

THE EVALUATION OF THE LANGUAGE SKILLS
OF A PROFOUNDLY DEAF ADULT AND A HARD-
OF-HEARING ADULT

by

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I Hereby Recommend that the Research Paper Prepared under
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Ante Marie Davies Adams
~~Head of Department~~

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well done

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CHAPTER I

INTRODUCTION

In this study the chief language skills of a profoundly deaf male adult and a hard-of-hearing female adult were investigated. Three areas were selected for investigation: (a) relationship between chronological age and language skills, (b) relationship between intelligence and language skills, (c) differences between sexes in development in language skills.

Both adults have gone through Litzinger special school district. Here training in oral speech is emphasized until the child is about twelve years of age, after that reading and writing receive greater emphasis than oral speech.

According to Goda (1957, p. 367), the deaf child who is superior in one language skill will generally be superior in all of the skills, and the deaf child who is inferior in one language skill will generally be inferior in all of the skills. The quantitative and qualitative aspects of expressive language appear to be related; thus the child who uses a relatively larger number of words in his speaking, and writing will generally express himself with relatively longer and more complex sentences.

Wilbur and Montanelli (1947) did research on question formation in the language of deaf students. They found that deaf students improved with increasing age, to Yes/no questions. That even the youngest hearing students consistently obtained higher scores than most of the deaf students. Yes/no questions were easier to comprehend and judge the grammaticality of than were wh-questions.

Sarachan and Love (1951) found that the deep structural differences in syntactic rules exist between congenitally deaf and hard-of-hearing individuals. Many of the errors made in the language of the deaf is deletions of major sentence constituents, incorrect derivational or inflectional noun and verb endings, agrammatical sequential word orders, or inappropriate substitutions for the verb, which caused a gross violation of english sentence structure. The language of the deaf seems to reveal either an unstable or a limited syntactic competence for the basic english rules of syntax. On the other hand, in the language of the hard-of-hearing there were fewer errors made which violated english sentence structure, and if so, were of a less minor nature than that of the deaf individual.

In 1964 Winitz studied the language skills of male and female kindergarten children. This investigation

sought to discover whether previously reported and relatively small differences favoring female children are chance differences or real differences which would be significant with large samples. Winitz concluded that the hypothesis of no language difference between the sexes is tenable in the population of five year old children with regard to major verbalization measures, articulatory skills, vocabulary skills, and three of four word-fluency measures.

CHAPTER II

PROCEDURE OF THE STUDY

The two subjects selected for this study were a twenty seven year old profoundly deaf adult and a twenty five year old hard-of-hearing adult, who were without any apparent secondary handicaps. The deaf adult had a seventy five decibel loss in each frequency of the speech range and had congenital deafness. The hard-of-hearing adult was deafened by the age of four years old. Both had received their entire education at special district school, and were placed in oral classes for high school at Webster senior high school.

Measurement of Skills

Four language skills were measured: writing, speaking, lipreading, and reading. For measuring writing two samples were obtained from each adult which served as a basis for evaluating written language: (a) a composition on "Why I like summer better than winter" or "Why I like winter better than summer" and (b) ten sentences in response to ten individual pictures, one sentence response per picture. The ten sentences and compositions were evaluated as one unit. Two meetings were conducted to obtain the samples, The first meeting being devoted to the compositions and the second meeting being devoted to the sentences in reaction to the pictures.

For measuring speaking, two samples were obtained from each subject which served as a basis for evaluating spoken language: (a) ten sentences in response to the same ten pictures as were used to measure writing ability, one sentence response per picture and (b) six sentences to tell a story in response to six pictures, one sentence response per picture. There were thus sixteen spoken sentence responses. The subjects were instructed to repeat each sentence three times while the experimenter wrote down what was said. By being able to see the subject and the material to which he was reacting, the experimenter was usually able to understand what the subject was saying. In each instance however, the subject was shown what was written down and asked if it was what he had spoken. The subject was given an opportunity to make corrections. When the subject could not be understood he was instructed to write down what he had said. This procedure insured maximum understanding of every word spoken by the subject.

A four part test was constructed to measure lipreading ability: part one, ten items, each consisting of two words (an article and a noun); part two, eight items, each consisting of a three-word phrase; part three, five items, each consisting of a four-word sentence; and part four, six items, each consisting of a five-or six word sentence. There were thus twenty-nine items in all. The

test was composed of those words which the subjects had used at least once in their written compositions.

In the administration of the lipreading test each item was spoken in a soft voice which the subjects could not hear because of hearing losses. Each item was spoken three times in succession. The the subjects were allowed sufficient time to write the item.

Reading ability was measured by errors made while reading a short story.

The intelligence of each subject was determined by his performance on a non-language intelligence test. Several tests were administered, the test for auditory comprehension of language, peabody picture vocabulary test, the goodenough draw-a-man, and the receptive part of the northwestern syntax screening test.

For scoring procedures three measures were obtained from two writing samples, two of a quantitative nature and one of a qualitative nature. The quantitative measures used for evaluating the language ability of the subjects were length of composition and average sentence length. The total number of words which the subject used yielded the score for the length of the composition. Average sentence length was determined by dividing the total number of words by the number of sentences. The qualitative measure, used for the development of the

sentence, was determined by using a 10-point scale which the writer constructed. The scale ranged from one, for a completely unintelligible response showing no concept of a sentence, to ten, for an easily intelligible elaborated sentence made up of more than two clauses. Each written sentence was evaluated separately. The average score of all the sentences was the average score for development of written sentence.

The same three measures were used to evaluate spoken language ability: average length of spoken sentence, and average score for development of spoken sentence. The same method which had been used to determine the development of the written sentence was used also to determine the development of the spoken sentence.

In the measurement of lipreading ability, each word correctly understood by the subject was graded separately. An article received a score of one-half point, and any other word received a score of one point.

The reading score was measured by the comprehension of the paragraph meaning and word meaning.

There were eight measures: three for written language, three for spoken language, one for lipreading, and one for reading.

CHAPTER III

RESULTS AND DISCUSSION

The means for the eight language measures (Table 1) show that the younger hard-of-hearing subject generally scored higher on the language measures than the older deaf adult. The younger subject did significantly better on amount of writing, the development of spoken sentence and the amount of speaking, these latter two being the measures of oral performance.

Intelligence and Language Skills

On the non-language intelligence test the hard-of-hearing subject did significantly better on all four test. On the peabody picture vocabulary test the deaf adult yielded a total raw score of sixty-two. Based on mental age the intelligence quotient was ninety-three percent and the mental age was seven years-three months old. The other subject yielded a total raw score of eighty-seven and an intelligence quotient of one-hundred and one, which gave her a mental age of twelve years-two months old. On the test for auditory comprehension of language the deaf subject scored a mental age of eight years-two months old. The other subject had a total raw score of eighty-nine and scored above all the eight year old norms. On the goodenough draw-a-man test the deaf adult received a mental age score of twelve years

old. The other subject scored a mental age of fourteen years old. On the receptive part of the northwestern syntax screening test the deaf subject scored a twenty-four ranking him at the fifty percentile. The other subject scored a eighteen ranking her at forty-one percentile.

Sex Differences in Language Skills

Differences between the sexes were determined for each of the eight language measures. The differences all favored the female. The measure which showed the largest sex difference was the one for development of written sentence.

The inconsistent patternings of language skills found with these two subjects are similiar to those found in several other studies. Pintner comments on the erratic pattern of growth in the language of the deaf child. Lyon and others found uneven growth in reading, with the largest improvement occuring above age 18. The results of two other studies show an uneven patterning in written language. Heider and Heider found decreases in sentence length between profoundly hard of hearing and mild impaired hearing losses among adults; Wells found seven instances in intermediate grades where the language of older deaf children was inferior to the language of younger deaf children.

There is apparently a tendency for the deaf individual to be lower in language skills then the mildly

impaired hearing individual.

There seems to be a tendency for the deaf subject who is inferior in one language skill to be relatively inferior in all language skills. Thus the individual who excels in reading may be expected, in general, to lipread, write, and speak at a relatively high level while the person who reads at a lower level may be expected, in general, to lipread, write, and speak at a relatively low level.

Further, within the two expressive skills of writing and speaking, there was found to be a significant relationship between the quantity of expression and the quality of expression. The subject who uses a relatively greater number of words in his written or oral language may be expected to express himself with relatively longer and more complex sentences. The average length of spoken sentence is, however, not related significantly to the average length of written composition.

The Heiders have stated that individual factors are responsible for superiority in lipreading. Therefore this language skill may not be affected by any general ability to the same extent as are the other language skills.

The results showed that the younger subject scored significantly higher in oral performance than the older

subject. The younger subject may have used oral speech for communicating and relied very little on sign language. Whereas the older deaf subject may have used sign language to communicate relying very little on oral speech.

The degree of hearing loss may account for the differences in test results on the non-language intelligence tests. The ability to hear words and being exposed to language could have a great effect on an individual's receptive vocabulary and how well they would score on the Peabody picture vocabulary test and the test for auditory comprehension of language. We could expect a much more limited and rigid vocabulary for the deaf subject than the hard-of-hearing subject. A large amount of deaf people have telegraphic writing which may be due to their limited vocabulary and syntax.

Expressive language of the deaf subject as compared with the hard-of-hearing subject would be expected to be inferior in all aspects of language development. Deaf individuals tend to have many grammatical errors in word order, additions, omissions, and substitutions in words they string together.

The results of the differences between sexes in development of language skills, may be due to the differences in hearing loss. The hard-of-hearing subject may be able

to write a longer more intelligible sentence than the deaf subject because she has a more advanced vocabulary and syntax than the deaf subject.

TABLE I

<hr/>		
Quantitative Writing Measures	25	27
1 Length of Written Composition	81	48
2 Average Sentence Length	5.1	3
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Qualitative Writing Measures	25	27
3 Development of written sentence	151	106
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Quantitative Spoken Language Measures	25	27
4 Total Number of Words Spoken	96	48
5 Average Score of Spoken Sentence	6	3
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<hr/>		
Qualitative Spoken Language Measures	25	27
6 Development of Spoken Language	153	90
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Lipreading Measures	25	27
7 Measure of Words and Articles	65.5	59
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Reading Measures	25	27
8 Comprehension of Word Meaning	72.5	58

CHAPTER IV

SUMMARY AND CONCLUSIONS

The chief language skills of a profoundly deaf male adult and a hard-of-hearing female adult were studied. Four language skills were measured: writing, speaking, lipreading, and reading.

The following conclusions are drawn: (a) because of the consistent pattern of interrelationships of the language skills, the prediction may be made that the deaf adult who is inferior in one will generally be inferior in all the skills: (b) the hard-of-hearing adult will perform significantly better in oral skills; such as amount of writing, the development of spoken sentence and the amount of speaking, than a deaf adult.

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