonen.

⁸¹The expression "tactile/kinaesthetic" or "tactile and kinaesthetic" is used because it is difficult to distinguish touch and movement. However, a person can *primarily* have a tactile *or* a kinaesthetic experience. He can touch a subject/object or be touched by a subject/organism/object, and respectively can he (or a part of him) move and be moved. In the case of fingerspelling, the deaf-blind person when *receiving* (e.g. in normal communication or learning) is primarily touched in the palm by the other person spelling into his hand or hands (*tactile activity* by the deaf-blind receiver, *kinaesthetic activity* by the other person). When *producing* the letters the deaf-blind person is moving the fingers (*kinaesthetic activity* by the deaf-blind person, *tactile activity* by the receiver if he also is deaf-blind, *tactile* and/or *visual activity* by the receiver if he is sighted).

boration of that hypothesis. This, however, does not mean that it is possible for a deaf, or a deaf-blind, person to reach the same linguistic level as a hearing person. The reason why is that this level obviously also depends on other factors related to blindness and/or deafness.

Appendix IV

Meshcheryakov on "certain general principles concerning the initial stage of development of a deaf-blind child".

Meshcheryakov's method described by himself:

"In what way, as we seek to mould and develop the deaf-blind child's behaviour and mind, can we bring about this appropriation of human skills objectivised in a humanized environment? How should a non-seeing and non-hearing child be made aware of the diversity of objects in the world around him? It is clear that the path to knowledge of the world can follow only one course for such an individual; it must be effected via analysis through touch and movement. It might seem that there is a simple solution: a child should be given objects to hold, then he will feel them over and in this way he will gradually come to create for himself an infinitely large number of images of the objects around him.

However, experience in teaching deaf-blind children has shown that such a path is impracticable. Deaf-blind children, before they receive special training, are completely bereft of any aspects of human mental processes - these exist only in potential (which, if realized, can promise the highest level of development). Initially they have no need to discover the world, and possess no skills enabling them to find their bearings within it or analyse what they encounter.

If such a child is given objects to 'peruse' he drops them at once without even bothering to familiarize himself with them. This is understandable insofar as the objects given to such a child has no significance for him. Regardless of how novel tactile stimuli might be when attempts are made to place various objects in the hands of a child they do not arouse any orientative reaction.⁸²

How can a deaf-blind child be made to handle objects? It is necessary to provide conditions in which getting to know objects would become a need for the child.

Any deaf-blind child has a number of basic natural wants (to eat, excrete and protect himself). Initially these wants do not in themselves constitute true needs in the psychological sense of the word. They do not exist as human needs in the strict sense, they cannot as yet provide the motive force behind purposeful behaviour, and for this reason no human behaviour is to be observed in the early stages. These wants become true needs only after they start to be objectivised and satisfied through human methods involving tools and implements.

A child's familiarisation with objects from the world around him takes place in the course of his activity directed towards the satisfaction of these elementary natural wants. This means that during the early stages of a deaf-blind child's development, the appropriation of social experience, which is humanizing him, must be linked with concrete practical activity, activity directed towards the satisfaction of his real (at first organic but later more diverse) needs that will expand in pace with the range of his activity.

In order to satisfy his natural wants, at meal-times for example, man uses a number of 'tools' - spoons, forks, plates, etc. This fact is utilized to familiarize deaf-blind children with objects. The adult teacher, while feeding a child, teaches it to use a spoon, plate or napkin, holding the child's hands in his own.

In the course of this practical activity a child is obliged to become familiar with various objects. 'Obliged' insofar as this encounter with objects at meal-times is essential if he is to receive direct sustenance in the form of food. At other times outside the meal-time situation these objects did not produce an orientative reaction (after being placed in the child's hand they immediately fell or were dropped or pushed away by the child), but

⁸²In a footnote Meshcheryakov says: "By orientative reaction here and later we mean a child's motor reaction directed towards improving its perception of an object - in this case, its feeling over an object. This should not be confused with the elementary preparation for reaction to a changed situation." (R.Th.E.: Meshcheryakov obviously distinguishes his concept from the term "orientative reflex" used by Pavlov).

at table the child's perception of these objects is reinforced, they become significant for him and he begins to feel them. Gradually, in the course of this unconditioned fixation (in this case in association with food), the child's orientative and analytical activity begins to develop.

In the physiology of higher nervous activity it has been established that in order for a conditioned reflex to a specific stimulus to develop it is essential that an orientative reflex to that same irritant be present. This principle should be regarded as indisputable. However, it should also be pointed out that the scientists who established this principle were considering higher nervous activity already in its more or less definitive form. We, on the other hand, were observing the emergence of children's behavioural reactions. It soon became clear that during the initial stages of a deaf-blind child's development, preliminary reinforcement of an orientative reflex to a particular stimulus is essential for that reflex to become properly established.

Those engaged in the practical rearing of these children have to come to terms with their lack of any orientative reactions to new stimuli and to the need to foster such reactions during the early stages of their development.

A completely unfamiliar object placed in the hands of a deaf-blind child does not stimulate any tactile investigation on the latter's part: a pen, a box of matches or a pencil will be dropped or thrown away by the child. However, a blocked teat from which a child can no longer suck in milk or water or the changed shape of a spoon give rise to an energetic orientative reaction (handling).

So the 'What's this?' reflex (to use Ivan Pavlov's term) is a later achievement in the case of the deaf-blind child. We have never observed the 'What's this?' reflex in the early stages of a deaf-blind child's development. In its place we observed more concrete reactions such as 'Is it safe?' or 'Is it edible?'. If it emerges that the stimulus is not linked to the body in a practical relationship, the orientative reaction to it does not evolve.

The emergence and degree of the orientative reaction are determined not by the novelty of the stimulus, but, on the contrary, by the similarity between the new stimulus and those which have already become signals and have previously been fixed. The newer the stimulus the less chance of it producing an orientative reaction in the deaf-blind child. The situation in which an orientative reaction is most likely to evolve is when a child is presented with an altered variant of a stimulus previously fixed.

There probably are forms of behaviour which appear innate, because they evolve easily in the course of ontogenesis. The emergence of new forms of reaction in a changing environment is something vitally important, and so some forms of behaviour evolve very quickly; only one reinforcement is required before the necessary association is formed. Some other reactions evolve thanks to generalization, which can be elective from a very early stage. Such reactions function thanks to the fact that a similar link was formed earlier, and this similarity does not need to be self-evident.

Such a situation is to be found with regard to man's cognitive behaviour, starting with the orientative-investigatory reflex and ending with his search for the truth. It is hardly correct to link this activity with so-called innate unconditioned orientative reflex; most probably there exists no reflex as a result of which orientative behaviour develops, nor are there any other biological preconditions for the emergence of specifically human mentality. Yet it should be remembered that orientative-analytical behaviour starts to take shape as soon as the influence of the external environment, beneficial or harmful to the organism, is felt. The resultant need does not manifest itself like a biological want, which, once satisfied, disappears. While for instance the need for food once satisfied fades away, the orientative-learning need, once satisfied, moves on a step further.

Orientative-investigatory activity emerges as activity directed towards knowledge of an object that has previously figured in a practical activity. It is thanks to such activity that a child is able to actualize the image of a thing, with the help of which one or other of its physical wants were previously satisfied.

The widening of the range of objects used to satisfy the child's basic wants places new demands on orientative-investigatory activity, which at this stage must include the choice of one from a group of things, which vary in their suitability for the achievement of the objectives inherent in the practical activity.

But an overwhelming increase in the flow of objects brought into the practical activity not only complicates the activity in quantitative terms but also leads to qualitative restructuring. In order for objectives to be reached this or that practical activity has to be effected in different ways depending upon the conditions. The range of objects used to carry out this activity is not merely extended but also changes depending upon the changed situation. In different conditions one and the same activity requires now one set of objects, now another. Consequently the tasks of orientative activity also change and grow more complex: it consists in the search for the necessary object. In this search the child comes across a large number of diverse objects, both those which have some bearing on the practical activity, and those which are divorced from it. In order to find the thing he is looking for, the child has to compare objects he lights upon with the image he carries in his mind and measure up the real object against the ideal image.

This comparison of an object with an image that has grown up in a child's mind gives rise to new knowledge, to new images for articles that have no direct bearing on his practical activity.

In this way there takes shape, as an aspect of the practical activity, the orientative-investigatory function, which then gradually emerges as an independent activity, giving rise in its turn to a secondary, "superstructural" need for the knowledge of objects in the surrounding world.

At this stage occurs not only the actualisation of images directly necessary for the success of the practical activity but also the accumulation of knowledge 'for future use'. Now the orientative reflex can in itself provide a sort of reinforcement, and on that basis an enormous number of temporary links can be formed making possible the attainment of more and more new knowledge.

However, at this stage, too, the final selection and consolidation of emergent images take place in the context of concrete practical activity that is in some way beneficial to the organism, although this 'benefit' must be understood in a wider sense, not confined to food, protection from pain or cold, etc.

Images that have taken shape as a result of orientative-investigatory activity 'for future use' provide a reference point with relation to much more complex behaviour on the part of the child: by this time he has been taught to walk, to put on his own clothes and shoes, overcome obstacles in his path and use correctly a large number of everyday household objects (furniture, clothes, toilet articles, toys, etc.). New objects which the child encounters or is given are carefully examined (via his hands) with the guidance of his teacher, and he learns the purpose of each new object.

With what 'tools' does the deaf-blind child become familiar during the early stages of his training, what functions associated with these 'tools' does he master? Initially one can count such 'tools' in tens, later in hundreds and thousands. First of all there are the numerous household objects, the mastering of which proceeds imperceptibly in the case of an ordinary child possessed of normal sight and hearing, is taken for granted as it were. A child learns to eat with a spoon and fork from a plate, sitting on a chair at a table, biting off a piece of bread and then taking a spoonful of soup, later stirring a drink in a cup or glass with a teaspoon, drinking out of that cup or glass and finally wiping his mouth with a napkin. He is taught, in accordance with a clearly defined timetable, to go to bed, lie on a sheet, put his head on a pillow, cover himself up with a blanket, to wake up and get up at a set time, then to make his bed, use the pot or lavatory, do his morning exercises, go to the bathroom, turn taps on and off, regulate the flow of warm and cold water coming out of the mixer-tap, soap his hands and face, then wash the soap off, brush his teeth, rub himself down with a towel and comb his hair; to put on and take off pants, stockings, trousers and a shirt or a dress, to put on and take off socks, slippers, shoes, felt boots and galoshes, coat and hat; he learns to open and shut doors, go up and down stairs, play ball or dolls and enjoy other toys as well.

This list is not a haphazard string of activities because a deaf-blind child really does have to be taught to do all these things one by one by specially devised methods. In practical terms the whole life of a deaf-blind child is an unending learning programme.

A deaf-blind child is taught not only to do the things listed above but also to do tens and hundreds of other things, to apprehend and acquaint himself with tens and hundreds

of objects made by man, and to master and understand the functions that are inherent in these objects. As he comes to master and manipulate numerous household and everyday objects, such a child makes his first real contact with his fellow-men, and, as he assimilates the experience accumulated by men over thousands of years and embodied in these objects and their functions, the child himself comes into his own as a human being.

Instruction of such children in the skills of self-care, that is aimed, essentially, at enabling them to satisfy their individual needs using socially evolved methods, is a fundamentally important stage within the overall programme of rearing and teaching the deaf-blind child: it constitutes the laying of the foundation for his subsequent development.

At the initial stage of a child's development the relationship and interaction between practical forms of activity, aimed at satisfying basic wants, and orientative-investigatory activity with cognitive objectives are as follows.

Cognitive activity arises within the practical activity and for the satisfaction of the latter's requirements (indeed this is the only way in which it can come into being); it emerges as an indispensable condition for the realization of the practical activity. However, after first emerging within the practical activity, cognitive activity assumes relative independence. As a result of its relative independence, a child acquires knowledge of the outside world (images of objects) which extend beyond the narrow range of knowledge essential for the execution of concrete types of practical activity. In this way conditions are created for the mastering of more complicated forms of practical activity, and new forms of activity emerge. Practical activity becomes more varied and extends beyond the simple satisfaction of the child's physical needs, and this, in its turn, makes possible the further advance in learning.

The relative independence of cognitive activity enables the teacher of the deaf-blind child to enlarge his knowledge not merely in the course of practical activity but also through special tuition and games.

It is essential to understand that not until a child begins to be instructed in practical activity and not until relatively independent cognitive activity starts to emerge within the framework of the latter, will the conditions be provided for special lessons to promote the child's so-called sensorimotor culture. To encourage a child's sensorimotor development before he has mastered elementary skills of self-care is not only futile but harmful because the child will become profoundly hostile to the very process of instruction.

The need to establish self-care skills is acknowledged by all those who have had anything to do with the teaching of deaf-blind children. Deaf-blind children in the United States and Britain are instructed in the skills of self-care. However, in those countries these skills are seen as just one of the objectives in the teaching of these children, and by no means the most important one.

While in this country the main objective at the first stage of instruction provided for these children is to teach them the skills of self-care. At the Conover school for the deaf-blind in Britain, for example, the main emphasis at the initial stage is laid upon sensorimotor development. Children are taught to perceive such things as toys and bricks, to develop their sense of rhythm. Special attention is paid to the development of their tactile perception by means of special exercises, moulding activities, etc. Their motoric function is developed via outdoor games with large building blocks, walks, swimming in the pool provided at the school; they are taught to work with clay, sand and water.

It should be pointed out that such forms of activity for deaf-blind children can be extremely valuable, indeed, they are quite indispensable, if we bear in mind all the time that the main form of activity at the first stage of such children's development should be the training of self-care skills and that *non-practical* forms of activity should arise within the framework of *practical* ones. As it acquires relative independence, *non-practical* activity serves to promote the children's sensorimotor development, and this in its turn creates the prerequisites for the further development of *practical* activity." (Meshcheryakov 1979, pp. 87-94).

Appendix V

Stillman and Battle

Stillman and Battle have obviously a very deeply considered understanding of development. It is a problem for interpretation, however, that neither in the Scale nor in the description of the theoretical foundation of the Scale, do they present a framework including all the developmental domains at the same time. The Callier-Azusa-H is composed of a hierarchical progression of items within four developmental domains (which may be seen as four subscales):

Representational and Symbolic Abilities; Receptive Communication; Intentional Communication; and Reciprocity.

The hierarchical progression is, as we see, *within* the domains (each of the four subscales is divided into sequential steps), but the presentation of the domains is separated. There is then, of course, no hierarchical progression from the first subscale to the fourth. In Stillman and Battle's description of the theoretical foundation, they start with the first domain, then follows the second, third and fourth. The interpretation will be in the same order.

It may be wise firstly to express what the scales are assessing, since this also may be seen as Stillman and Battle's definitions of basic concepts:

The *Representational and Symbolic Abilities* subscale assesses the individual's understanding that one thing can stand for something else and the individual's ability to use this knowledge in interactions with others.

The *Receptive Communication* subscale assesses the individual's ability to respond to the communications of others, the form and content of these communications, and the contexts in which they are understood.

The *Intentional Communication* subscale assesses the level of intentionality of the individual's communicative expressions, the forms of the expressions, and the purposes they serve.

The *Reciprocity* subscale assesses the individual's ability to participate in communicative exchanges, and to understand the patterns and conventions of social interactions (Stillman,R.D. and Battle,C.W. 1985, p. I).

The following is a very brief summary of the content of the four scales in the Callier-Azusa Scale-H. We will emphasize the first domain, since that in a way is the basic one.

Representational and Symbolic Abilities

Representational ability is the ability to form and retrieve mental images or schemas which stand for objects, people and events.

The development of representational ability is an outcome of the process of distancing or differentiation between self and the external world.

The child's differentiation of self from the external world is a gradual process which can be observed in his decreasing reliance on immediate and familiar contexts to anticipate external events, his increasing ability to understand the correspondence between his own actions and those he observes, and his increasing ability to depict through imitation the observed actions of people and objects.

Stillman and Battle are of the opinion that before the onset of representational abilities we will find two levels of what they call pre-representational abilities, namely the "pre-representational anticipation and imitation abilities." (Stillman and Battle 1986, p. 324).

The anticipation begins with almost no temporal and/or spatial distancing: the child smiles when held in a certain position. Then there will gradually be a temporal and spatial distancing: the child anticipates an event from observation of activities which typically precede the event. For example, the child goes to the door when the adult puts on her coat.

The imitation also goes through stages, from very simple to more complicated. Finally the child imitates activities he has never before performed ("new" activities).

Stillman and Battle are of the opinion that the emergence of the pointing gesture indicates the onset of representational abilities. This gesture is "the child's first use of a symbolic vehicle, an action used to make reference to something." (Stillman and Battle 1986, p. 325).

The following summarizes the processes of differentiation which underlie the continuing development of representational abilities, and which is also a continuing of the temporal and spatial distancing:

First, there is a decreasing reliance on contextual cues to retrieve mental representations and to produce symbolic vehicles. As a result, the child gradually becomes able to produce symbolic vehicles outside of the context in which they were learned. For example, the child who learns to understand and use the pushing gesture, sign or spoken word in relation to pushing his chair to the table becomes able to understand and use the same symbolic vehicle at other times, in reference to other acts of pushing.

Second, there is an increasing differentiation of the child from the form of the symbolic vehicle. Initially, the forms of the symbolic vehicles the child understands and uses are his own actions. For example, the child indicates 'throwing' with his own throwing motion. As the child differentiates himself from the symbolic vehicle, he begins to understand and use symbolic vehicles which are formed not of his typical actions, but of sounds or manual signs. For example, he uses the word 'throw' formed of sounds or the abbreviated motion of the manual sign for 'throw' to refer to throwing.

Third, there is an increasing differentiation between the child and the meaning of the symbolic vehicle. At first, the child only understands and uses symbolic vehicles which refer to his own actions. For example, he understands and uses the throwing gesture, spoken word or sign only to describe his act of throwing. But with increasing differentiation, he becomes able to understand and use symbolic vehicles to refer to the actions of others; for example, to describe another person's act of throwing or to request that another person throw. In symbolic play, the child initially depicts his own activities; for example, his sleeping, his eating, his dressing and his washing. He then becomes able to pretend the behaviour of others; for example, sweeping, going to work, dusting or driving a car.

Fourth, there is increasing differentiation between the symbolic vehicle and that which it represents. Initially, the child only understands and uses symbolic vehicles which are perceptually similar to that which they represent. For example, the throwing gesture looks like the motion of throwing, the sound 'meow' sounds like the cat's cry, or 'tick-tock' sounds like the clock. With increasing differentiation the child becomes able to understand and use symbolic vehicles which are not perceptually similar to the thing represented; for example, signed or spoken words for 'throw', 'cat', or 'clock'. In play, the child initially pretends to eat only

using the usual utensils. With increasing differentiation, the child pretends to eat using a stick for a fork, a block for a bowl and a chair for a table. The child also becomes able to pretend to be other people and things such as an aeroplane. (Stillman and Battle 1986, p. 325-326).

Stillman and Battle have a rich understanding of the process from signal to symbol, the pre-lingual stages.

The next subscale is the one called

Receptive Communication

This scale assesses the ability to respond to the communicative expressions of others. However, as they state, the processes of differentiation, described in the discussion of the Representational and Symbolic Abilities scale, provide the framework for items on the Receptive Communication scale. The logic of development is therefore the same as in the description above. Very briefly we can say that Stillman and Battle see a development of the child's receptive abilities from the understanding communications related to the child's present needs and actions to understanding of communications concerning topics unrelated to the child's immediate concerns; from understanding familiar communications about familiar events to understanding novel communications about novel events; and from understanding only with the assistance of contextual cues to understanding independent of contextual cues.

This is a process going through several levels.

At the earliest level, the child responds to social acts intended to elicit attention or to modify ongoing behaviours (e.g. the child quietens or attends to gentle physical stimulation, attends to interesting visual or auditory events produced by the adult, and can be comforted when distressed). He then passes over the levels of context-related signals to the levels where the child gradually begins to respond to familiar gestures and verbalizations outside their usual context, and to understand new gestures and verbalizations independent of context. The child also gradually expands his receptive vocabulary beyond names for present people and objects to include names for absent people and objects, words for new actions, and words which refer to past, present and future (Stillman and Battle 1986, p. 328-329).

Intentional Communication

At the early levels of development, the child does not communicate intentionally, according to Stillman and Battle:

"Rather, the child performs actions in response to internal states and to sensations resulting from environmental stimuli. These actions are communicative only in the sense that they can be interpreted and responded to by the partner as indicators of the child's needs and desires. Until the child has differentiated self from the external world, he cannot communicate intentionally because he is unaware of the independent existence of others beyond his own actions and sensations. The child's focus on himself, his actions and his sensations means also that those actions which have a communicative effect can relate only to himself and will appear only in familiar contexts. It is only when the child has differentiated himself from people, objects and events that intentional communication, communications about the external world, and communications outside familiar contexts are possible." (Stillman and Battle 1986, p. 329).

According to Stillman and Battle the stages or levels of intentional communication will then be:

The earliest communicative expressions are actions emitted in response to internal states and which serve to assure the meeting of basic adaptive needs. For example, crying has such a function.

The next level will be the ability to participate in, sustain and modulate interactive activities (e.g. social smiling).

Then comes the participation in interactive "games" (e.g. vocalizing as a request to continue the activity).

At the next level the child uses intentional actions to signal the adult to initiate specific activities or to request specific objects and actions. For example, the child holds out his hands to initiate a patting game.

Further progress towards the development of true intentional communication is observed when the focus of the child's communicative actions shifts from the goal, to gaining the partner's attention in order to communicate. For example, the child may elicit the adult's attention to an object by showing it, request objects by making reaching motions towards the object even when the object is within reach, and vary the form of the communicative expression until success is achieved in gaining the adult's attention.

At the highest level the child creates and uses a variety of idiosyncratic gestures for communicative purposes. Conventional gestural forms and language symbols then emerge to become the primary means of communication (Stillman and Battle 1986, p. 332).

Reciprocity

This scale assesses the child's developing ability to participate in reciprocal communicative exchanges, and to understand the patterns and conventions of social conversation. Although, as we stated above, the four subscales in the Callier-Azusa Scale-H only are hierarchical in the four domains, not in relation to one another, the highest level of reciprocity of course may be seen as the "top" level in the development of communication. There is from the beginning of communication, before the intentional communication, a certain degree of reciprocity. In the reciprocity scale, however, the development of reciprocity is explored. Stillman and Battle find several levels and see the highest level of reciprocity in the child's use of intentionally communicative behaviours to participate in conversation. The child's focus is on the partner and the exchange, rather than on his actions and their effects. It is at this point that the child can lead and pace communicative exchanges on a variety of topics and eventually incorporate gesture and words (oral or manual) into conversational exchanges (Stillman and Battle 1986, p. 333).

This brief description may be seen as an interpretation of Stillman and Battle's opinion on the pre-lingual stages up to the lingual stages at the end.

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