A STUDY OF SOME PERSONALITY ASPECTS OF DEAF ADOLESCENTS

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A STUDY OF SOME PERSONALITY ASPECTS OF DEAF ADOLESCENTS

by

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A THESIS

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CHAPTER I

INTRODUCTION

Deafness is a handicap which produces, in general, a marked restriction in the environment of its victims. With the deaf, particularly with those born deaf or becoming so in the earliest years of life, to whom is denied the spoken and heard word as a medium of communication with the outside world, the mind is held back. Whatever the potential mental capacity of the deaf person, whatever its innate condition at the outset, he starts forth under a tremendous handicap, with the processes for learning and the acquisition of knowledge severely impeded. In this respect, the deaf live in greater isolation from the rest of the world than could be achieved for any artificially controlled experimental population. Therefore, research into the personality adjustments of such subjects should be of particular interest.

Statement of the Problem. In personality studies of hearing populations, self-descriptive adjustment inventories have been of considerable value and various instruments are now available for the measurement of different aspects of adjustment in children and adults. The question of whether deaf adolescents should be tested on a scale standardized on the hearing, or on a scale standardized on the deaf alone is a moot one. It is of vital importance to some educators of the deaf that test scores of deaf adolescents be compared with those of the hearing since the ultimate aim of those using oral methods is

the preparation of deaf boys and girls to fit adequately into a hearing environment both educationally and socially as soon as possible. However, the characteristic language retardation of the congenitally deaf offers a serious obstacle to the ready application of such tools of measurement to them.

Purpose of the Study. In order to make an objective study of some personality aspects of deaf adolescents enrolled in a residential school for the deaf, an adjustment inventory was constructed, adapted more specifically to the relatively immature thinking habits and limited knowledge of language usage characteristic of those so handicapped. This inventory was designed to measure four aspects of adjustment within the group of residential school deaf adolescents: social, school, home, and emotional adjustment. An attempt was made to standardize this inventory on the basis of the deaf themselves, rather than a standardization based on a hearing population. An allied purpose of this study was to acquire a better understanding and a greater working knowledge of the deaf and deafness itself. This goal has been approached by concentrated observation of the deaf subjects as well as through extensive reading.

CHAPTER II

REVIEW OF PREVIOUS RESEARCH

The Committee on Nomenclature of the Conference of Executives of American Schools for the Deaf in 1937 defined people with defective hearing under two broad classifications: The Deaf and the Hard of Hearing.[1] The deaf are those whose sense of hearing is non-functional for the ordinary purposes of life. This general group is made up of two distinct classes based entirely upon the time of the loss of hearing. These are: (1) The congenitally deaf--those who were born deaf, and (2) the adventitiously deaf--those who were born with normal hearing but in whom the sense of hearing became non-functional later through illness or accident. The hard of hearing are those in whom the sense of hearing, although defective, is functional with or without a hearing aid. The research undertaken in this paper concerns, mainly, the congenitally deaf; in addition, the adventitiously deaf who lost their hearing before they acquired language.[2]

Inventory results may not only give evidence of a pupil's problems in adjustment or suggest the need for special treatment, but may supply as well some clues to his needs in educational and vocational guidance. Moreover, what the child says about himself in response to individual test items may supplement other available

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1 S. Richard Silverman, "The Implications for Schools for the Deaf of Recent Research on Hearing Aids," American Annals of the Deaf, Vol. 94, No. 4, September, 1949.

2 Usually, before the age of 3.

information about him. The inventory has been employed as a measuring instrument in a comparison of the behavior adjustment of deaf and hearing children.

Applied in this capacity, the Adjustment Inventory administered by Pintner and Brunschwig[3] revealed consistent differences between the deaf and hearing, pupils of residential schools for the deaf averaging in every instance poorer scores than hearing public school children. The largest difference between the two sets of groups occurred in social adjustment.

In a study to determine whether deaf and hearing children differ from each other on certain standardized scales, various phases of personality were measured.[4] When the deaf and hearing children were compared with the Haggerty-Olson-Wickman standard, it was found that both groups presented more overt behavior problems and undesirable personal characteristics than children in general.

The general implications of the results obtained in this study would seem to indicate that the deaf children differ very little from their hearing control group in those phases of personality which the Haggerty-Olson-Wickman Behavior Schedules measure. Both the deaf and the hearing children included in this study are more maladjusted than children in general. Their scores on the

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3 R. Pintner and L. Brunschwig, "An Adjustment Inventory for the Use in Schools for the Deaf," American Annals of the Deaf, March, 1937, Vol. 82, No. 2, p. 166.

4 N. Norton Springer, "A Comparative Study of the Behavior Traits of Deaf and Hearing Children of New York City," American Annals of the Deaf, Vol. 83, No. 3, May, 1938, pp. 270-273.

various behavior rating scales indicate that they present more personality problems than the children of the Haggerty norm groups.

The Haggerty-Olson-Wickman Behavior Rating Schedule was used by Kirk to rate 112 deaf and hard of hearing children in grades 1 to 8. Conclusions may be summarized as follows:

1. Deaf and hard of hearing children as a group present significantly greater problem tendencies than normal hearing children.
2. The greatest difference was found in emotional traits, while the least difference was found in intellectual and physical traits.
3. As with normal children, defective-hearing boys exceed defective-hearing girls in behavior problems.
4. There was no difference between the deaf group and the hard of hearing group in problem tendencies.
5. This study confirms the observations of others that children with defective hearing have more emotional problems than do normal hearing children.[5]

Streng and Kirk conducted a study with ninety-seven deaf and hard of hearing children (ages 6 to 18) in a public day school for the deaf. They were given (1) the Grace Arthur Performance Scale, (2) the Chicago Non-Verbal Examination, and (3) the Vineland Social Maturity Scale. The following results were obtained:

1. The group was average in intelligence since the mean IQ on the Grace Arthur Scale was 100.9 and on the Chicago Non-Verbal Test, 95.5.
2. The group was approximately average in SQ (Social Maturity Quotient). The mean SQ for the group was 96.2 with an SD (Standard Deviation) of 12.8. This is very similar to Doll's normal hearing group which had a mean SQ of 100 and an SD of 12.
3. There was no difference between the deaf and the hard of hearing children either in intelligence or in SQ. The

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5 Samuel A. Kirk, "Behavior Problem Tendencies in Deaf and Hard of Hearing Children," American Annals of the Deaf, Vol. 83, No. 2, March, 1938, pp. 136-137.

mean SQ for the 51 deaf children was 96.5, and for the 46 hard of hearing children 95.9.

4. The discrepancy between these results and previous studies which indicated that the deaf were inferior in social competence is explained in one of the following ways: Either (a) the children previously studied were also inferior in intelligence, or (b) deaf children in day schools are higher in social competence than deaf children in residential institutions.[6]

In a comparison of mean social quotients for congenitally and adventitiously deaf children, Burchard and Myklebust[7] found the mean SQ for the adventitiously deaf to be 82.4 with a SD of 12.1. The mean SQ for the congenitally deaf was 85.0 with a SD of 17.5. The mean difference between the two groups was 2.60; the standard error was 2.90, and the critical ratio, .89. They concluded this part of their experiment by stating that there is not a statistically reliable difference between congenitally deaf children and children who have acquired deafness. There is, however, a retardation in social maturity for both groups ranging from 15 to 18 points.

In a validation study of the Vineland Social Maturity Scale at the New Jersey School for the Deaf, Bradway[8] used ninety-two subjects ranging in age from 5 to 21 years. She obtained a mean SQ

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6 Alice Streng and Samuel A. Kirk, "The Social Competence of Deaf and Hard of Hearing Children in a Public Day School," American Annals of the Deaf, Vol. 83, No. 3, May, 1938, pp. 252-253.

7 Edward M. L. Burchard and Helmer R. Myklebust, "A Comparison of Congenital and Adventitious Deafness with Respect to Its Effect on Intelligence, Personality, and Social Maturity--Part III: Personality," American Annals of the Deaf, Vol. 87, 1942.

8 Katherine Preston Bradway, "The Social Competence of Deaf Children," American Annals of the Deaf, Vol. 82, No. 2, March, 1937.

of 80.7 for the group with a SD of 11.3, and concluded that the deaf are retarded approximately 20 SQ points in social competence.

The Brown Personality Inventory for Children was given to 397 deaf and 327 hearing children by N. Norton Springer, in order to determine whether there are group differences between deaf and hearing children in their manifestation of maladjusted behavior, as measured by their psychoneurotic responses.[9] The deaf children were, on the average, more than four years older than their hearing control.

All the groups of deaf children were found to receive much higher neurotic scores than the hearing control children. The differences between the deaf and hearing children were very large and of a high degree of statistical significance.

When the results of this study were compared with the published norms, all the deaf and hearing groups were found to receive much higher neurotic scores than the children of the norm group. The deaf children, in particular, fell within the highest possible range and, according to Brown's classification, made a "very poor adjustment." The hearing groups fell within the "poor adjustment" category.

A comparison was made by Rudolf Pintner and Lily Brunschwig[10] of the responses of deaf and hearing public school children to a check list of 39 fears, and to 7 sets of wishes which permitted a choice

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9 N. Norton Springer, "A Comparative Study of the Psychoneurotic Responses of Deaf and Hearing Children," The Journal of Educational Psychology, Vol. 29, 1938.

10 Rudolf Pintner and Lily Brunschwig, "A Study of Certain Fears and Wishes Among Deaf and Hearing Children," The Journal of Educational Psychology, Vol. 28, 1937.

between a desire for the immediate fulfillment of a smaller gratification and the delayed fulfillment of a greater good.

Deaf girls reported significantly more fears than hearing girls, deaf boys slightly more than hearing boys. Sex differences were greater than differences between the deaf and the hearing.

Deaf boys and girls expressed a greater number of wishes for immediate satisfaction than the hearing. Differences between the deaf and the hearing in this respect were larger than between the sexes. Deaf girls expressed more fears than any other group, and also the largest number of wishes for immediate satisfaction.

Correlations between scores on the fears and wishes tests with the factors of age intelligence, age at becoming deaf, and per cent of hearing in the better ear were slight.

With respect to the six most frequently named fears, there was complete agreement among the deaf and the hearing of both sexes. On the wishes test, the deaf exceeded the hearing in wishes for immediate gratification, and particularly in those items that involved articles for immediate consumption.

In a study made by Isobel Gregory[11] comparing the responses of deaf and hearing children in institutions as to certain personality and interest items, the most characteristic difference between the two groups of institutionalized children was the tendency on the part

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11 Isobel Gregory, "A Comparison of Certain Personality Traits and Interests in Deaf and in Hearing Children," Child Development, Vol. 9, March-December, 1938.

of the deaf to withdraw from social participation and responsibilities. This tendency is shown in their desire to be younger and more dependent and to isolate themselves from social pastimes. The greater desire on the part of the deaf for more friends, as well as their inability to get on well with their teachers, suggest an insecure social adjustment. The less adequate emotional adjustment exhibited by the deaf also indicates their less satisfactory adaptation to adolescents.

The personality inventory scores of 1,263 pupils administered by Pintner and Brunschwig[12] were classified and averaged with respect to amount of deafness in each subject's family. With some minor exceptions, the findings supported the belief commonly held by those acquainted with the deaf, that deaf children coming from families in which there are also other deaf members tend to be better adjusted than cases in families where they are the only member so afflicted.

Welles[13] administered the Bernreuter Personality Inventory to 225 urban hard of hearing adults and compared the scores with those of comparable normal hearing subjects. He found the hypacousic group to be significantly more emotional, more introverted and less dominant than the hearing control group. There was no marked difference between the two groups in self-sufficiency.

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12 R. Pintner and L. Brunschwig, "Some Personality Adjustments of Deaf Children in Relation to Two Different Factors," Journal of Genetic Psychology, Vol. 39, No. 1, September, 1936.

13 H. H. Welles, "The Measurement of Certain Aspects of Personality Among Hard of Hearing Adults," Teachers College, Columbia University Contributions to Education, 1932, p. 545.

On the basis of the Thurstone Personality Schedule, Lyon[14] found the percentage of deaf high school pupils classified as emotionally maladjusted to be twice that of college freshmen of corresponding age.

Madden,[15] using a short rating scale, found that the hard of hearing are not rated as leaders, and are often more shy and solitary than normal children.

A study by Pintner reports the results of the Bernreuter Inventory for 94 hypacousic individuals living in small towns and rural communities all over the United States and Canada compared with hearing individuals. The hypacousic and hearing groups are very similar in age, education, and social background. The results of the Bernreuter test show the hypacousic group to be decidedly more neurotic, more introverted, and more submissive than its control hearing group. Comparing the hypacousic group with Bernreuter's standards for women in general, it is found that they deviate in the above three traits and, in addition, show themselves more self-sufficient than hearing women.[16]

The picture of the average hypacousic individual shown by

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14 V. W. Lyon, "Personality Tests with the Deaf," American Annals of the Deaf, 1934, Vol. 79, pp. 1-4.

15 R. Madden, The Social Status of the Hard of Hearing Child, Teachers College, Contributions to Education, No. 449, 1931.

16 Rudolf Pintner, "Emotional Stability of the Hard of Hearing," Journal of Genetic Psychology, Vol. 43, No. 1, September, 1933, pp. 293-311.

the Bernreuter test does not show such a marked deviation from the average hearing individual as might have been imagined. The shock of deafness is great, particularly if it comes suddenly and in adolescence. That so many individuals would seem to be able to readjust their lives more or less satisfactorily with little or no help, would lead one to hope that a deeper understanding of the peculiar psychological difficulties involved might eventually give rise to a technique of re-education that would bring about an adequate readjustment more speedily and to a larger number of individuals.

CHAPTER III

PSYCHOLOGY OF THE DEAF

Conceptions Regarding the Deaf.[1] While the deaf are as a rule quite normal in appearance, and seemingly entirely able-bodied, the fact that they fail to respond or to communicate when addressed creates an impression that is not altogether favorable to them. Being unable to hear, their faces appear blank or vacant without acknowledgment of sounds or words uttered in their presence. There is no sign that they are aware of what is happening unless they should be able to detect certain movements in front of them. Furthermore, responses by them when they are accosted or spoken to are not usual or accepted.

The fact that the deaf to a large extent do not use speech in general groups or with strangers may receive greater attention than the matter of the absence of hearing. It is upon this fact that major consideration should be placed; too often, the hearing population fails to realize that such condition is simply a consequence or derivative of deafness. It is held in the light of a separate affliction.

In addition, the facial expressions of some deaf persons

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1 Unless otherwise footnoted, the viewpoints expressed in this chapter are those of the author, based on 44 detailed observations at the Flint school. These observations consisted of at least one-half school day over a period of time ranging from April, 1949, through May, 1950.

when in animated conversation with other deaf persons may at times appear to be facial contortions, seemingly giving evidence of bad temper, or of irritability, and regarded as not in keeping with calmness of thought or feeling of self-control. It is not realized that these expressions are little more than the result of strong or energetic feelings, or as a vent to the emotions, just as the tone or inflection of the voice may do to those who have hearing. On the whole, of course, deafness does not mean that a person is entirely unable to communicate with other people; it means that he gets only part of what is going on about him.

While their inability to hear must always be a serious and distressing handicap, it seems to be true that the deaf as a whole are not unhappy. They are not morose, sullen, or discontented; when in the company of their deaf associates, they are able to derive fully as large a portion of happiness as any other group of human beings.

Frequent misapprehension with respect to the deaf on the part of the public is to regard them as though they were all on a common level, or to regard one of them as a representative of a class. The fact fails to be recognized that the deaf differ among themselves fully as much as persons in entire possession of their hearing.

Deaf persons do not evoke the sympathy that is generally immediate in the case of those whose physical affliction or defect is more obvious. The situation with them is intensified because of the lack of ability to make quick and ready response to speech directed

to them; there is established some sort of obstacle between them and the rest of the population.

It is such considerations as these that cause a misunderstanding of the deaf to so great an extent on the part of the public. The deaf are liable to be looked upon as "queer" or abnormal; they may be regarded as morose or moody; they are approached with a degree of caution; they may even be shunned or rebuffed. There may be built up toward them an attitude combined of wonder, misgiving, fear, aversion -- a vague feeling that they are more or less different and distinct from other people in their thoughts and actions.

Attitudes Toward the Deaf As They Appear to the Deaf. In order to understand the full meaning of the social limitations involved in deafness we have to consider the behavior and attitudes of hearing persons toward the deaf as they appear to the deaf. We find that many of the deaf feel that the cause of their difficulties lies with the hearing. They recognize and accept the fact that they themselves are handicapped in a physical sense, but that their deafness involves peculiar social problems they blame largely on the group of those who are not deaf.

It is interesting to see what the deaf themselves say of the different groups with whom they come into contact and especially about the reasons why they prefer to associate with one group or another. Some say that they prefer to be with hearing people because they learn more from them than from the deaf; others give a more abstract reason: they want to be with the hearing in order to keep

themselves as 'normal' as possible. They wish to be like the majority group because it represents the social norm, not because of its intrinsic characteristics.

With those who prefer to make their social contacts among the deaf, one may distinguish between those who do so of necessity, that is those who are so limited in their means of communication that they have no possibility of getting on with hearing people, and those who are more or less free to choose their associates. Some feel that they have greater social satisfaction from their contacts with the deaf. Others prefer to be with the deaf because communication is easier with them. This preference assumes the use of signs or spelling.

One study revealed the complaint that the hearing do not bother to talk to the deaf, that they are impatient, that only a few intimates or very sympathetic people take the trouble to enter into conversation with the deaf.[2] The difficult thing is to get a hearing person to talk with a deaf person. The more intellectual class are willing to sit down and write things out for the deaf, but the average business man has no time to waste writing or otherwise. Thus, the initiative for the social contact is left to the deaf person. But if he tries to keep up with the group by too many questions the hearing are too indifferent (or lazy) to give satisfactory answers. Often, the hearing exclude the deaf from games or groups and fail to

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2 Fritz Heider and Grace Moore Heider, 'Studies in the Psychology of the Deaf,' Psychological Monographs, Vol. 53, No. 5, 1941.

recognize that their social needs are as great as those of normal hearing persons.

The following excerpts were taken from an article written by Cora Haines.[3] Unfortunately, the opinions expressed by her therein reflect the feelings of too many of the hearing population toward the deaf as well as toward the deafened.

> The truth is, the deafened are at least "different" in many respects, being somewhat queer in appearance and actions, and unable to cope with many little situations in everyday life, or to look out for themselves without the kindly offices of others.
>
> Many avoid the deafened. That is but natural because of the embarrassment of attempts to converse, especially if others are present. Sometimes, in his longing to live in the world of other people, the deafened man makes himself a nuisance by insisting that everything be explained to him, and he is likely to make a confidential remark in a tone audible to all. He is a strain on everyone's nerves. His constant blundering is trying. It is little pleasure to converse with him, and those who do so from pity are usually self-conscious and stilted. The unfortunate defective is almost invariably left to take the lead, and he wonders what people talk about when they meet.
>
> The deafened person is not normal, and only the rare soul among them can function fully as a member of society. Too often, largely through his own fault, he is an undesirable member of it.
>
> He cannot contribute his part to the social hour, and often the best he can do is to avoid being a hindrance to the pleasure of others. In daily occupations he cannot assume some of the responsibilities that naturally belong to his position. Whether in the family group or in business, the deafened makes large draughts upon the forbearance of others.

There is consolation in the fact that all who come in contact with the deaf and the deafened do not share these attitudes, else there would be small hope of help, understanding, and guidance for the deaf.

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3 Cora M. Haines, "The Effects of Defective Hearing Upon the Individual as a Member of the Social Order," The Journal of Abnormal and Social Psychology, Vol. 22, 1927-1928, pp. 153-155.

Deafness and Blindness. Frequently, the deaf are associated in the public mind with the blind.

Blindness is in some ways more impressive than deafness. For this reasoning, there are two supporting facts: (1) There is a great difference in the feelings of the normal person about his own temporary experience of the conditions which the two handicaps involve. But quiet, even quiet as absolute as we can imagine, has an entirely different value for the normal person from darkness. We all have a certain fear of darkness because it robs us of security. Quiet, on the other hand, involves little that is awful or dangerous. (2) Blind eyes are more impressive than deaf ears. We can see blindness, usually in the face itself, almost always in every movement that the blind person makes, but the deaf person, until he has to speak or understand what someone else says, usually gives the appearance of being a perfectly normal man. We think of him as equal to ourselves, then are constantly annoyed, surprised, or amused, as the case may be, at the way he behaves as we come into closer contact with him. But the handicap itself is not constantly before us as the cause of his peculiar behavior. In the case of blindness, on the other hand, every abnormality of behavior is attributed directly to the handicap and objectified. It is seen from the beginning as the result of the defective vision and not as something innately related to the character and mind of the individual. Deafness in itself can be disregarded and abnormalities are then attributed to an inferiority of the

personality.

> In a crowd a deaf man passes unnoticed as a unit of the throng, but a blind man becomes conspicuous and seeing none is seen of all. The deaf man is independent in his movements, hampered in his discourse; the blind man must always move with hesitant uncertainty but is free and untrammelled in his utterances. Each has his compensations and each seems happy.[4]

However important the loss of sound for its own sake may be, we can safely assume that with the average person the loss of sound as a means of communication is vastly more significant. This fact makes for one of the differences between the deaf and the blind. The blind are handicapped in their relation with the physical environment. The deaf are handicapped in their intercourse with the social environment. The deaf person can do many things that the blind cannot. He can get around by himself; he can handle machines; he can drive a car; but one thing he cannot do -- he cannot converse freely with hearing people.

People do not realize the difficulties of being deaf. That is, they cannot imagine how they themselves would act in the absence of an auditory connection with the world; they cannot imagine what stability of personality and what intelligence are needed in making the adjustment that most of the deaf achieve. Thus, it may often happen that the hearing person does not enter into conversation with the deaf person, does not explain to him what a conversation is about, because of simple carelessness or laziness, or perhaps he is afraid

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4 George William Veditz, "The Relative Value of Sight and Hearing," American Annals of the Deaf, Vol. 82, No. 2, March, 1937, p.151.

of the embarrassment that may arise if the deaf person fails to understand him. Or, there are times when there are things that must be done quickly, in a minor emergency or as part of the day's routine, and the hearing person feels that he cannot spare the time for communication which is apt to be relatively slow. The deaf person, on the other hand, may interpret this behavior at once in terms of an unfriendly attitude.

A lessening of this tension will come about only when both the hearing and the deaf have a more rational insight into the situation; the hearing must come to understand the objective difficulties with which the deaf have to contend and the deaf must come to understand that often it is not ill-will on the part of the hearing but more objective causes that are responsible for a failure to establish contact.

Reactions and Adjustments to Situations. It is often held that physical handicaps leave their imprint on the emotional life of the individual. This is considered to be particularly true in the case of deafness as the auditory defect tends to restrict the range of experience and to isolate the individual so affected from ready social relations with the normal hearing.[5] Moreover, persons who have been without hearing from early childhood frequently suffer also from a marked language handicap since the most important avenue of verbal

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5 Rudolf Pintner, Irving S. Fusfeld, and Lily Brunschwig, "Personality Tests of Deaf Adults," Journal of Genetic Psychology, Vol. 51, 1937, p. 305.

communication is closed to them. Their vocabulary is often meager and their comprehension of the written word restricted. All of these factors are likely to influence the personality adjustments of the deaf.

Much of the pathos of the deaf lies in the fact that they live in a divided world. Their instinct tends to throw them with their own kind. Here they can find free social contact. Yet practical exigencies force them to orient themselves to a hearing world. It is the dedicated task of education of the deaf to bring about this orientation so that the deaf may carry on the struggle for existence in a hearing society.[6]

While the deaf person may be found to be an active component in the economic and industrial life of society, yet his inability to hear, accompanied by his general inability to speak fluently and intelligibly stand in the way of his prompt and continuous partaking in its social life. He may have many friends among his hearing acquaintances, but in the discourse which forms such a large part of the interest in living, he is for the most part unable to join. There is usually no ready means of communication as there is between two hearing persons in their conversation, and his intercourse must necessarily be slow and tedious.

Placed with his deaf friends, the deaf man discovers himself in a different situation. He soon learns that by the use of that

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6 D. C. Yelton, "Language and the Deaf," American Annals of the Deaf, Vol. 83, No. 2, March, 1938, p. 114.

language of signs so largely employed by other deaf, and of which he has in a short time become master, he is able to converse with an ease and quickness fully as great as by that means of which he has been deprived. Hence, he turns to his deaf comrades; in them he builds up a congenial companionship and fellowship, and to them he looks largely for his means of social diversion. With them he feels a close bond of sympathy where their mutual interests are concerned.

Two comprehensive studies of the observational type have been made. The first of these, by Naffin,[7] was concerned directly with the social behavior of deaf school children. Naffin concluded that the language retardation of the deaf child results in a retardation in the formation of social groups during the pre-adolescent years, but there after that there are no fundamental differences between the deaf and hearing in social development. He reported that the deaf showed no feelings of inferiority in their adjustment to their own family groups and in team play with hearing children, although even those who lived outside the school preferred to play with their deaf schoolmates rather than with hearing children.

Pellet,[8] whose principal concerns were thought development of the deaf and social consequence of deafness. He comes to a different conclusion from that reached by Naffin. He believes that the

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7 P. Naffin, "Das Soziale Verhalten Taubstummer Schulkinder," p. 107, as cited in Psychological Monographs, loc. cit.

8 R. Pellet, "Des Premieres Perceptions du Concret a la Conception de L'Abstrait, Essai d'Analyse de la Pensee at de son Expression Chez l'Enfant Sourd-muet," P. 398, as cited in Psychological Monographs, loc. cit.

deaf person reacts to his own handicap by showing increased aggressiveness and competitiveness in his relations with other people.

Pellet also feels that the language handicap of the deaf results in emotional immaturity. His argument is that most of the words that we use to express feeling, judgments, and other emotional responses in general, belong to the category of the more abstract terms which the deaf person has special difficulty in mastering. Pellet emphasizes the fact that the effects of deafness on personal development have nothing to do with the deprivation of sound in itself, but are rather the natural result of the restricted environment and limited language experience which deafness involves.

The actual situation in which the deaf person lives is one that would involve problems of adjustment for any person, whether he hears or not. The deaf person is always faced with a barrier in his efforts to communicate with other people, in making friends, and in finding economic security. Some of the deaf react to their limitations by doing something to help bridge the gap created by their handicap, rather than by accepting the situation and withdrawing from the difficulties that present themselves.

From these statements about the situation in which the deaf person lives and of his adjustment to it one fact becomes clear: difficulties arise not so much because the deaf are deaf as because other people hear. For the most part, the deaf live as members of a minority group within a social world in which the majority of people

hear and the frustrations and difficulties involved in deafness are largely those created by the adjustment between the majority that has more and the minority which has less.

Every measure of adjustment must be based on a study of the environment to which the adjustment is made. If the behavior of the deaf is found to differ from that of the hearing, a closer study will show that in many cases it is normal behavior in an abnormal situation rather than abnormal or maladjusted behavior in the ordinary sense of the word.

Statistical studies developed for use with normal hearing people may fail to show the different kinds of adjustment that are found in a group of the deaf since they are built to measure the amount of deviation in directions which have already been found to be important for a different group. Hence, there is a need for a broad preliminary study of the psychological environment of the deaf and of the ways in which they adjust to it. Until surveys of this sort have given us a better understanding of the world of the deaf and of the "normal" adjustment to it, there can be no really adequate measures of the degree of adjustment in individuals or groups of individuals.

Too long have the deaf been set down as a strange, uncertain body of human beings, removed in their activities, manners, and modes of thought from the rest of mankind. The interests of the deaf require a different consideration and treatment. They demand that the deaf be

regarded quite as other people, only unable to hear. When they are no longer looked upon as a distinct and different portion of the race, but entirely as normal creatures with tensions and problems beyond our comprehension, we shall have taken a step in the right direction toward educating and understanding the deaf.

CHAPTER IV

EDUCATION OF THE DEAF

Need for Communication. The mental operations of deaf children who are taught to speak do not differ in essential respects from those of hearing children. The natural sign language, or the acquired manual or finger language is not adequate for precision or rapidity of thought. Speech distinguishes man from the lower animals and is absolutely necessary to the highest physical development. During the first year, or prior to the period of beginning speech development, the congenitally deaf differ but little mentally from normal children. The deaf child who has learned to speak and understand speech by modern methods may be little handicapped mentally by his deafness, because the only undeveloped cerebral area is that employed in audition, the visual area being specially trained to take its place. The nearer we can approach normalcy of accomplishment in speech and lip reading, the better fitted will our deaf pupils be to take their places in the community.[1]

Many deaf people learn to understand strangers and to make themselves understood by people who are unfamiliar with the speech of the deaf, but no deaf person has the facility in conversation that every hearing person takes for granted. Even the lip reader, who is

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1 Max A. Goldstein, Problems of the Deaf, 1933, p. 278.

completely at ease in talking with a single person, often loses the thread when the conversation is passed from one person to another in a group. And no one, of course, can read the lips unless the light is adequate and properly directed.[2]

Language Problem. In spite of the great amount of attention attracted to the problem of the deaf, there seems to be little improvement in the language situation. The majority of deaf pupils still leave school without language adequate for the simplest general needs; the profession still finds it necessary to bolster its professional self-respect by dwelling in thought upon its moderate success with semi-mutes, with the hard of hearing, with pupils of exceptional mental ability, and with the few average pupils with a flair for language or with a past history of exceptional luck in the matter of teachers.[3]

Something effectual should be done about this situation, a situation quite unfair to the deaf pupil and his capabilities.

The lack of qualifications to teach the content of the English language, thoroughly demonstrated by the fragmentary nature of language work, has somehow escaped as a fact deserving consideration and remedy. Observing the very unsatisfactory results of determined

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2 Heider and Heider, op. cit., p. 59.

3 Marietta Rector Vinson, "The Pupil's Case--I," American Annals of the Deaf, Vol. 87, No. 2, March, 1942.

efforts, teachers of the deaf have seized upon the so-evident fact of deafness as the entire basis of rationalization. The profession has thus far failed to recognize and face its inadequacy in the field of teaching language to the deaf. Deafness is ideal for this rationalization. Its victims are unable to plead their case and to shift much of the responsibility to the shoulders of those who have failed in meeting their needs adequately. Only by complete analysis, systematization, and careful organization may one teach language thoroughly to the deaf.[4]

Language Handicap. A beginning deaf child has no sense of correct word order in a sentence. In expressing his thoughts, he gives a mass of pantomimic gestures with no logical sequence. When he enters school he has no vocabulary; sometimes, he does not know his name, or realize he has one. Hearing children, from babyhood, hear thought expressed in correct order so often that the pattern becomes instilled in them automatically. Their sole criteria for judging logical sequence is whether of not it sounds right, whereas deaf children have no criteria.

This language handicap, then, presents the greatest obstacle in the education of the deaf. Because of it, language must be made the core of the curriculum during the first years in school. Visible signs and patterns have been devised as a help, although it is practically impossible to satisfactorily substitute a visible channel for the auditory one.

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4 Vinson, loc. cit.

Word deafness is an impairment of the use and understanding of language due to weakened mental imagery. Very often a word-deaf child hears well enough to pick up speech but does not understand it. He has normal intelligence but the impairment is one that weakens the faculty of association between cortical centers that should function integrally. Every possible association pathway, direct or indirect, should be developed by training to compensate for this impairment. The child suffering from word deafness needs to be taught by a method of sense training.[5]

Our greatest difficulty lies in the fact that the thing to be taught and the medium through which it is to be taught are one and the same thing. We have the English language to teach and nothing by which to teach it except the English language.[6]

Methods of Instructing the Deaf. The literary education of the deaf, with all its obstacles and hindrances, has received close and earnest attention and study. Because of the peculiar methods necessary for its accomplishment--not through the sense of hearing, as with children in general, but through the eye in particular--it ranks as one of the most difficult of human undertakings. This education has now become a science.

The problem of the instruction of deaf children is often

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5 Ruth C. Gay, "A Case Study of Word Deafness," American Annals of the Deaf, Vol. 83, No. 2, March, 1938, p. 169.

6 Myrthel S. Nelson, "The Evolutionary Process of Methods of Teaching Language to the Deaf with a Survey of the Methods Now Employed," American Annals of the Deaf, Vol. 94, No. 3, May, 1949.

misapprehended. The public, including frequently the parents of deaf children, may easily be carried away with the thought that deaf children generally can be taught to speak and to read lips well--sometimes almost to the extent of regarding these things as a sort of substitute for the absence of hearing.

During the time at school there must be diligent, steady, unremitting, disciplined practice in language and in what is to be obtained through it. Education must, by the nature of the case, be a slow and arduous process.

It is said that "the average deaf child from 12 to 15 achieves on the educational tests what the 8 or 9 year old child achieves."[7]

Virtually all children are afforded the opportunity to learn speech; if there are indications of progress, such opportunity is provided through the school career; if vocal articulation is quite unsatisfactory, and hardly worth the effort, there may be a transfer to non-oral means of instruction, though sometimes provision may still be made for oral work in classes organized for the purpose. The chief characteristics of the combined method may be said to be flexibility and adjustability.

Definitions of Methods. The possible methods employed for the instruction of deaf children may be summarized as follows:

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7 H. E. Day, I. S. Fusfeld, and R. Pintner, "Survey of American Schools for the Deaf," American Annals of the Deaf, Vol. 32, 1927, p. 377.

The Manual Method. Signs, the manual alphabet, and writing are the chief means used in the instruction of the deaf pupils, and the principal objects aimed at are mental development and facility in the comprehension and use of written language. The degree of relative importance given to these three means varies in different schools; but it is a difference only in degree, and the end aimed at is the same in all.

The Manual Alphabet Method. The manual alphabet and writing are the chief means used in the instruction of the pupils, and the principal objects aimed at are mental development and facility in the comprehension and use of written language. Speech and speech reading are taught to all of the pupils in the school recorded as following this method.

The Oral Method. Speech and speech reading, together with writing, are made the chief means of instruction, and facility in speech and speech reading, as well as mental development and written language, as the use of natural signs is allowed in the early part of the course, and also in the prominence given to writing as an auxiliary to speech and speech reading in the course of instruction; but they are differences only in degree, and the end aimed at is the same in all. In most of the oral schools and with some of the pupils in some of the combined-system schools the manual alphabet and sign language are never used by any employee of the school.

The Auricular Method. The hearing of semi-deaf pupils is utilized and developed to the greatest possible extent, and with or without the aid of artificial appliances, their education is carried on chiefly through the use of speech and hearing, together with writing. The aim of the method is to graduate its pupils as hard of hearing speaking people, instead of deaf-mutes.

The Combined System. Speech and speech reading are regarded as very important, but mental development and the acquisition of language are regarded as still more important. It is believed that in some cases mental development and the acquisition of language can best be promoted by the Manual or Manual Alphabet Method, and so far as circumstances permit, such method is chosen for each pupil as seems best adapted for his individual case. Speech and speech reading are taught where the measure of success seems likely to justify the labor

> expended, and in some of the classrooms and some of the combined-system schools the oral or the auricular method is strictly followed.[8]

Generally speaking, the least difficulty and the greatest advantages in the instruction of deaf children are experienced with those who have some speech and some language; next, with those who have once had these things; next, with those who have once had speech even if no language; and, lastly, with those who have never had any speech or language.

Oral Method versus Sign Language. We are all eager to see deaf children who can make satisfactory educational and social adjustments return to the public schools, but we do not like to feel that those who need a school for the deaf are being exiled. We do our best to teach them to speak and not to sign, although we know the vast majority of the adult deaf, from both oral and combined schools, are going to find more complete social satisfaction and adjustment among the deaf where they will not be entirely oral.[9]

It must be kept in mind that the purpose of teaching language is to enable the child to communicate with people; therefore, language should be taught in the way in which it is to be used. Correct usage of language can be habituated only through constant usage in natural situations. The general aim of education must be

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8 American Annals of the Deaf, January, 1936, p. 285, cited by Harry Best in Deafness and the Deaf in the United States, 1943, pp. 550-551.

9 William J. McClure, "Misleading Information Concerning the Deaf," American Annals of the Deaf, Vol. 94, No. 4, September, 1949.

kept in mind: that of developing the whole child in order that he may become adjusted to his environment and successfully take his place in society.[10]

Those opposed to the use of the sign language, and especially those who advocate the use of speech or of oral methods in the education of the deaf, have not been slow in pointing out what they regard as the shortcomings and the evils of the sign language.[11] The arguments against its use have been strongly presented, especially against its use in schools which are supposedly given over to the instruction of deaf children. The foremost charge against the sign language is that it is a foreign language, known and understood only by a small fraction of the population, and existing in the midst of the people with a universal common language.

It is the sign language more than anything else, it is claimed, that makes the deaf a class apart, and that builds up among them a feeling of clannishness. It accentuates and emphasizes, the argument continues, a particular bodily infirmity.

The sign language, with little relationship to the language in use by the general population, is alleged to stand as a powerful barrier to the acquisition of any proper language, whether in its

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10 Nelson, loc. cit.

11 The ideas contained in the remaining discussion on Oral Method versus Sign Language are taken, for the most part, from Best, op. cit., Chapter 33, pp. 516-568.

written or in its spoken form. It severely retards the use of language in general use.

The importance of the ability to use speech and to read the lips in human society cannot be minimized. As a medium of communication and intercourse employed among men, its value is so apparent that there is no need to dwell upon it. Lip reading in itself is something of incalculable benefit.

It is even asserted that the oral method, when brought into use, cannot go along with the sign language. Wherever the sign language is even tolerated, the use of speech and speech reading can hardly make any substantial headway. Unless signs are rigidly barred, the deaf will speedily relapse into them -- and into 'mutism.' Among the deaf the sign language constitutes much the quicker and easier means of communication, requiring little of the careful, painstaking effort that speech and speech reading do; if indulgence in the former is allowed, there will be prompt falling back upon it, to the serious or even irremediable detriment of speech. The acquisition of speech, always relatively a wery difficult thing in itself, can make little progress in a sign language environment; often, in such an environment, it is hardly believed worth the attempt.

If the deaf have their vocal organs whole and intact, they should be put to use. Muteness is an unnecessary handicap when speech is possible.

The defenders of the sign language, on the other hand, insist that no method of communication be used to the detriment of

the sign language; that there is a definite place for it in their lives.

To the deaf, spoken language is simply a series of signs. The whole process is, in a sense, superficial: speech is too closely bound up with the hearing.

Lip reading, which in a sense is separate from the ability to use speech, likewise has serious drawbacks and limitations. Apart from the acquirement of the capacity to understand what is being said by watching the motions of the mouth, there are certain essentials involved: nearness to the speaker, distinct and not too rapid enunciation on the part of the speaker, and good light upon his face. At best, the process is attended with a strain, not only upon already heavily used eyes, but upon the general nervous system as well.

Especially with the congenitally deaf and with those losing hearing very early in life, nothing can take the place of signs or can serve so fittingly as a means of mental development. With the great number of the deaf, there is nothing in the way of a substitute for the sign language as a means of instruction.

Even though the sign language is different from that of the general population, the deaf consider it indispensable to them; in their contacts with one another nothing can take its place.

It is stated that the deaf, who have to live their lives and to fight their battles in the world about them, are in the only position to know what is best for their own benefit and advantage. They are the ones who are most able to judge in a matter that is so vital to them. The decision, they say, can best be left in their hands.

The deaf claim, moreover, that the sign language does not get a fair hearing with the public. It is not appreciated, and its usefulness is not realized. It is widely misunderstood, and often grossly misrepresented.

Thus, there is, say the defenders of the sign language, an overvaluation set upon the speech afforded in its schools. It is not given its proper place in what the deaf person should have. Speech is not to be regarded as coming first in a deaf person' life, but rather ability to understand written language and vocational training, or fitness for usefulness, happiness, and economic well-being in later life.

Day Schools versus Residential Schools.[12] The great argument for the day school is that it is not well that children be "institutionalized." The attitudes and the practices of the institutions are regarded as at variance with those of the normal life which should be enjoyed by all children. It is the home which should be the center of the affection and interests and attachment of the child, not an institution. The character and influence of the family must be maintained unimpaired. No solution of our educational or other problems is acceptable if in the end it involves the breaking up or weakening of the home.

More specific charges are to be brought against the institution. The routine life and the associations of the institution are

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12 C. C. Upshall, Day Schools versus Institutions for the Deaf, Teachers College, Columbia University, Contributions to Education, No. 499, 1929.

likely to have an effect not altogether wholesome upon the growing child. Here, life is made too easy and too carefree, and not sufficiently strenuous and enterprising; and the activities and the difficulties of the outside world are too little perceived. Much of the life of the institution is machine-like. Through the discipline, which is a necessary feature of its life, much of the spontaneity of growing childhood is impaired or destroyed.

With the deaf child, attendance at the day school does not make him a stranger in his own home and in his own domestic circles, while there is kept alive on all sides a feeling of family responsibility. The arrangement is more acceptable to the child's parents, and they become more willing to have their child at school, with the result that a greater number of deaf children are induced to enter school than could be prevailed upon to seek admittance at an institution.

The day school, at the same time, becomes a part of the known educational system. The public, in general, becomes more ready to regard the special school for the deaf in its proper light and in a proper manner; it becomes better acquainted with the possibilities and the limitations of the deaf. The day school is coordinated or joined with the regular public school order, standing on a level with the state's other schools. Deaf children, for their part, better come to feel their place, not only in their schooling, but in the general normal world.

The case against the day school for the deaf rests upon

the circumstance that the deaf form, educationally, a special class, which must be reached by unusual methods. To them the large central institution offers advantages not likely to be had elsewhere. For this reason, the argument against the institution cannot well apply.

In the operation of the day school, extraordinary duties are imposed upon the regular schools in the providing of special equipment and facilities, including teachers. It remains a question, moreover, just how far children who are dear are received into full understanding and comradeship with their hearing and speaking fellows in the classroom and on the playground, or how far they are really absorbed into the ranks of the latter.

Except in large cities where pupils may come in from a wide contributing territory, most day schools must have comparatively few pupils. In none but the largest schools can well-graded classes be expected, with a place for every pupil according to his needs, bright or dull, quick to learn or slow, or with anything like the individual attention that is so often necessary. A pupil in a small day school, if not neglected to some extent, may be required to do work for which he is quite unfitted, being either beyond it or incapable of it. The backward child will be the worst sufferer; for if there are few classes he can get little of the special notice he needs; and his progress cannot be the same as when in a class of like pupils and under an appropriate and patient teacher.

In the institution, the children may be under intelligent supervision and direction their entire time, with proper provision

for study and for all else that is called for in their well-rounded development, something not to be looked for in many homes.

In association with children of similar condition, there is supplied an intellectual stimulus otherwise largely denied; and helpful influences upon adolescent life are exerted that elsewhere would be absent. Outside the institution, ready means of communication with others are for the most part lacking. Even though deaf children can and do mingle with their hearing acquaintances, they cannot get so much zest or happiness out of their sports and intercourse as they can with their own deaf comrades; and, while no matter what their surroundings are, the difficulties of most of them in mastering language will never be overcome, still in contacts with similar deaf children the tendency will be for them to become more and more like the normal in their mental actions.

In the home, there can be no great assurance of assistance in preparation of lessons and in other matters pertaining to the receiving of an education. The growing child, now being able fully to comprehend the forces that surround him as the hearing child does, may the more easily fall under unwholesome influences. In the institution, there can be suitable discipline, regular occupation at school work, enlightened general supervision, and coordiantion in all that is concerned in the child's proper development.

Again, the attention that is given in an institution with a considerable number of pupils to the learning of a trade means much more to a deaf child than it could to any other. In an institution,

there will usually be found more equipment, fuller apparatus, and more varied lines than are possible in any but a very large day school; and in its trade departments habits of industry are formed, talents and aptitudes recognized and developed, a knowledge of mechanics and the use of tools implainted, and an appreciation of the part to be played in the great world of industrial activity.

Nor should we lose sight of the fact that, although there may be a growing adverse sentiment toward institutional life as a substitute for life in the home, there is increasing social questioning as to the advisability of a child's remaining in a particular home if his progress in the social organization is retarded.

Hence, we are told that no matter how strong and valid are the theoretical objections to the institution, it occupies a position of demonstrated usefulness for many at least.

Modern Aims of Education. The aim of education is now rarely expressed in terms of the achievement of a certain degree of skill. The aim of education is very often said to be the production of an integrated personality, or the development of a well-adjusted individual. In psychological terms, this means a greater emphasis upon the non-intellectual traits of the personality as opposed to the more purely intellectual traits. The school situation must help the child learn how to adjust himself adequately to his environment: how to adjust to his teacher, his classmates, the members of his family, to society in general. It must help to strengthen, or lessen or preserve intact, such personal traits as aggressiveness and submis-

siveness, extroversion and introversion, and general emotional stability. It must help the child destroy the causes for needless fears and useless superstitions. . .It must try to lay a foundation for desirable wishes and ambitions. It must also help to lay the foundation for desirable attitudes toward the multifarious facets of our life, toward nature and animals, toward work and play, toward war and peace, toward social justice and injustice.[13]

To educate a deaf child has never meant merely to teach him so much knowledge. It has meant, rather, to help build a well-adjusted individual. The very fact that the pupils in our schools for the deaf have a major handicap has, from the very first, centered the attention of teachers of the deaf upon the all-important problem of helping the deaf child fit himself for a happy and useful place in the world.

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13 R. Pintner, "Latest Phases of Psychological Testing with the Deaf," American Annals of the Deaf, Vol. 82, No. 4, September, 1937, pp. 327-328.

CHAPTER V

SOCIABILITY OF THE DEAF

Social Organizations. Some people have opposed societies composed exclusively of the deaf because it was felt that the deaf should not be segregated from the rest of the population. A particular objection is that, unless discouraged, the practice will cause intermarriage among the deaf, which may result in an increase in their number.[1]

In combating this tendency of the deaf to organize among themselves, we are sometimes unmindful of an elemental principle in human society: that like-minded persons are prone to congregate, and will seek to form associations to promote their mutual enjoyment of life and to protect their common interests. The deaf themselves claim that, as the fact of their infirmity forbids them belonging generally to societies for the hearing, they are thus forced to band together, or else to go without the associations that form such a valuable part of life.[2] It may be added that today objections to organizations among the deaf have largely ceased to be voiced.

Wherever a number of the deaf are congregated, some such organization is likely to be effected. In urban centers, more than a few may be found, planned perhaps on different lines or appealing to different interests. In some societies among the younger members,

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1 Best, op. cit., p. 352.

2 Loc. cit.

athletics may constitute a prominent feature, this being something that readily appeals to the deaf, and perhaps at times furnishing a means by which competition may be engaged in with hearing groups. It may be added that the deaf, as a rule, make use of whatever facilities for athletics or outdoor sports are available. They may even be said to have a particular zest for such things.[3]

One must allow for the fact that every deaf person with any objective survey of his own situation must realize that in social relations with hearing people he is at a disadvantage. He will usually succeed in making real contacts only insofar as he proceeds slowly and feels out the reactions of the other person as he goes. This approach may be considered as one of caution rather than suspicion, and may easily be a matter of tact and intelligence in meeting the situation.

On the other hand, in every city, there are enough deaf people so that they can remain within groups of their own for the major part of their social life. Within such groups, one finds that communication is usually by some form of manual system, signs, finger spelling, or a combination of the two. For the people who confine their social life to such groups, the strain of adjustment may often be less.[4]

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3 Ibid., p. 162.

4 Heider and Heider, op. cit., p. 120.

What is hard for the deaf to bear goes far beyond the inconveniences of being deaf or the inability to keep in touch with other people in conversation. Many of the deaf seem to mind most the fact that they are unlike other people and are considered different by them. Among those who mention this aspect of their handicap are those who have been deaf from birth or early childhood as well as those who have known the transition from normal hearing to deafness.[5]

Marital Status. The deaf are far more likely to choose for their partners in marriage persons who are deaf like themselves than they are to choose persons who can hear. The reasons for the generally happy unions of the deaf with the deaf have been thus stated:

> Where both husband and wife are deaf, they are united by the strong bond of mutual fellowship and sympathy growing out of their similar condition, which has already been mentioned as the principal reason why the deaf generally prefer to marry one another rather than hearing persons, or seek their partners from their own ranks. They are able to communicate with each other with perfect ease and freedom. The most intimate social relations and sympathies of both, outside the domestic circle, are with the same class of persons. In marriages in which one of the partners is deaf and the other a hearing person, the first of these ties is always lacking, and the second and third are often lacking to a greater or less extent. Even under the less favorable conditions the mutual love of husband and wife may be, and often is, strong enough to render the union a very happy one. . .[6]

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5 Ibid., p. 92.

6 E. A. Fay, "Marriages of the Deaf in America," p. 121, cited by Harry Best, op. cit., p. 188.

CHAPTER VI

THE ADJUSTMENT INVENTORY

Need for an Adjustment Inventory. Due to the tremendous complexity of understanding the psychology of the deaf, there is a definite need for more intensive research to ascertain the nature and relationships of factors underlying the personality adjustments of the deaf.

The application of a self-descriptive questionnaire to deaf subjects may be particularly revialing since the psychology of the deaf is probably different from that of the hearing.

If psychological differences between the deaf and the hearing are regarded as minimal, the fact remains that deafness is a handicap which, irrespective of endowment, education, and individual success in surmounting it, subjects its victims to certain difficulties that are rarely paralleled in the lives of those with normal hearing. Therefore, the content of questionnaire items may suggest different meanings for deaf and hearing groups, and the responses to them, whether different or alike, may not hold the same significance. Again, because of dissimilarities in environment, the deaf and the hearing as groups may employ unlike mechanisms of behavior adjustment for the attainment of equally happy results.

Sources of Inventory Items. Inventory questions were formulated while observing deaf pupils in various situations at the residential school in Flint, Michigan.[1] A great many ideas were

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1 See Footnote 1 on p. 12.

incorporated through work previously done in the field pertaining, in part or in whole, to the use of an adjustment inventory for the deaf. Originally, this inventory contained 192 questions which were reviewed and criticized by three members of the Flint school staff. Eventually, through the helpful suggestions of these people and the afore-mentioned observations, the inventory was narrowed down to 77 simplified questions.

Form of the Adjustment Inventory. The form employed contained 64 threefold multiple choice type questions and 13 completion or essay type questions. The multiple choice questions were the only ones scored, although the essay type questions, in many cases, were very revealing for better insight into the student.

The 64 questions constituted the general adjustment score (maximum 176 points). The test was categorized into four types of adjustment: social, school, home, and emotional. Social adjustment included 35 items, constituting a maximum score of 93; emotional adjustment, 30 items, 84 points maximum score; school adjustment, 13 items for 35 points; and home adjustment, 9 items with a maximum point value of 23.

Because of the restrictions imposed by the elementary vocabulary and sentence structure of the inventory, several aspects of adjustment of probable importance in a study of the psychology of the deaf could be touched upon only indirectly; among them, feelings of inferiority, suspicion, and masculinity-femininity.

The Subjects. The aim was to obtain subjects that would be as representative as possible of deaf adolescents in special

schools for the deaf. For this reason, subjects were chosen from the Michigan School for the Deaf in Flint, Michigan, and the Detroit Day School for the Deaf (Main Branch) in Detroit, Michigan. It was originally thought that the Flint school would give an adequate cross-section of deaf students living in smaller towns and rural areas, while the Detroit school would be reasonably representative of urban-reared children. It was also felt that these two schools would be representative of similar schools throughout the United States, since the Detroit school has the second largest enrollment of its kind in the country and the Flint school is rated fourth largest.[2] However, after screening the total enrollment of pupils between the ages of 13 to 20, those pupils were eliminated who had a hearing loss of less than 65 decibels in their better ear or could hear speech with or without a hearing aid,[3] and had an achievement level below 3.5. There were 75 subjects available at Flint, but only 7 at Detroit. Therefore, the inventory was administered at both schools, but only the material obtained from Flint has been used statistically in this paper. It was felt that the sample obtained at Detroit was too small to be of any significant value.[4]

Records of recent date were available at the residential school to indicate the amount of residual hearing by the 3-A Audiometer.[5]

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2 American Annals of the Deaf, Vol. 95, No. 1, January, 1950.

3 Also verified by teachers' reports.

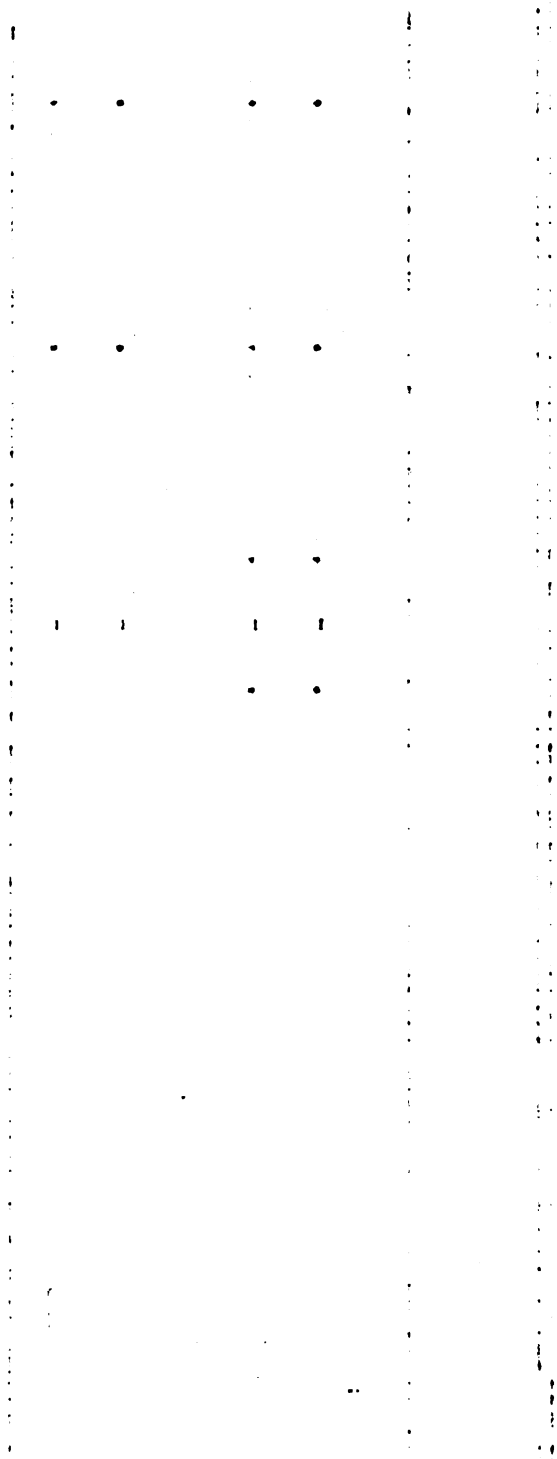
4 Consult Table VIII for mean scores obtained from Detroit day school.

5 Table II.

TABLE I

Chronological Age and Intelligence Quotient of Deaf Adolescents Tested

Variable	Number of Cases	Range	Mean	Standard Deviation
Age:				
Boys	41	14.70 - 20.63	17.40	1.36
Girls	34	15.19 - 20.21	16.84	1.12
Intelligence Quotient:				
Boys	41	75 - 122	97.14	12.51
Girls	34	64 - 117	95.87	13.32



The intelligence quotients were determined by intelligence tests administered at the institution by the school staff, using the Pintner Non-Language Intermediate Mental Test.[6] Age in years, at onset of deafness, was obtained from the pupils' individual case files.[7]

Administration of the Inventory. The Adjustment Inventory was administered to 41 boys and 34 girls at the Michigan School for the Deaf at Flint on May 12, 1950, and to 2 boys and 5 girls at the Detroit Day School for the Deaf on May 16, 1950.

At Flint, four groups, consisting of approximately 19 students each, were given the inventory. One and one-half hours were allowed for each group to complete the inventory.[8]

The same interpreter remained with the author throughout the day to interpret any of the questions which were not readily understood by some of the subjects; for this interpretation, it was nedessary to use signs as well as the manual alphabet. The interpreter was one of the three staff members who had assisted in constructing the inventory.

Inventory Results. Data relating to the inventory scores of the students are presented in Table III. Boys averaged somewhat higher than girls in all aspects of adjustment. This is contrary to results obtained in many previous experiments with the deaf.[9] The

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6 Table I.

7 Table II.

8 The time was found to be quite sufficient.

9 Lily Brunschwig, A Study of Some Personality Aspects of Deaf Children, pp. 35-37.

TABLE II

Characteristics of Deaf Adolescents Tested

Variable	Boys (N = 41)	Girls (N = 34)
Per Cent Hearing (in better ear):		
Range	0 - 9.4	0 - 7.0
Mean	4.81	4.24
S. D.	2.90	2.65
Age in Years at Onset of Deafness:		
Range	0 - 3.9	0 - 3.7
Mean	1.04	1.21
S. D.	.65	.48

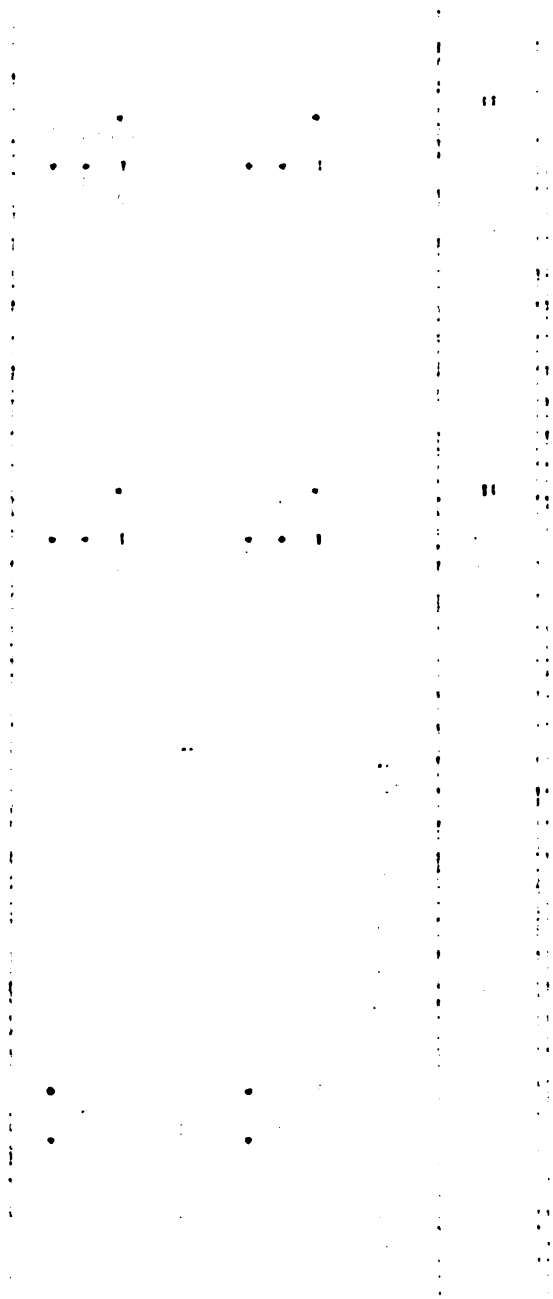

TABLE III

Score of Deaf Adolescents on Adjustment Inventory

Test Area and Group	Number	Range	Standard Deviation	Mean
General Adjustment:				
Boys	41	65 - 139	20.03	108.60
Girls	34	68 - 135	13.52	103.15
School Adjustment:				
Boys	41	14 - 30	3.11	22.41
Girls	34	13 - 32	3.37	21.68
Social Adjustment:				
Boys	41	32 - 73	8.50	56.54
Girls	34	37 - 70	8.13	54.78
Emotional Adjustment:				
Boys	41	21-72	6.42	52.14
Girls	34	29 - 68	5.97	46.93
Home Adjustment:				
Boys	41	7 - 23	2.12	18.43
Girls	34	3 - 23	2.27	16.62

most significant difference appeared in emotional adjustment, where the boys' mean score was approximately five points above the girls' mean. On the whole, however, the critical ratios of the sex differences are not statistically reliable.

Inter-correlation of the adjustment scores appear in Table IV. Highest inter-correlation occurs between social and emotional adjustment, r .68. Lowest correlation appears between social and home adjustment, r .23. The Student-Fisher t Test for the hypothesis that the correlation between social and home adjustment = 0 is rejected at the 5% significance level but not at the 1% level ($t = 2.02$). Using emotional adjustment as the dependent factor, a multiple correlation coefficient of .78 was found as the correlation between emotional adjustment and the other three factors (social, home, and school).

Reliability of the Inventory. In a test for reliability, the coefficient of equivalence was obtained by the Spearman-Brown formula for estimating reliability from two comparable halves of a test. Reliability coefficients were also obtained for the four adjustment categories of the inventory, the lowest of which was r .69 for home adjustment and the highest, r .82 for emotional adjustment.[10] Reliability data for sexes are to be found in Table VI. The adjustment inventory was correlated with age and intelligence quotient and found to have a slight, but statistically reliable, tendency to be associated with relatively higher chronological age and intelligence.

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10 Table V.

TABLE IV

Intercorrelation of Adjustment Scores on the Adjustment Inventory

Scores Correlated	Correlation Coefficients (N = 75)	Confidence Limits At the 95% Level with the Population*		
School Adjustment with:				
Social Adjustment	$\not$ .26	.03	P	.46
Emotional Adjustment	$\not$ .36	.14	P	.55
Home Adjustment	$\not$ .29	.06	P	.49
Social Adjustment with:				
Emotional Adjustment	$\not$ .68	.53	P	.79
Home Adjustment	$\not$ .23	.00	P	.44
Emotional Adjustment with:				
Home Adjustment	$\not$ .52	.33	P	.67

* Using Fisher's Z transformation.

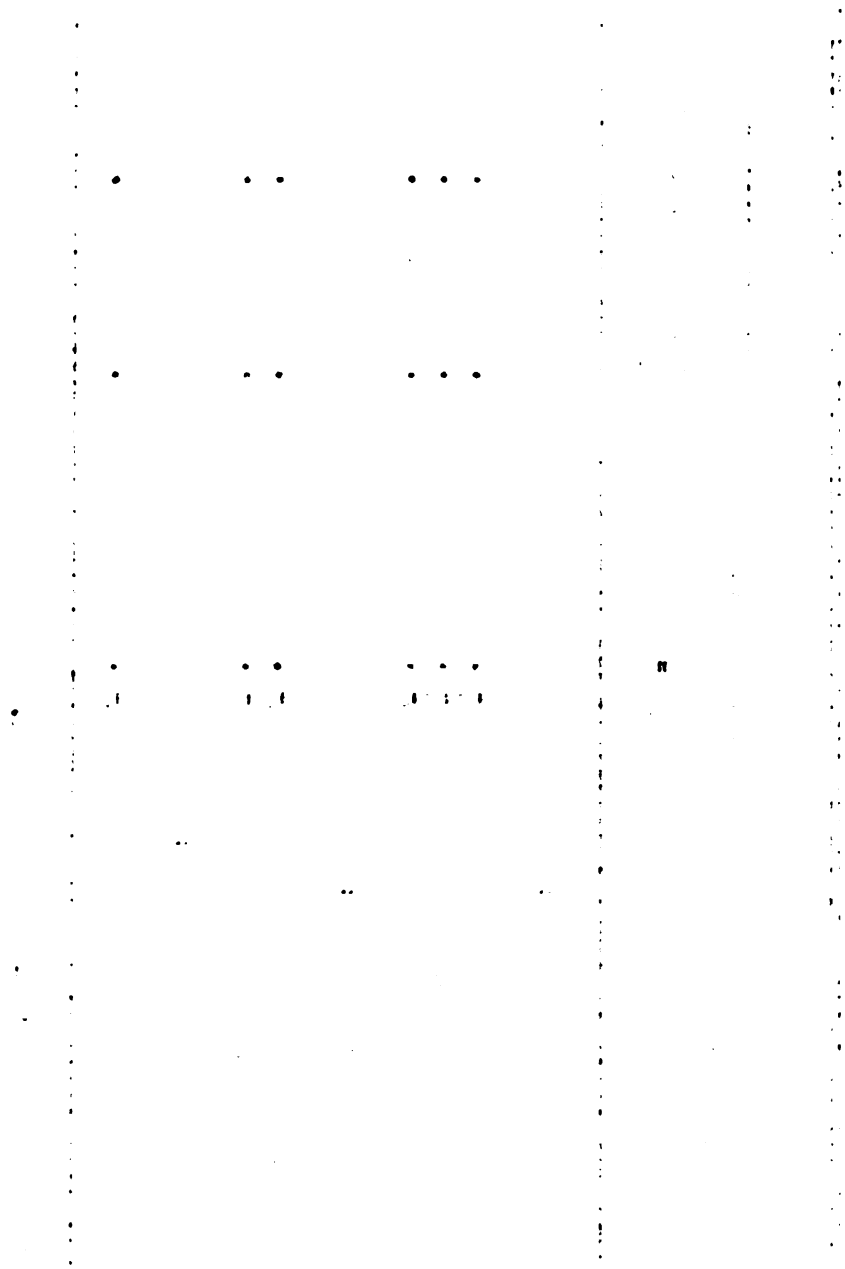

TABLE V

Reliability of the Adjustment Inventory for Deaf Adolescents

Test Area	Number of Items	Reliability Coefficient
General Adjustment	64	$\not$ .87
Home Adjustment	9	$\not$ .69
School Adjustment	13	$\not$ .73
Emotional Adjustment	30	$\not$ .82
Social Adjustment	35	$\not$ .80

TABLE VI

Adjustment Inventory for Deaf Adolescents -- Reliability Data

Group	N	Inventory Score			Reliability r
		Range of Scores	Mean	S.D.	
Boys	41	65 - 139	108.60	20.03	.85
Girls	34	68 - 135	103.15	13.52	.81

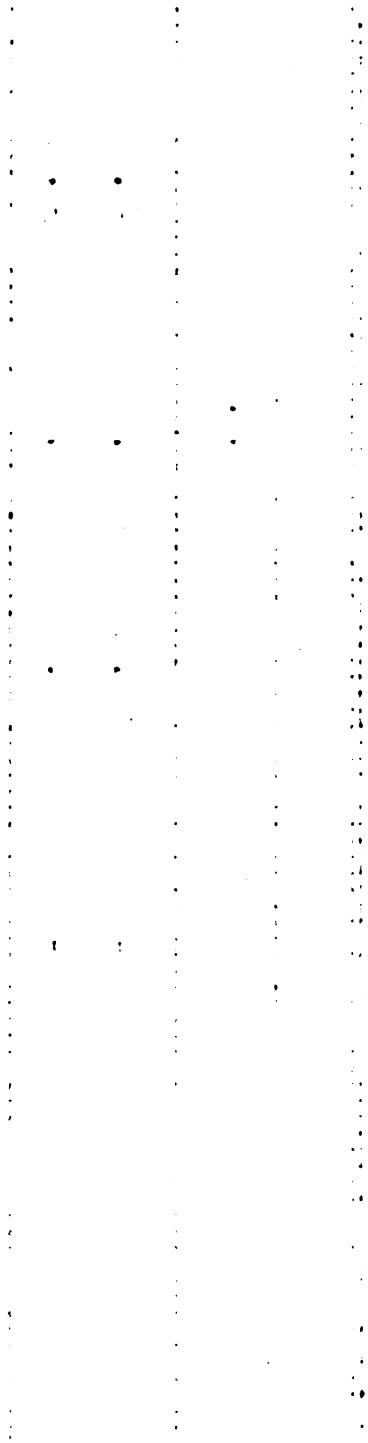

TABLE VII

Adjustment Inventory Correlated With
Age and Intelligence Quotient

Measures Correlated	Correlation Coefficients (N = 75)
General Adjustment with:	
Chronological Age	f .27
Intelligence	f .29
School Adjustment with:	
Chronological Age	f .19
Intelligence	f .22
Social Adjustment with:	
Chronological Age	f .20
Intelligence	f .19
Emotional Adjustment with:	
Chronological Age	f .21
Intelligence	f .18
Home Adjustment with:	
Chronological Age	f .17
Intelligence	f .14

Validity of the Inventory. Due to the possible subjectivity or lack of adequate knowledge regarding the subjects, teacher rating scales were not employed. One recent study of the ability of high school teachers to rate personalities of pupils showed a reliability which was discouragingly low.[11] Therefore, in attempting to determine the validity of this inventory, it was felt that ratings from a group composed of three probably impartial personnel members at the institution might be more reliable than the customary teacher-rating method. These staff members consisted of (1) The School Psychologist, (2) A male instructor who became deafened at age 16; he later received his M.A. in Counseling and Guidance, and (3) a female instructor who has had numerous years of experience teaching the deaf in Flint. All three had more individual contact with the students in the various capacities of interviews, testing, guidance ann counseling than have the respective teachers; and, in the opinion of the author, their backgrounds in psychology should render their judgment more reliable.

Using the ratings of the selected staff as the criteria, the validity coefficient was found to be .58. Correlation was higher with girls than with boys between the rating and adjustment score.

Discussion of Item Analysis. The results of the item analysis are presented in Table IX. They indicate the number of students giving the particular reply to the various questionnaire items.

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11 Olive L. Ives, "A Critique of Teachers' Ratings as an Indication of Later Army Neuropsychiatric Rejection."

TABLE VIII

Detroit Day School for the Deaf*

Test Area	Number	Range	Mean
General Adjustment	7	106 - 151	125.86
School Adjustment	7	19 - 33	27.14
Social Adjustment	7	54 - 73	66.86
Emotional Adjustment	7	48 - 72	59.29
Home Adjustment	7	17 - 23	19.86

* Chronological Age Range of Group, 16.61 - 18.93 with a mean of 17.58.

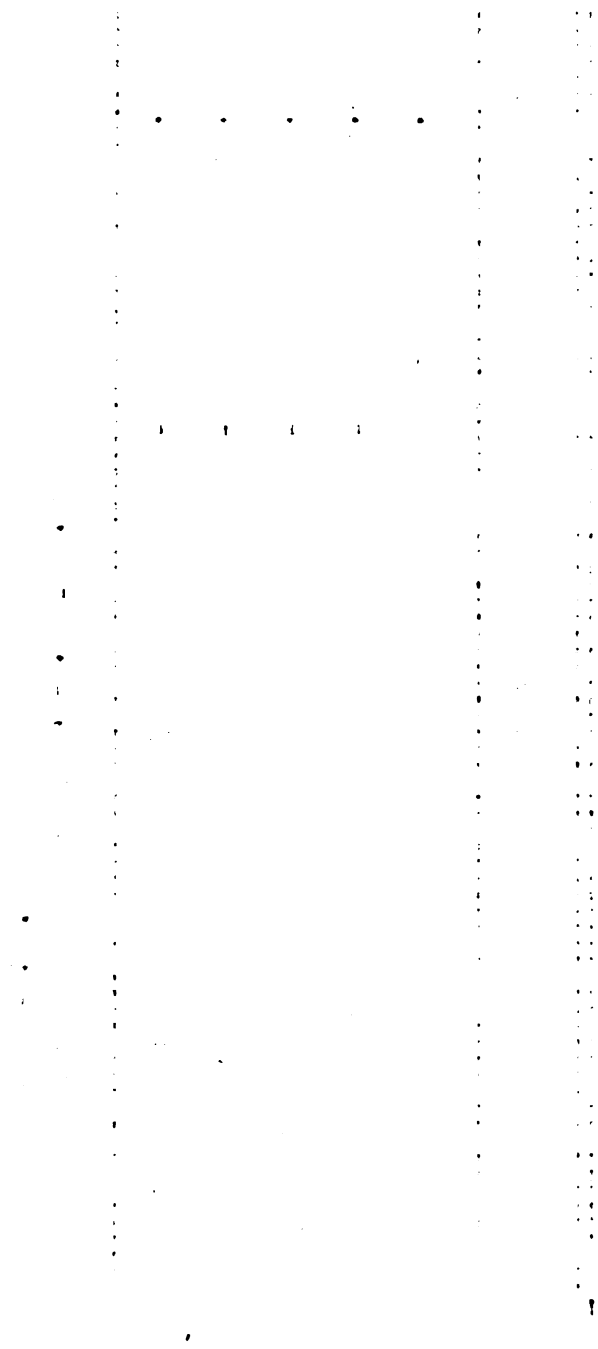

TABLE IX

ITEM ANALYSIS OF ADJUSTMENT INVENTORY

7. Do you hate people who tease you about being deaf?

18 Yes

28 No

29 Sometimes

8. Does it make you unhappy when someone tells you that you are doing something the wrong way?

21 Yes

21 No

33 Sometimes

9. Do you ask your teacher to help you when you do not understand your lesson?

46 Yes

1 No

28 Sometimes

10. Does it make you angry when people tell you how you should do a thing?

10 Yes

34 No

31 Sometimes

11. Are you nervous or afraid when you are near your teachers?

1 Yes

65 No

9 Sometimes

12. Does it make you nervous or angry when other people tell you what you should do?

5 Yes

38 No

31 Sometimes

13. Does it make you nervous to have a teacher call on you?

9 Yes

48 No

17 Sometimes

14. Do you feel afraid or nervous when you have to speak or write on the blackboard in your schoolroom?

2 Yes

53 No

20 Sometimes

15. In school, do you like talking in front of all the class?

38 Yes

20 No

17 Sometimes

16. Do you feel sad when you get low marks in school?

37 Yes

13 No

25 Sometimes

17. Do your teachers like you?

23 My teachers like me very much.
49 Sometimes my teachers like me.
1 My teachers do not like me.

18. Do you like your teachers?

30 I like my teachers very much.

43 Sometimes I like my teachers.

2 I do not like my teachers.

19. Do you like school?

40 Yes

6 No

29 Sometimes

20. Are you happy in school?

25 Yes

6 No

44 Sometimes

21. Do you like your classmates?

39 I like all my classmates.

33 I like some of my classmates.

3 I do not like any of my classmates.

25. Do you like to be at home when you are not in school?

35 Yes

16 No

24 Sometimes

26. Do you like to fight?

2 I like to have many fights.

16 I like to have a few fights.

56 I do not like to fight.

27. Do you fight with your friends?

2 I have many fights with my friends.

35 Sometimes I fight with my friends.

38 I do not fight with my friends.

28. Are you afraid to talk to a stranger?

7 Yes

34 No

33 Sometimes

30. Are you afraid when you have to go to the doctor?

7 Yes

39 No

29 Sometimes

31. Do you feel pity for all the deaf people in the world?

37 Yes

19 No

19 Sometimes

32. Do you get angry very easily?

3 Yes

34 No

38 Sometimes

33. Do you like to see other boys and girls fight?

10 Yes

54 No

10 Sometimes

34. Do you like to talk to hearing people?

40 Yes

5 No

30 Sometimes

35. When you buy things, do you find it hard to make people in stores understand you?

20 Yes

11 No

44 Sometimes

36. Do you have friends who can talk and hear?

27 I have many friends who can talk and hear.

46 I have a few friends who can talk and hear.

3 I do not have any friends who can talk and hear.

37. Do you think that hearing people misunderstand what you mean when you tell them you want something?

19 Yes

19 No

46 Sometimes

38. Do you want to have friends?

0 I do not want to have friends.

11 I want to have one or two friends.

64 I want to have many friends.

39. Are you afraid of getting lost when you go out alone?

14 Yes

43 No

18 Sometimes

40. Do you think that everyone hates you?

4 Yes

33 No

38 Sometimes

41. Do you feel embarrassed because you are deaf?

13 Yes

32 No

29 Sometimes

42. Do you often feel sad?

12 Yes

24 No

38 Sometimes

43. Do you feel lonesome, even when you are with people?

13 Yes

24 No

36 Sometimes

46. Do you like to read?

53 Yes

0 No

22 Sometimes

47. Which of these do you like best?

29 sign language

23 lip reading and oral method

23 manual alphabet

48. Are you afraid of many things?

4 I am afraid of many things.

46 I am afraid of some things.

25 I am not afraid of anything.

50. Do you feel sad if other people do not like you?

15 Yes

21 No

39 Sometimes

51. Are you jealous of hearing people?

1 Yes

50 No

23 Sometimes

52. Do you feel sad because you are deaf or hard of hearing?

16 Yes

36 No

23 Sometimes

53. Do you wish that you could hear?

51 Yes

8 No

16 Sometimes

54. Do you think that people laugh at you because you are deaf?

13 Yes

23 No

38 Sometimes

55. Do other boys and girls like you?

24 Boys and girls like me very much.

51 Sometimes boys and girls like me.

0 Boys and girls do not like me.

56. Do you like your father?

57 I like my father very much.
12 Sometimes I like my father.
0 I do not like my father.
6 My father is not living.

57. Do you like your mother?

63 I like my mother very much.
8 Sometimes I like my mother.
0 I do not like my mother.
3 My mother is not living.

58. Does your father like you?

56 My father likes me very much.
13 Sometimes my father likes me.
0 My father does not like me.
6 My father is not living.

59. Does your mother like you?

62 My mother likes me very much.
8 Sometimes my mother likes me.
0 My mother does not like me.
4 My mother is not living.

60. Do you like your brothers and sisters?

55 I like my brothers and sisters very much.
14 Sometimes I like my brothers and sisters.
0 I do not like my brothers and sisters.
5 I not have any brothers or sisters.

61. Do your brothers and sisters like you?

51 My brothers and sisters like me very much.
18 Sometimes my brothers and sisters like me.
0 My brothers and sisters do not like me.
5 I do not have any brothers or sister.

62. Do you like your home?

51 I like my home very much.

22 Sometimes I like my home.

2 I do not like my home.

63. Do you play with other boys and girls?

60 Yes

0 No

15 Sometimes

64. Do you like to help other people?

55 Yes

0 No

20 Sometimes

65. Which do you like best, to work alone or with other people?

19 I like to work with other people.

14 I like to work alone.

42 Sometimes I like to work alone, and sometimes I like to work with other people.

66. Do you like sports better than reading?

40 Yes

9 No

26 Sometimes

67. Do you like to meet new people?

40 Yes

1 No

34 Sometimes

68. When you meet new people, can you become friends with them easily?

27 Yes

6 No

43 Sometimes

69. Do you like to go to parties?

30 I like to go to many parties.

39 I like to go to a few parties.

4 I do not like to go to parties.

70. Do you like to go to parties with hearing people?

18 Yes

18 No

39 Sometimes

71. At a party, do you talk to many people or do you talk only to a few friends?

26 At a party, I talk to many people.

44 At a party, I talk only to a few friends.

3 At a party, I do not talk to anyone.

72. Are you a leader of games at a party?

17 Yes

27 No

31 Sometimes

73. Do you like to dance?

52 Yes

9 No

14 Sometimes

74. Do you like to be popular at dances and parties?

27 Yes

12 No

35 Sometimes

75. Are you popular at dances and parties?

21 Yes

22 No

31 Sometimes

76. Do younger boys and girls have more fun than you do?

21 Yes

14 No

39 Sometimes

77. Do you like to be alone?

5 I like to be alone most of the time.

29 Sometimes I like to be alone.

41 I do not like to be alone.

CHAPTER VII

SUMMARY AND CONCLUSIONS

An original adjustment inventory was given to 75 deaf adolescents at the Michigan School for the Deaf in Flint, Michigan.

A reliability coefficient from the two halves of the inventory was found to be .87. Reliability coefficients were found to range from .82 for Emotional Adjustment to .69 for Home Adjustment. Reliability coefficient for the boys was .85 and .81 for the girls.

The validity of the adjustment scores was considered on the basis of a correlation with the ratings obtained from a trained staff of three. The Correlation coefficient was found to be .58; low, but statistically significant and of definite predictive value.

Intercorrelations among the subtests of the inventory were low, the lowest being .23 between social and home adjustment. The highest correlation was 168 between social and emotional adjustment.

The mean score for boys was higher on all subtests than for girls, although the difference was not statistically reliable on all tests.

There was a low, but positive, relationship between increasingly better adjustment scores and higher chronological age and I.Q.

This group of subjects did not appear to be emotionally disturbed within their own environment; rather, they scored quite

average for both emotional and social adjustments.

Results seem to indicate that the inventory differentiates between students at the lower end of the adjustment scale more so than at the upper end. There do not seem to be any deviates from the norm at the upper end of the adjustment scale; rather, a clustering around the mean which is carried out almost to the end of the curve.

The language handicap was not met as well as had been expected in spite of all the time spent on test construction. However, results point to the fact that language tests can be used with the deaf and the closer we come to presenting more concrete questions to the deaf at a level which they can understand, the sooner we will obtain a better insight into the psychology of the deaf. With this information at hand, the teacher of the deaf might have a more fundamental starting point from which to begin in attempting to socialize deaf students.

We cannot say what is normal for the deaf person until we know what tensions and problems his situation involves.

BIBLIOGRAPHY

A. BOOKS

Best, Harry, Deafness and the Deaf in the United States. New York: The Macmillan Company, 1943.

Brunschwig, L., A Study of Some Personality Aspects of Deaf Children. New York City: Teachers College Contributions to Education, No. 687, 1936.

Goldstein, Max A., Problems of the Deaf. St. Louis: The Laryngoscope Press, 1933.

Habbe, S., Personality Adjustments of Adolescent Boys with Impaired Hearing. New York: Teachers College, Columbia University, 1936.

Madden, R., The School Status of the Hard of Hearing Child. New York: Teachers College, Columbia University, 1931.

Menninger, K. A., The Human Mind. Alfred A. Knopf, Inc., 1930.

Pintner, R., J. Eisenson, and M. Stanton, The Psychology of the Physically Handicapped. New York: F. S. Crofts & Co., 1941.

Ramsdell, D. A., "The Psychology of the Hard of Hearing and Deafened Adult," Hearing and Deafness. New York: Murray Hill Books, 1947.

Upshall, C. C., Day Schools versus Institutions for the Deaf. New York: Teachers College, Columbia University, Contributions to Education No. 499, 1929.

Welles, H. H., The Measurement of Certain Aspects of Personality Among Hard of Hearing Adults. Teachers College, Columbia University, Contributions to Education No. 545, 1932.

B. PERIODICAL ARTICLES

Baldwin, Margaret, "The Psychology of Deafness," Atlantic Monthly, 132, October, 1923.

Bradford, C. A., "The Salary Status of Teachers of the Deaf in America," American Annals of the Deaf, Vol. 89, 1944.

Bradway, Katherine Preston, "The Social Competence of Deaf Children," American Annals of the Deaf, Vol. 82, No. 2, March, 1937.

Brill, T., "Mental Hygiene of the Deaf," American Annals of the Deaf, Vol. 79, 1934.

Burchard, Edward M. L., and Helmer R. Myklebust, "A Comparison of Congenital and Adventitious Deafness with Respect to Its Effect on Intelligence, Personality, and Social Maturity--Part I: Intelligence," American Annals of the Deaf, Vol. 87, 1942.

Burchard, Edward M. L., and Helmer R. Myklebust, "A Comparison of Congenital and Adventitious Deafness with Respect to Its Effect on Intelligence, Personality, and Social Maturity--Part II: Social Maturity," American Annals of the Deaf, Vol. 87, No. 3, May, 1942.

Burchard, Edward M. L., and Helmer R. Myklebust, "A Comparison of Congenital and Adventitious Deafness with Respect to Its Effect on Intelligence, Personality, and Social Maturity--Part III: Personality," American Annals of the Deaf, Vol. 87, No. 4, September, 1942.

Calkins, Earnest Elmo, "On the Technique of Being Deaf," Atlantic Monthly, 131, January, 1923.

Caplin, Daniel, "A Special Report of Retardation of Children with Impaired Hearing in New York City Schools," American Annals of the Deaf, Vol. 82, No. 3, May, 1937.

Day, H. E., I. S. Fusfeld, and R. Pintner, "Survey of American Schools for Deaf," American Annals of the Deaf, Vol. 32, 1927.

Doll, E. A., "Preliminary Standardization of the Vineland Social Maturity Scale," American Journal of Orthopsychiatry, Vol. 3, 1936.

Doll, Edgar A., "The Inheritance of Social Competence," Journal of Heredity, Vol. 28, No. 5, May, 1937.

Fowler, Edmund, "A Simple Method of Measuring Percentage of Capacity for Hearing Speech," Archives of Otolaryngology, Vol. 36, December, 1942.

Frackelton, Berneda Pierson, "Adjustment of the Deaf," American Annals of the Deaf, Vol. 89, 1944.

Gay, Ruth C., "A Case Study of Word Deafness," American Annals of the Deaf, Vol. 83, No. 2, March, 1938.

Goetzinger, Cornelius P., "A Consideration of Audiometric Curves in Relation to Intelligibility for Speech," American Annals of the Deaf, Vol. 92, No. 3, May, 1947.

Graham, Alva Whitcomb, "Personal and Social Adjustment of High School Students," The School Review, Vol. 25, No. 8, October, 1947.

Gregory, Isobel, "A Comparison of Certain Personality Traits and Interests in Deaf and in Hearing Children," Child Development, Vol. 9, March-December, 1938.

Haines, Cora M., "The Effects of Defective Hearing Upon the Individual as a Member of the Social Order," The Journal of Abnormal and Social Psychology, Vol. 22, 1927-1928.

Heider, F., and Grace M. Heider, "Studies in the Psychology of the Deaf," Psychological Monographs, Vol. 53, No. 5, 1941.

Jenkins, Marion, "Modern Trends in the Psychology of Maladjusted School Children," Journal of Genetic Psychology, Vol. 23, No. 1, September, 1933.

Johnson, Elizabeth Hughes, "The Ability of Pupils in a School for the Deaf to Understand Various Methods of Communication--II," American Annals of the Deaf, Vol. 93, No. 3, May, 1948.

Kirk, Samuel A., "Behavior Problem Tendencies in Deaf and Hard of Hearing Children," American Annals of the Deaf, Vol. 83, No. 2, March, 1938.

Levine, Edna Simon, "Psychological Sidelights--The Teacher's Role in Pupil Development," The Volta Review, Vol. 50, 1948.

Levine, Edna Simon, "The Psychological Service Program of the Lexington School for the Deaf," American Annals of the Deaf, Vol. 93, 1948.

Lyon, V. W., "Personality Tests with the Deaf," American Annals of the Deaf, Vol. 79, 1934.

Lyon, Verne Wesley, "The Use of Vocational and Personality Tests with the Deaf," The Journal of Applied Psychology, Vol. 18, 1934.

MacPherson, Jane G., and Helen S. Lane, "A Comparison of Deaf and Hearing on the Hiskey Test and on Performance Scales," American Annals of the Deaf, Vol. 93, 1948.

McClure, William J., "Misleading Information Concerning the Deaf," American Annals of the Deaf, Vol. 94, No. 4, September, 1949.

Myklebust, Helmer R., "Clinical Psychology and Children with Impaired Hearing," The Volta Review, Vol. 50, 1948.

Nelson, Myrthel S., "The Evolutionary Process of Methods of Teaching Language to the Deaf With a Survey of the Methods Now Employed," American Annals of the Deaf, Vol. 94, No. 3, May, 1949.

Nelson, Myrthel S., "The Evolutionary Process of Methods of Teaching Language to the Deaf With a Survey of the Methods Now Employed, II," American Annals of the Deaf, Vol. 94, No. 4, September, 1949.

O'Connor, Clarence D., and Edna Simon, "A Preliminary Survey Into Problems of Adjustment Among Pupils of the Lexington School for the Deaf," American Annals of the Deaf, Vol. 87, No. 3, May, 1942.

O'Connor, Clarence D., "Discussion of the Deaf and the Hard of Hearing in Schools and Classes for the Deaf," American Annals of the Deaf, Vol. 89, 1944.

Peters, Edwin F., "Guidance for Exceptional Children," American Annals of the Deaf, Vol. 87, No. 1, January, 1942.

Pintner, R., and L. Brunschwig, "An Adjustment Inventory for Use in Schools for the Deaf," American Annals of the Deaf, Vol. 82, No. 2, March, 1937.

Pintner, R., "An Adjustment Test of Normal and Hard of Hearing Children," Journal of Genetic Psychology, Vol. 56, 1940.

Pintner, Rudolf, and Lily Brunschwig, "A Study of Certain Fears and Wishes Among Deaf and Hearing Children," The Journal of Educational Psychology, Vol. 28, 1937.

Pintner, Rudolf, "Emotional Stability of the Hard of Hearing," Journal of Genetic Psychology, Vol. 43, No. 1, September, 1933.

Pintner, R., "Latest Phases of Psychological Testing with the Deaf," American Annals of the Deaf, Vol. 82, No. 4, September, 1937.

Pintner, Rudolf, Irving S. Fusfeld, and Lily Brunschwig, "Personality Tests of Deaf Adults," Journal of Genetic Psychology, Vol. 51, 1937.

Pintner, R., and L. Brunschwig, "Some Personality Adjustments of Deaf Children in Relation to Two Different Factors," Journal of Genetic Psychology, Vol. 29, No. 1, September, 1936.

Pintner, R., "Some Personality Traits of Hard of Hearing Children," Journal of Genetic Psychology, Vol. 60, 1942.

Reamer, J. C., "Mental and Educational Measurements of Deaf," Psychological Monographs, Vol. 29, No. 3, 1921.

Shambaugh, G. E., "Diplacusis, A Localizing Symptom of Disease of the Organ of Corti," Archives of Otolaryngology, Vol. 31, 1940.

Silverman, S. Richard, "The Implications for Schools for the Deaf of Recent Research on Hearing Aids," American Annals of the Deaf, Vol. 94, No. 4, September, 1949.

Springer, N. Norton, "A Comparative Study of the Behavior Traits of Deaf and Hearing Children of New York City," American Annals of the Deaf, Vol. 83, No. 3, May, 1938.

Springer, N. Norton, "A Comparative Study of the Psychoneurotic Responses of Deaf and Hearing Children," The Journal of Educational Psychology, Vol. 29, 1938.

Stevenson, Dr. Elwood A., "The Deaf and the Hard of Hearing in Schools and Classes for the Deaf," American Annals of the Deaf, Vol. 89, No. 4, September, 1944.

Streng, Alice, and Samuel A. Kirk, "The Social Competence of Deaf and Hard of Hearing Children in a Public Day School," American Annals of the Deaf, Vol. 83, No. 3, May, 1938.

Symonds, Percival M., and Murray Sherman, "A Personality Survey of a Junior High School," The School Review, Vol. 25, No. 8, October, 1947.

"The Thirty-Third Meeting of the Convention of American Instructors of the Deaf," Florida School for the Deaf, St. Augustine, Florida, June 16-20, 1947, American Annals of the Deaf, Vol. 93, No. 3, May, 1948.

Veditz, George William, "The Relative Value of Sight and Hearing," American Annals of the Deaf, Vol. 82, No. 2, March, 1937.

Vinson, Marietta Rector, "The Pupil's Case--I," American Annals of the Deaf, Vol. 87, No. 2, March, 1942.

Ward, Herschel R., "An Integrated Program of Pupil Evaluation," Tennessee Public Welfare Record, October, 1947.

Williams, Boyce R., "Essential Characteristics (Qualifications) of a Rehabilitable Deaf or Hard of Hearing Individual," American Annals of the Deaf, Vol. 92, No. 3, May, 1947.

Yelton, D. C., "Language and the Deaf," American Annals of the Deaf, Vol. 83, No. 2, March, 1938.

_____, The Volta Review, Vol. 33, 1931.

C. UNPUBLISHED MATERIALS

Ives, Olive L., "A Critique of Teachers' Ratings as an Indication of Later Army Neuropsychiatric Rejection." Unpublished Doctor's dissertation, Teachers College, Columbia University, 1946.