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A VALIDATION STUDY OF HUTT'S MEASURE OF PERCEPTUAL
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by

Antonio Thomas Iannarone

A Dissertation Submitted to the Faculty of the
REHABILITATION CENTER
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA

GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my
direction by Antonio Thomas Iannarone
entitled A VALIDATION STUDY OF HUTT'S MEASURE OF PERCEPTUAL
ADIENCE-ABIENCE IN A DEAF POPULATION
be accepted as fulfilling the dissertation requirement for the
degree of Doctor of Philosophy

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8-25-76
Date

As members of the Final Examination Committee, we certify
that we have read this dissertation and agree that it may be
presented for final defense.

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Final approval and acceptance of this dissertation is contingent
on the candidate's adequate performance and defense thereof at the
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STATEMENT BY AUTHOR

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SIGNED:

Antonio T. Lannarone

To my father,
Liberatore J. Iannarone, Sr.,
who, in his personal world of
deafened silence brought the
sounds of joy, encouragement,
assistance, and love to his
family and all who knew him.
Dad, this is our dissertation.

Love,

Tony

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ABSTRACT

Understanding the psychological makeup and the personality characteristics of deaf and severely hearing impaired individuals still eludes most psychological examiners. Communication problems frequently preclude adequate psychological evaluation of deaf individuals. Verbally based evaluation instruments place the deaf individual at a distinct disadvantage in presenting himself and his abilities.

The personality assessment component of the psychological evaluation is often most challenging. The use of popular projective techniques with deaf people is questionable when the examiner expects the verbal skills of the deaf client to accurately reflect the client's associations, creativity, and general thought processes.

This study examines the Hutt Adaptation of the Bender Gestalt Test (H.A.B.G.T.), a non-verbal performance type instrument, as a potentially useful diagnostic tool in assessing the personality characteristics of adience (approach) - abience (avoidance) in deaf individuals. More definite identification and clarification of these traits, adience and abience, and their possible antecedent or consequent factors are expected to provide a better understanding of the deaf individual's orientation to the environment. The orientation, adient or abient, taken by a deaf individual toward his environment is considered to be closely related to the early communication experiences of the individual with his or her parents.

To test this hypothesis, three groups (N=12 each) of individuals were selected and administered the H.A.B.G.T. The first group were deaf individuals, ages 15-19, whose parents also were deaf. The other two groups were randomly selected from deaf and hearing individuals with normal hearing parents. All three groups were administered the 'Copy Phase' of the H.A.B.G.T., and a score for adience-abience was obtained. The appropriate statistical analysis was performed, demonstrating homogeneity of variance and no significant differences between the groups. The analysis showed a significant relation between sex and adience-abience, males being more adient than females.

Within the parameters of this study, a relationship between adience-abience and early communication with parents was not identified. The results indicated that the instrument, the H.A.B.G.T., might not be so sensitive to differences in adience-abience in normal individuals as it is among individuals suffering some psychopathology.

CHAPTER 1

THE PROBLEM

Introduction

Vocational rehabilitation programming had its beginning in 1920 with the signing of the Smith-Fess Act by President Woodrow Wilson. Since that time, from its initially limited scope, vocational rehabilitation has grown to include the total spectrum of disability and handicapped groups. Services were initially provided to groups of physically disabled individuals; however, emphasis had yet to be placed upon those individuals within these groups who were unable, for various reasons (i.e., mental illness or other severely disabling conditions), to benefit from existing service-oriented provisions and facilities. Finally, with the Rehabilitation Act of 1973, and the Rehabilitation Amendments of 1974, emphasis was focused upon the more severely handicapped individual. In this latter group of severely handicapped are those hearing impaired individuals who have not benefitted from the existing vocational rehabilitation services that are normally provided to members of other disability groups by social and rehabilitative agencies. The "circular argument," since deaf individuals do not request special services from these agencies, they do not require them, is frequently advanced. Little thought is given to the possibility that deaf individuals do not apply for services, knowing the frustration they will face due to the inability of the agency's representatives to communicate with them.

Recently, Schein and Delk (1974) completed a national census of the deaf and hearing impaired population in the United States. It was determined by this survey that there are 13,362,842 deaf and/or hearing impaired individuals in this country. Of that number, 1,767,046 are considered deaf; in a further categorization, 410,522 were determined to be prevocationally deaf. The term prevocationally deaf is applied to that individual who has lost his hearing prior to 19 years of age. Of those individuals determined to be prevocationally deaf, 201,626 were determined to be prelingually deaf. The term prelingually deaf is applied to that individual who has lost his hearing prior to three years of age. It was with this group of prelingually deaf individuals that the orientation to and interpretation of the environment will be examined.

Among the services which may be provided to a disabled or handicapped individual, once he/she has applied for assistance from the Department of Vocational Rehabilitation or other social service agency, is a comprehensive medical and/or psychological examination. It is at this point that the services to many deaf and hearing impaired individuals break down. The breakdown in service comes primarily as a result of the inevitable communication barrier. This communication barrier may manifest itself in a variety of ways: lowered or nonexistent language skills in the deaf individual; inadequate communication skills on the part of the deaf individual; or a lack of ability on the part of the doctor, psychologist, psychiatrist, or psychometrist to communicate with the deaf individual while providing the evaluation services. It is this breakdown in communication which frequently prevents many deaf and

hearing impaired individuals from being appropriately evaluated in a medical or psychological mode.

The medical evaluation can be, and often is, completed through the use of gestures, pointing to the area of concern, and pantomime. However, the psychological evaluation is not open to this same flexibility of bodily expression, and it is this area of psychological evaluation that is the concern of this study.

The instruments frequently used in psychological evaluation are so verbally laden that the reduced reading, language, and communication skills of a deaf individual can only serve to affect adversely his test results and their interpretation by the evaluating professional. McClure (1966) demonstrated that approximately 30% of deaf students graduating from day and residential schools for the deaf read at or below a fourth grade level of achievement. This was substantiated in a later study by Parks and Bowe (1970) who found that ". . . nearly 1,000 of the 3,000 deaf students terminating their education each year are functionally illiterate" (page 537). The influence of these severely reduced reading, language and achievement abilities on a psychological evaluation is evident.

In the provision of a comprehensive psychological examination for a deaf individual, there is one component which poses a serious problem: the assessment of that individual's personality. The problem in such personality assessment, as seen by Brenner and Thompson (1967), is compounded by the fact that the deaf individual, as a result of the hearing impairment, may also have varying degrees of communication and/or

language problems. Bolton (1973) determined that clinical assessment of deaf clients presents a difficult task for psychologists and psychiatrists. This problem is complicated by deficient language skills which frequently preclude the use of standard personality inventories, projective techniques that require verbal interchange between examiner and client, and the traditional clinical interview. Specifically, the projective techniques commonly used in personality assessment involve, to a large extent, the need for communication and language development within the individual whose personality is being assessed. The use of projective techniques in assessing the personality of the deaf individual may be of questionable usefulness when language and verbal skills are the vehicles for thought transmission (Falberg, 1967; Hess, 1969; Levine, 1960; Rosen, 1967; and Vernon and Koh, 1970).

On the basis of these inherent difficulties, and need for the provision of quality services in assessing the personality traits and characteristics of a deaf individual, and in light of the language and communication barriers, new and innovative research is necessary. The present study examined the Hutt Adaptation of the Bender Visual Motor Gestalt Test as a potentially useful diagnostic tool in assessing the personality characteristics of adience-abience in deaf individuals. These traits, as explained by Hutt (1969a), are related to the way in which an individual perceives and responds to his environment in either an approach or withdrawal/avoidance fashion.

Therefore, the manner in which an individual perceives his environment, positively or negatively, will greatly influence the fashion

in which he responds to his environment. Hutt (1969a) states that when perception of and response to the environment is of a positive (approach) nature, the individual is considered to be 'adient' oriented. However, if the individual perceives and responds to his environment in a negative (withdrawal/avoidance) nature, he is considered to be 'abient' oriented.

More definite identification and clarification of these traits, adience and abience, and their possible antecedent or consequent factors will provide better understanding of the individual's orientation in his environment. With a clearer evaluation of the deaf individual's orientation of approach or withdrawal, the psychologist or evaluating professional will have an information base from which to recommend a course of treatment for any deaf individual who might require counseling and/or psychotherapy.

According to the psychodynamic view, in childhood, a basic personality core develops that does not change greatly in its essentials during later years (Mischel, 1968). Much of the normal development of the ego is based on the early, dependent, mother-child relationship which optimally dwindles as the child grows into an autonomously functioning individual. However, if the pathway of communication between mother and child is restricted or non-existent in these early years, a number of things can go wrong with this pattern.

Mischel (1968) states that almost any initially neutral stimuli, such as communication, may acquire the power to evoke phobic and anxious emotional responses if the stimuli has been associated directly or vicariously with aversive events or outcomes. This is what happens when usual channels of verbal communication are blocked due to the child's

deafness. The young child may feel rejected, left out, or abandoned. Additionally, Rainer states that without communication, the growing child has no outlet for his impulsive needs and his frustrations in attempting to communicate, so that he may behave destructively, have temper tantrums, and thus further alienate the parents (Rainer et al., 1963).

The consequences of early development of communication between parent (especially mother) and child is significant in the personality growth of the deaf individual. Without the opportunity for reception and expression of thoughts and feelings, the deaf individual may manifest the behavioral characteristics described above by Rainer et al. (1963). The frustrations that deaf children experience can lead to misperceptions of, and therefore inappropriate reactions to, the environment. Rainer and Altshuler (1967) state that a commonly identifiable characteristic in deaf individuals is impulsive behavior. They state that "... personality structures (of deaf individuals) were unevenly developed and poorly integrated. It often appeared that perceptions were vague and ill-defined, and that capacities for adapting to new situations and structuring new experiences were very limited" (page 50).

Rainer et al. (1963) also state that for the deaf child the important process of learning how to relate to the parents and the environment, with all of its trials and tribulations, is a necessary step towards developing a social sense. Subsequently this feeling for others becomes an orientation that the developing individual will take in his approach towards the world. Levine (1956) pointed out that the early

deficient experiences and difficulties in language acquisition play a noticeable part in the mental and emotional development of a deaf individual. More pointedly, Erickson (1963) states that "Ultimately, children become neurotic not from frustrations, but from the lack or loss of societal meaning in these frustrations" (page 249). Without communication, the deaf child will be frustrated in his attempts to understand and respond appropriately to his perceived environment.

Baroff, in Rainer et al. (1963), states that the disability of deafness may produce a serious degree of intellectual and emotional isolation during the formative years; the long range effects of this isolation may be poor socialization. A major question posed by Baroff is whether deaf individuals develop withdrawn and/or isolated personalities. Conversely it may be asked whether deaf individuals can maintain reasonably effective social relationships in spite of the omnipresent communication barrier. The previously mentioned early mother-child relationship, and the need for early communication comes to play an even greater role in the development of a deaf child and his orientation to the world. The frequency with which a communication breakdown occurs in early mother-child relationships between a hearing parent and a deaf child is of very high proportion. The fact that less than ten percent of deaf children have deaf parents (Rainer et al., 1963; Schlesinger and Meadow, 1972) means that ninety percent of deaf children are born to hearing parents with whom the natural flow and development of communication is either severely delayed or non-existent. The problem is that the hearing parent of a deaf child suffers from a natural inability to

communicate with his child. It is these early parent-child, more specifically mother-child, communications and relationships that form the basis of the evolving personality of an individual. The deaf child's initial frustrations in attempting to approach the hearing parents through limited communication suggest that deaf individuals would tend to be more abient, or withdrawal/avoidance oriented, than their normally hearing peers.

Statement of the Problem

It was the purpose of this study to investigate the way in which the deaf individual's perception and utilization of the environment develops. This study was formulated to establish whether the deaf individual, as a result of early childhood communication experiences, tended to perceive and relate to his environment in an adient (positively oriented) fashion, or in an abient (withdrawal/avoidance oriented) fashion. Adience and abience was measured in this study by the Hutt Adaptation of the Bender Visual Motor Gestalt Test (hereafter referred to as the H.A.B.G.T.). In this adaption of Bender's original (1938) designs, Hutt (1969a) provided for consistency in the commercial reproduction of the stimulus design cards. He also developed a scoring system and stencil which provides scores on two scales, a psychopathology scale and an adience-abience scale. The scoring stencil provides for consistency and objectivity in rating the individual design reproductions. It was the adience-abience scale which was the focus of this study, leaving the psychopathology scale for further research and study. The present study was designed to determine the relationship between adience

and abience orientation in deaf and hearing groups, using Hutt's scoring criteria.

Research Question

This study was designed to obtain information which can be used to answer the following question: Does early communication with the parents influence the way in which a deaf individual perceives his environment?

Hypotheses

The following general hypotheses were tested in this study:

- H₀ - There are no differences between groups in adience-abience as measured by the H.A.B.G.T.
- H₁ - That deaf individuals are significantly higher in abience than their normally hearing counterparts as measured by the H.A.B.G.T.
- H₂ - That deaf children of deaf parents are significantly higher in adience than deaf children of hearing parents as measured by the H.A.B.G.T.
- H₃ - That deaf children exposed to early communication are higher in adience than those who are not exposed to early communication as measured by the H.A.B.G.T.

Rationale for the Study

Levine (1956) quoted from the 1930 White House Conference on Child Health and Protection that

. . . the objective measurement of personality traits, character traits and emotional factors is now fairly well established for the hearing. It would be well to begin the study of such traits among the deaf and the hard of hearing, both children and adults. The adjustment of the deaf to society is peculiarly difficult, and it is therefore necessary to make fundamental studies in this field in order to help in such adjustments. The emotional reactions of the deaf at all stages of their life need to be studied (Levine, 1956, page 13).

Levine's focus on the need for research in this area began the investigation into the psychological makeup of deaf individuals.

However, a review of the literature reveals that apparently limited effort has gone into the expansion of psychological testing and evaluation procedures with the deaf. Since the significant works by Vernon (1967), Vernon and Brown (1964), Vernon and Mindel (1971) and the works by Rainer and Altshuler (1960, 1967), Rainer et al. (1963), Altshuler and Rainer (1969), Levine (1960) and Falberg (1967), the literature review reveals no new testing procedures with the deaf, nor any attempts at expanding current understanding and utilization of psychological tests with deaf individuals. Language and verbal communication, the usual vehicle in psychological evaluation, play a major role in the total development of an individual.

Hutt (1969a) explains his concept of adience-abience as ". . . an underlying mode of adaptation in which, characteristically, individuals differ in the degree to which they are relatively more receptive to perceptual stimulation (adient) or less receptive to such stimulation (abient)" (page 130).

Perceptual adience is expressed through an awareness and openness to new experience, and manifests itself through such behaviors as adaptability, constructive mastery of the world of experiences, and the relative ease in incorporating new experiences. On the other hand, perceptual abience is expressed through a restriction in awareness to new experience, limited capacity for mastery of the world of experience, and greater difficulty in responding to new or changing experiences (Hutt and Miller, 1975). The development of adience-abience as a defense strategy begins in infancy. This developmental process is closely related to the early childhood experiences of the infant.

Perceptual adience results from early enriched emotional and intellectual stimulation (communication) and favorable perceptual contact with the outer world (Hutt and Miller, 1975). Perceptual abience results from early experiences of impoverished emotional and intellectual stimulation (lack of communication), traumatic or highly inconsistent emotional encounters, and perhaps from some genetic predispositions (Hutt and Miller, 1975).

Hutt's concept of adience-abience (1969a) is closely related to Schneirla's (1959) concept of basic, biphasic, functionally opposed mechanisms of approach/withdrawal which "are the only empirical, objective terms applicable to all motivated behavior of all animals" (page 2). Schneirla focuses his attention on the total behavioral characteristics and manifestations of the individual, regardless of whether the organism perceived the world as trustworthy or threatening. For Hutt (1969a, -b, 1975) and Hutt and Gibby (1970), the development of

basic perceptual style, the adience-abience style, is conceived to be a total perceptual organismic orientation to the world.

The H.A.B.G.T. is a nonverbal instrument, is nonthreatening, and is an easily accomplished task. The H.A.B.G.T. is a measure of development which does not rely on language and verbal communication, and emphasizes a performance oriented task as opposed to a verbally based task. Therefore, it is a reasonable instrument for consideration in measuring the psychological orientation of a deaf individual to his environment. It consists of the same nine designs selected by Bender in 1938 for incorporation into the original Bender Visual Motor Gestalt Test. Nine geometric designs are to be copied as they are perceived by the individual being tested. It is the individual's responses to the stimuli which are then scored by the Hutt method, interpreted, and yield a measure of perceptual adience-abience. In an unstructured, ambiguous, or projective situation the individual's responses reveal his basic personality organization. Further, all aspects of his behavior, the total Gestalt, are interpreted as potentially revealing of this basic underlying personality configuration (MacFarlane and Tuddenham, 1951).

Definition of Terms

The following terms are defined for the purpose of this study:

Gestalt Function: "The Gestalt function may be defined as that function of the integrated organism whereby it responds to a given constellation of stimuli as a whole; the response itself is a constellation, or pattern, or Gestalt" (Bender, 1938, page 3).

Deaf Individual: For the purpose of this study a deaf individual was defined as any individual born either totally deaf or so severely hearing impaired as to prevent the establishment of speech and natural language; an individual who became deaf in early childhood before speech and language were established; or one who became deaf in childhood so soon after the establishment of speech and language that the ability to speak and understand speech and language has been practically lost to him. Specifically, the deaf individual, for this study, was defined ". . . as that individual in whom the sense of hearing is non-functional for the ordinary purposes of life" (Levine, 1956, pages 31-32). Individuals selected for this study met the criterion of deafness noted above, and had no other physically handicapping condition.

Perceptual Adience-Abience: "An underlying mode of adaptation in which, characteristically, individuals differ in the degree to which they are relatively more receptive to perceptual stimulation (adient) or less receptive to such stimulation (abient)" (Hutt, 1969a, page 130).

Total Communication: The systematic simultaneous use of speech/speech reading, signs/finger spelling, supported by the printed word plus all other media.

Assumptions Underlying the Study

The following assumptions are made in the execution of this study:

1. The experimental sample selected from state schools for the deaf are related to similar populations in other state schools for the deaf.

2. The sample studied is sufficiently like those in other states to warrant tentative use of this study's findings in treatment decisions and to warrant replication at chosen sites around the United States.

CHAPTER 2

REVIEW OF THE LITERATURE

Literature Review

In light of the extensive research on the Bender Visual Motor Gestalt Test (hereafter referred to as the Bender), this review of literature was restricted to those books and articles pertinent to the specific study at hand.

The major research use of the Bender, as originally designed by Bender (1938) has been for the evaluation of organic dysfunction, neuroses, or schizophrenia. Recently Levine (1974), in a survey of 166 psychologists working with the deaf and hearing impaired, reported the Bender to be the third most frequently used psychological instrument in the assessment of a deaf individual. In the same report, under the section on personality tests, the popularity of the Bender is further explained by the following: ". . . gives information on visual-motor skills as well as personality observations, and the results reveal motor disabilities and organic dysfunction" (Levine, 1974, page 314).

Since Bender's original research, several scoring procedures have been developed; i.e., Hain (n.d.), Pascal and Suttell (1951), Koppitz (1964) and Hutt (1969a). It is the intent of this study to determine whether Hutt's (1969a, 1975) criteria for adience-abience is as valid when used with a deaf population as it is with a hearing population, thereby adding to the psychologist's ability to develop a more clinically accurate psychological profile of a deaf individual.

In a review of bibliographies published on deafness (Austin, 1973; Bolton, 1973; Fellendorf, 1966; and State of Washington, Department of Social and Health Services, 1973) no studies indicated the use of the Bender to assess perceptual approach and withdrawal behavior (adience-abience) in a deaf population. Hutt and Miller (1975) state that adience-abience is a basic mode of adaptation, is learned early in life, and is, therefore, a forerunner of an individual's basic orientation to life and a possible precursor of future defensive styles of behavior. Bender, in her monograph (1938), stated that an individual's response to a stimulus is by the organism-as-a-whole. She further stated that the Gestalt function (copying the designs) is performed by the integrated organism: the individual as a composite of all his current and past experiences. The response made by the individual was considered a constellation or Gestalt and totally integrated with perception. This integrative function of the organism in responding to the stimuli of the Bender is underscored by a variety of researchers (Billingslea, 1948 and 1963; Hutt, 1969a; Kitay, 1950).

Since an individual's personality is an active, dynamic, stratified, and structured whole interacting with its environment, the personality may be interpreted accurately only in light of knowledge of its total environment. This interdependence of personality and environment is a widely accepted tenet in the psychological field. Therefore, it is of importance in interpreting the results of the H.A.B.G.T. that adequate background data and information be gathered.

This information will enable the examiner to test hypotheses and tentative conclusions which are drawn on the basis of the individual's performance on the instrument.

The interpretation of data and information, gathered as a result of administering the H.A.B.G.T., is based in part upon Schneirla's formulations of the biphasic processes underlying approach/avoidance behavior (Schneirla, 1959; Hutt, 1969a). These authors state that an individual's early life experiences may leave him with a primary perceptual defense system. This defense involves the inhibition of perceptual input and tends to preclude effective learning upon exposure to later suitable experiences. Therefore, on the basis of accumulated clinical evidence, it is suggested by Hutt and Miller (1975)

. . . that as a consequence of favorable perceptual contact with the outer world (initially communication between mother and child) on the one hand, or of traumatic or highly inconsistent and unfavorable perceptual contact, the organism tends to develop an approach-oriented position or an avoidance-oriented position in his perceptual communication with both the outer and inner worlds (Hutt and Miller, 1975, page 123).

In an earlier study by Hutt and Feuerfile (1963), an attempt was made to construct and evaluate the measure of perceptual adience-abiencence, that is, of the relative preference for "approaching" versus "avoiding" or withdrawing from perceptual stimuli, in terms of a number of behavioral correlates. It was hypothesized that perceptual tendencies in either direction probably constitute a primary mode of adaptation and defense for the individual, and should therefore be related to the basic expressive modes of adaptation which the individual

utilizes. The subjects in this study were 40 deaf retarded patients selected from approximately 200 patients in a state institution for the mentally retarded. The subjects were administered the 'copy' phase of the H.A.B.G.T., and it was predicted that those individuals scoring in the high adient group, as compared with the high abient group would show: (1) Less severe psychopathology; (2) Higher intellectual functioning and less intellectual impairment; and (3) A shorter experience in the state institutions (and therefore a less culturally depriving experience). "T" tests were obtained for the differences in the mean scores on each of these scores on each of these variables and all of the differences were in the expected direction. "Five of them clearly attained what may be regarded as statistically significant differences, and only one (length of hospitalization) did not reach this level, although in view of the highly restricted sample of individuals included within this population, the authors chose to accept this level as being significant also" (Hutt and Feuerfile, 1963, page 8).

By and large, the findings of this study were consistent with Hutt's major hypotheses that perceptual adience, as measured by the H.A.B.G.T., is related to more effective personal, interpersonal, and intellectual functioning, whereas perceptual abience is associated with relatively ineffective functioning in this area (Hutt and Feuerfile, 1963; Hutt, 1975).

In a more recent study (Hutt and Miller, 1975), the adience-abience scale was exposed to a test-retest reliability and for both male and female subjects the Rho coefficient was found to be .84, which is significant at the .01 level. These authors indicated that

additional checks on overall reliability of the scale were made: (1) An analysis made of shifts in ranks between tests and retests; (2) An analysis of changes in raw scores; and (3) A study of individual shifts and scores. All three of these additional checks reveal similarly consistent results in being indicative of fairly high test-retest reliability (Hutt and Miller, 1975, page 126).

There are four components to the adience-abience scale: space and size, organization, change in form of the Gestalt, and distortion.

In examining the reliability of the four components,

. . . form of Gestalt was found to be the most sensitive to change since the items comprising this component, involving minor variations in configuration, are easily modifiable. The data indicate that this is the least reliable component, although the percentage of change (27.5%) is not very great. These findings, taken together with the data for the entire scale, suggest a relatively high degree of stability on the test-retest for the components as well as for the scale as a whole (Hutt and Miller, 1975, page 127).

A measure of the interscorer reliability was administered; ". . . the resulting Rho of .912 indicates a high degree of interscorer reliability" (Hutt and Miller, 1975, page 127).

Implications of the Literature

The above review of the literature supports the need for research in developing methods for quality psychological evaluation services for the deaf individual. Research is needed in the expansion of existing, and development of new, tests and techniques in evaluating the personality of a deaf individual. Hutt's (1969a, -b) adaptation of the Bender, a non-verbal instrument, is being examined as such a tool for measuring the psychological orientation of a deaf individual to his environment. The present study is an attempt to add to the literature in the field of psychological evaluation and rehabilitation of deaf individuals.

CHAPTER 3

RESEARCH METHODOLOGY

General Design of the Study

This study was predicated on the Random Replications Design (Lindquist, 1956) which ". . . takes Type G and Type R errors, as well as Type S errors, into consideration in the test of significance" (page 200). It is described as an experimental design, and is based on replication of a previous study (Hutt and Feuerfile, 1963) with independent samples of subjects. The subjects for this study were assigned to one of the following three groups, matched for year of birth and sex: (1) Deaf individuals with deaf parents; (2) Deaf individuals with hearing parents; and (3) Hearing individuals with hearing parents. The focus of the design in this study was to allow for comparison between the three groups on Hutt's measure of adience-abience (1969a).

The Setting and Sample

This study was conducted in state schools for the deaf. These schools are the residential educational facilities serving the deaf and severely hearing impaired children from their respective states. In addition, a regular public high school was used for data collection with normally hearing individuals. The subjects in the experimental group were deaf students attending a state residential school; their ages ranged between 15 and 18 years at the time of testing.

Examiner

The examiner is fluent in all the various modes of communication employed by deaf individuals. All testing was done personally by the researcher of this study.

Physical Facilities

The testing sessions were conducted in suitable facilities at the residential schools. A well lighted, non-glare room was used for the testing. Comfortable chairs and a table or desk with a smooth surface, to prevent unintentional deviations in the drawings, were the only other considerations for the room.

Procedures

The Group I sample selected for participation in the study included all deaf students, as described in Chapter 1 of this study, in the selected residential schools for the deaf, for the academic year 1975-76 who have deaf parents. The Group II sample of deaf students were from the same schools, but have normally hearing parents. All the deaf subjects met the criteria for deafness noted in Chapter 1 of this study; deafness was the major disability, and the individual did not suffer from any additional disabling conditions. A control group (Group III), matched for age, based on year of birth, and sex, was randomly selected from a public high school. The random selection of the deaf students of hearing parents, and the normally hearing students of hearing parents, was based on a stratified random sampling procedure using a table of random members.

The administration of the H.A.B.G.T. is generally done in three phases. The first of these is the 'copy' phase, in which the individual is requested to simply copy the nine stimulus designs as he perceives them. In the 'elaboration' phase of the H.A.B.G.T., the individual is requested to modify the drawings, or to change them in any way, so as to make them more pleasing to himself. Finally, in the 'association' phase, the examiner presents stimulus card A alongside of the elaboration the examinee has made of it. The examinee is then told: "Now, look at the design on the card and look at the modification you made of it in your drawing. What does each of them remind you of? What could they be? What do they look like or suggest" (Hutt, 1969a, page 58)?

The directions for the administration of the 'copy' phase of the H.A.B.G.T., as well as the 'elaboration' and 'association' phases, are flexible and variable; the basic content is maintained to suit the level of functioning of the individual taking the test. Rainer and Altshuler (1960) state that

The overall goal in the treatment of deaf patients is to provide therapeutic services which are at least equivalent in professional standard to those available for the hearing. And as the primary and persisting handicap for the deaf is one of communication, the presence of a staff versed in manual language is an important step in achieving such equal services (Rainer and Altshuler, 1960, page 35).

In this context Levine (1960) states that the methods ultimately chosen, when giving directions for a test, depend upon the particular test task and the subject's language and communications abilities. She goes on to state that examiners must always bear in mind that ". . . the function

of test administration is to impart instruction, and that the manner of administration is dictated by a subject's communication needs rather than by the examiner's limitations" (Levine, 1960, page 185). "The language may be varied so as to make the meaning clear, as may be necessary for some children and for adults who have language problems, but the essential content is kept constant" (Hutt, 1969a, page 53). Therefore, the use of manual communication and/or pantomime in delivering instructions for the test provide the deaf individual with the advantage of not having to depend upon, or be limited by, his language structure in order to understand instructions or successfully complete the task.

In measuring adience-abience, only the 'copy' phase of the H.A.B.G.T. is used. The following test materials are needed for the 'copy' phase of the Hutt Adaptation of the Bender Visual Motor Gestalt Test: "(1) A number of medium-soft pencils (number 2-3 in hardness); (2) A stack of white, unlined 8½" x 11" bond paper; (3) A pencil eraser; and (4) The H.A.B.G.T. cards. The examinee should have a comfortable position for drawing and a stable, smooth writing surface on which to draw" (Hutt, 1969a, page 52).

For the 'copy' phase of the H.A.B.G.T. the examiner places the stack of bond paper near to the examinee, and also places the pencils and the eraser in an accessible position. He then places the nine H.A.B.G.T. cards in front of his own body, on the table, with the designs in a face-down position. The backs of the cards are thus exposed, in a pile, so that the examinee may see that there are a number of them, but is not told how many cards there are. The following instructions are then offered: "I am going to show you these cards (pointing to the

pile of cards), one at a time. Each card has a simple drawing on it. I would like you to copy the drawing on the paper, as well as you can. Work in any way that is best for you. This is not a test of artistic ability, but try to copy the drawings as accurately as possible. Work as fast or as slowly as you wish" (Hutt, 1969a, page 53).

Any questions put to the examiner by the examinee are answered either by paraphrasing the above instructions or by such non-leading statements as "That's up to you" or "Do it the way you think is best."

The examiner then takes a single sheet of paper from the stack and places it directly in front of the subject with the long (vertical) axis of the paper at right angles to his body. The first test card, card A, is then presented to the examinee with the instruction, "Copy this as well as you can."

Several of the administrative procedures for the 'copy' phase of the H.A.B.G.T. need to be clarified. (1) The stack of bond paper permits or encourages the maximum variance in the use of space. The single sheet presented to the examinee prevents his making impressions on the other sheets, in the course of his drawings which might be used as guides in making the subsequent drawings. (2) The stack of cards enables the subject to make some anticipatory adjustment in his planning, in possibly deciding where to place his drawings. (3) Placement of the single sheet of paper is with the long axis perpendicular to the examinee's body, but he is free to change its position. (4) Placement of test card provides for standard perceptual task, a change in the position may change its Gestalt quality. A first rotation is corrected

with the instructions, "You are supposed to copy it this way." An insistence on rotating the stimulus should be recorded in the Revised Record Form. (5) Pencils and eraser, of a medium soft type, help to maximize nuances produced by varying pressures while drawing and may serve as indicators of anxiety, frustration with the task, and the like (Hutt, 1969a).

The sequence of presentation is stimulus design "A" first, followed by 1, 2, 3, 4, 5, 6, 7, and 8 in numerical order. The examinee's method of work should also be observed and recorded as to:

- (1) Does he pre-plan, or act impulsively.
- (2) Does he count or proceed haphazardly, as on designs 1, 2, and 3.
- (3) Does he erase frequently.
- (4) Which part of the design does he attack first.
- (5) What is his direction of drawing and is it consistent.
- (6) Does he sketch.
- (7) Does he show unusual blocking on any figures.

The time used by the examinee is not recorded. However, should extreme variations in time occur, they should be noted on the Revised Record Form.

Although normative data obtained for Hutt's adience-abience scale is only tentative, it holds promise for usefulness after further research, such as this study, is conducted. The scoring for adience-abience on the H.A.B.G.T. is accomplished by the use of a scoring stencil (Appendix A) and rating form (Appendix B) on the following factors:

Revised Scale for Perceptual Adience-Abience*

Section A. Directions for Scoring.

1. Using the 'copy' phase of the H.A.B.G.T., score the drawings for each of the following factors by circling the weight that is relevant for the factor.

2. Each factor is assigned a weight from +2 to -2, or for maximum weight in adience to maximum in abience.

3. The adience-abience score is the algebraic total of the circled scores. The Corrected Score is this total plus a constant of 20.

4. The height and width limits for each of the figures (to be used for factors 1 and 2) are presented below.

<u>Figure No.</u>	<u>Height Limits (Inches)</u>	<u>Width Limits (Inches)</u>
A	0.67 to 1.00	1.18 to 1.97
1		3.11 to 5.20
2	0.27 to 0.40	2.94 to 4.96
3	0.67 to 1.10	1.14 to 1.89
4	1.10 to 1.81	1.00 to 1.67
5	0.79 to 1.34	0.79 to 1.34
6	1.02 to 1.76	1.97 to 3.31
7	0.97 to 1.53	1.10 to 1.81
8	0.35 to 0.59	1.85 to 3.07

Section B. Definitions and weights for adient-abient factors.

<u>Weight</u>	<u>Factors Relating to Space and Size</u>
-2	Space 1. Three or more of the figures are less than the limits for either height or width as indicated in No. 4 above.

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<u>Weight</u>	<u>Factors Relating to Space and Size</u>
-2	Height 2a. One or two figures are less in height than the limits for height, as indicated in Sec. A, no. 4 above.
-2	2b. Three or more figures are less in height than the limits indicated in no. 4 above.
+1	3a. Use of page. Uses more than three-fourths of the page for drawings.
	<u>Factors Relating to Organization</u>
	Sequence. (Defined in terms of shift or change from the preceding sequence of figures.)
+1	4a. Methodical sequence. Less than three changes.
-2	4b. Irregular or Confused Sequence. It is irregular when three or more shifts occur. It is confused when there is no apparent plan or the figures are obviously jumbled on the page.
+2	Placement of First Figure.
	5a. Normal placement. At least 1 inch from the top or side edge of the page, and within the upper third of the page.

Weight

- 1 5b. Abnormal Placement. Any of the following:
within one inch of any margin; center of figure
within one inch of center of page; center of
figure is below upper third of page.

Factors Relating to change in Form of the Gestalt

Closure Difficulty. (Defined as obvious difficulty in joining within a figure.) No more than two closure difficulties are scored for any single figure.

- +1 6a. Moderate Closure Difficulty. No more than five closure difficulties.
- 2 6b. Marked Closure Difficulty. Six or more closure difficulties.

Crossing Difficulty. (Defined as redrawing, sketching, erasing or increase of pressure at the point where lines cross each other in figures 6 and 7. When figure 6 is drawn as two tangential curves, this is not counted as crossing difficulty.

- +1 7a. No crossing difficulty.
- +2 7b. Marked crossing difficulty. Two or more crossing difficulties.
-

Weight

Change in Angulation. (Counted on figures 2, 3, 5, 6 and 7 when there is an increase or a decrease in angulation of 15° or more.)

- +2 8a. Increased angulation, marked. Present on three or more figures.
- +2 8b. Increased angulation, moderate. Present on one or two figures.
- 2 8c. Decreased Angulation, marked. Present on three or more figures.

Factors Relating to Distortion

Rotation. (Defined as a shift in or rotation of the figure, not the paper, from the standard orientation on the card.)

- +2 9a. Rotation, absent or mild--no rotation more than 14° on any of the figures.
- 2 9b. Rotation, severe. Rotation of more than 80° .

Fragmentation. (Breaking the Gestalt into component parts, or gross separation of the two parts on figures A, 4 and 7.)

- +2 10a. No Fragmentation Present.
- 2 10b. Marked Fragmentation. Present on two or more of the figures.

Weight

Simplification. (The use of a "substitute" figure which is simpler to draw or execute, other than by fragmentation, or by making symmetrical figures out of assymmetrical ones.)

- | | |
|----|---|
| +1 | 11a. No simplification present. |
| -1 | 11b. Moderate simplification. One or two figures. |
| -2 | 11c. Marked simplification. On more than two figures. |

Elaboration. (Any elaboration or doodling.)

- | | |
|----|---|
| +1 | 12a. No elaboration. |
| -2 | Marked elaboration. On more than two figures. |

(Hutt and Gibby, 1970, pages 37-39).

The individual's reproductions on the 'copy' phase of the H.A.B.G.T. are scored according to the given criteria, and the constant of 20 is added to eliminate negative scores in the corrected scores. A corrected score of 26.0 or above is taken as indicative of good capacity for change or benefit from counseling and/or therapy (Hutt and Gibby, 1970). This corrected score is the adience-abience score. As this score increases, the more adient the subject is presumed to be, while the lower the score, the more abient he is presumed to be.

Statistical Analysis of the Data

Analysis of variance (Winer, 1962) was used to test the hypotheses. Initially a test for heterogeneity of variance among the scores obtained for perceptual adience-abience was performed. The variance was found to be non-significant: therefore, a one way analysis of variance was undertaken to determine whether there was a significant difference between the means.

For this purpose Hartley's Test (Winer, 1962) was used, as it determines whether one of the assumptions of the test for significance of difference of means has been met. However, several authorities do question this procedure because of the demonstrated robustness of the analysis of variance even when differences of variances are found (Hays, 1965). Therefore, if heterogeneous variances were observed, they were reported along with appropriate reservations about the influence of such on inferences about significance of difference of means. It was felt, however, that should heterogeneous variances be observed, they should not invalidate the study.

The null hypothesis, that there are no significant differences in perceptual adience-abience as measured by the H.A.B.G.T. among the three groups, was tested with an analysis of variance. Initially, Hartley's test for homogeneity of variance (Winer, 1962, page 93) was performed. The results indicated that the samples were drawn from populations with homogeneous variances ($F=5.20$, $p > .05$). The results demonstrated that a departure from homogeneous variances of the treatment groups was not evident.

The analysis of variance was performed, based on the corrected audience-abience scores (Appendix C) and the means and standard deviations are reported in Table 1 with the analysis of variance results reported in Table 2.

Table 1. Sample Sizes, (N), Means, and Standard Deviations (S.D.) of the Three Treatment Groups

Group	(N)	Mean	S.D.
I	12	25.42	2.391589
II	12	27.17	3.040136
III	12	27.08	4.581749

Group I - Deaf individuals of deaf parents
 Group II - Deaf individuals of hearing parents
 Group III - Hearing individuals of hearing parents

Table 2. Summary for Analysis of Variance of Treatment Groups

Source	df.	S.S.	M.S.	F	Prob.
Between	2	23.38916	11.69	0.9758	0.3875
Within	33	395.4998	11.98		
Total	35	418.8889			

The results of the analysis of variance showed that the mean of Group I was slightly lower than the means of Groups II and III, but this difference was not statistically significant ($F=0.9758$, $p>.05$). Thus, the results of the analysis were not significant, and the null hypothesis

failed to be rejected. It was concluded that there were no significant differences between the groups in adience-abience as measured by the H.A.B.G.T. It was noted, however, that there was a difference in the scores of males and females. An analysis of the possible sex differences revealed that the males' mean scores across the groups were significantly higher than the females' mean scores across groups (see Table 3).

Table 3. Means and Standard Deviations of Males and Females in Groups I, II and III

		I	Groups II	III
Male	N	6.	6.	6.
	Mean	25.67	29.00	28.67
	S.D.	2.73	2.83	4.72
Female	N	6.	6.	6.
	Mean	25.17	25.33	25.50
	S.D.	2.23	2.07	4.23

An analysis of variance computed on the data yielded an F-ratio of 4.97, $p < .05$ and indicated that the difference between male and female means was statistically significant (see Table 4). The results in Table 4 also indicated that while the sex differences were significant, there was no significant sex by treatment interaction.

These findings were not specifically related to the research design established for this study, but are of interest for further research and investigation and will be discussed in Chapter 5.

Table 4. Summary for Analysis of Variance of
Treatment and Sex Differences

Source	df.	S.S.	M.S.	F	Prob.
Cells	5	94.56			
Sex	1	53.78	53.78	4.97*	.0334
Treatment	2	23.39	11.69	1.08	.3519
Interaction	2	17.39	8.69	0.80	.4568
Within	30	324.33	10.81		
Total	35				

*Significant at $p < .05$

All of the statistical analyses were computed using a PDP-10 computer and STATPACK-Version 4, a statistical package created at Western Michigan University.

CHAPTER 4

RESULTS AND DISCUSSION

Introduction

This study was designed to investigate the relationship between early childhood communication experiences and adience-abience as measured by Hutt's scale (1969a). The major hypothesis of the study was that, as an individual's early communication experiences were more free, fluid and natural, his later perception of and reaction to the world would be more positive or approach oriented (adient). The converse of this hypothesis was also thought to be true: the less positive the early communication experiences, the more avoidance or withdrawal oriented (abient) the individual would become in his relation to the world.

It was the opinion of this researcher, as was demonstrated in the hypotheses section of Chapter 1, and supported by related research, that deaf individuals of deaf parents would prove to be more adient than abient oriented. This was felt to be true because deaf individuals of deaf parents generally have the natural, non-frustrating and flowing communication so necessary for personal and inter-personal growth and development. The deaf parents of a deaf child do not feel the same frustration and anxiety in trying to communicate with their child that hearing parents do. With them there exists a natural language bridge, manual (total) communication, which facilitates the adient development

of the deaf child. On the other hand, the deaf child of hearing parents traditionally faces frustration at almost every turn in his early attempts at communication with his parents. This frustration frequently leads to the deaf individual's developing in a more withdrawn, abient, fashion.

In choosing the sample population for this study, the total population of deaf students of deaf parents (N=12) of two residential schools for the deaf was selected; the other two groups, deaf students and hearing students of hearing parents, were randomly selected and matched with Group I on the basis of age and sex. The size of the sample is small due to the difficulty in obtaining a sufficiently large sample of deaf children of deaf parents. This confirms previous research findings that only ten percent of deaf children are born to deaf parents.

Findings

In the primary analysis of the null hypothesis, that there were no significant differences in adience-abience among the three groups treated, it was found that the results did not reach the level of significance required to reject the null hypothesis. A two-way analysis of variance was performed and significant differences, based on sex, were found for the groups, with mean scores for males being higher than mean scores for females. This indicated that males in this sample tended to be more adient than females. This finding was not directly related to the research questions posed in this study, but may be important for the design and interpretation of future research in this area.

Discussion

Failure to reject the null hypothesis poses some pertinent questions when one considers the findings of so many researchers who have stated the advantages to a deaf individual, in his or her development, if one is born to deaf parents. The findings of this present study raise several points worthy of discussion.

The first of these is the possibility that adience-abience is a function of, or is influenced by, age and/or sex. A survey of the data in Appendix C indicated that younger individuals tended to score higher, more adiently, than older individuals. This may be more impressive than it seems at first glance when one considers the limited age range of the subjects. This trend suggests a negative, abient, influence on the individual as he experiences more of his environment and matures. Another variable impinging on the individual here is the distance, in time, from his early communication experiences. The question arises as to whether as one ages, does one naturally tend to become more defensive and abient oriented. Also, is it possible that the natural maturational process of the individual has reduced or eliminated the influence of early communication experiences on the measurable development of adience-abience in a deaf individual? A longitudinal study, utilizing a larger sample and encompassing a broader age range, would seem to be clearly indicated on the basis of these limited findings. The measured significant differences between males and females deserves further study so that any differences which may occur as a result of sex can be identified. The early communication relationships between parents

and children, male and female, and the influence of this relationship on the measured trait should be investigated and analyzed.

The next major point of focus for discussion is the instrument itself, the H.A.B.G.T. In the studies and research by Hutt and Feuerfile (1963), Hutt (1969a) and Hutt and Miller (1975), cited earlier in this study, impressive statistics and findings of validity and reliability were reported. The populations reported on in these studies were comprised of individuals either hospitalized or suffering from some other debilitating condition which required either institutionalization or professional care. As cited earlier, the original purpose and intent of the Bender Gestalt Test was the diagnosis of pathological conditions such as organicity, neuroses, or schizophrenia. In Hutt's reported significant findings and data, he was dealing with samples of populations in which some pathology existed. These findings, when compared to the findings of the current research, pose one major question. The question centers around the issue of sensitivity: how sensitive is the instrument to differences among, between, or within groups of individuals in whom there are no pathologically debilitating or handicapping conditions? The instrument and its scoring system as designed by Hutt (1969a) appear sufficiently sensitive to differences between pathological groups and/or individuals. However, the instrument may not be sufficiently sensitive to detect real differences when applied to individuals in whom there are no pathological conditions.

If such differences existed in the sample employed in this study, they were not detected. There is some reason to believe, on the basis of existing research and personal and clinical experience by this

researcher, that a difference between groups might have been expected. This difference would have been expected to appear in the manner and direction outlined in Chapter 1 of this study. Thus, the findings call into question the validity of this expectation, the ability of the instrument to test it, or both. The fact that no significant differences were discovered regarding the central hypotheses of this study is felt to be, in part, due to the lack of sensitivity of the instrument as described above.

Another variable which cannot be overlooked in regard to the non-significant differences is the sample size of the groups used in the study (N=12). A larger sample, and further definition of the individuals within the sample, might have produced more significant differences. However, the demographic reality of only 10% of deaf individuals being born to deaf parents was an uncontrollable and limiting factor. Therefore, a larger sample is strongly recommended for follow-up research. This larger sample should also investigate such variables as age of diagnosis of deafness, and age of placement in schools. This would permit the investigation of other variables impinging upon the development of perceptual adience-abience in a deaf population.

Summary

In investigating the relationship between scores on Hutt's Adience-Abience Scale, and early communication experiences of deaf individuals, no significant findings were obtained. A statistically significant relationship between sex and performance on the H.A.B.G.T.

was noted, however. Sample size and instrument sensitivity to differences among non-pathological groups and individuals were cited as potential contributing factors to the lack of demonstrated statistical significance.

CHAPTER 5

SUMMARY AND CONCLUSIONS

The purpose of this study was to examine the influence of early childhood communication experiences on the development of an individual's mode of perception and reaction to the environment. This perception and reaction was measured, in this study, by the Hutt Adaptation of the Bender Gestalt Test, utilizing the Perceptual Adience-Abience Scale. Research has shown that the earlier and more positively that communication begins in a child's life, the more positive (adient) will that individual's perception of himself and the world become. Also, with later, less positive, and more frustrating communication experiences, there will develop more negative (abient) perceptions for the individual.

It was hypothesized in this study that deaf individuals of deaf parents, Group I, would demonstrate a more positive perception of their environment than would deaf individuals of hearing parents, Group II. It was further hypothesized that both of these groups, deaf individuals of deaf parents and deaf individuals of hearing parents, would demonstrate a less positive perception of their environment than would normally hearing individuals of hearing parents, Group III.

Students from state residential schools for the deaf and a regular public high school were selected for participation in this study. The students were placed in one of three groups; the first group

consisted of all deaf students, age 15 to 19 years and having no other physically handicapping conditions, whose parents were deaf. The remaining two groups, deaf students and hearing students of normally hearing parents, were randomly selected and matched with the first group on the variables of age (as determined by year of birth) and sex. All three groups were administered the Copy Phase of the H.A.B.G.T., which was then scored by the examiner for perceptual adience-abience. Each student obtained a score on this scale. All groups were administered the examination in the mode of communication they were most familiar and comfortable with.

For the main data analysis, an analysis of variance was performed to assess the significance of the difference between the means of the three groups on the adience-abience score of the H.A.B.G.T. This analysis indicated that there were no significant differences between the groups, and therefore the null hypothesis could not be rejected. However, a further analysis, of possible sex differences, revealed that males tended to score higher (more adient) than females. While this point was not directly related to the research questions of this study, these results suggest an area worthy of further research.

Conclusions

Based on the results of this study, the following conclusions are advanced:

1. No differences were observed among the three groups tested on the scale of perceptual adience-abience as measured by the H.A.B.G.T.

2. Possibly the instrument itself may not be sufficiently sensitive to detect differences among groups when it is applied to groups of individuals similar to those used in this study.
3. The hearing status, deaf or hearing, of the parents of a deaf child did not exert an observable influence on the development of the environmental perception of the child as measured by the H.A.B.G.T.
4. There appears to be a relationship between sex and performance on the measured trait of the H.A.B.G.T., males tended to be more adient than females.

Recommendations

Based on the research and results of this study, the following recommendations seem to hold promise for further investigation:

1. Replicate this study, utilizing a larger sample.
2. Replicate this study, utilizing a younger population, ages ten and above, to identify any possible differences which may occur at this level.
3. Replicate Hutt and Feuerfile's (1963) study with mentally retarded deaf individuals, utilizing a matched comparison group of deaf individuals with no other handicapping conditions.
4. Replicate this study, utilizing an additional comparison group of hearing individuals of deaf parents.
5. Replicate this study, looking specifically at sex as a variable.
6. Conduct a longitudinal study with a population of earlier chronological ages, with follow-up after five years, to identify

any differences which may occur within individuals as they grow away from their early communication experiences.

7. Replicate this study, utilizing a comparison group of deaf individuals attending day school programs for the deaf.

APPENDIX A

REVISED RECORD FORM FOR THE H.A.B.G.T.

Revised Record Form*
THE HUTT ADAPTATION OF THE BENDER-GESTALT TEST

Name: _____ Date: _____ Exam.: _____ Handedness: _____
 Address: _____ Phone: _____
 Birthdate: _____ C.A.: _____ School or Educ. Status: _____
 Sex: _____ M or Single: _____ Physical Handicaps: _____

CONFIGURATIONAL FINDINGS

(Check the presence of all relevant factors. The presence of 5 or more factors in a configuration offers presumptive evidence for that configuration.)

<u>Intracranial Damage</u>	<u>Schizophrenias</u>	<u>Psychoneuroses</u>
<input type="checkbox"/> Collision	<input type="checkbox"/> Seq., Confused	<input type="checkbox"/> Seq. (Overly Method. or Irreg.)
<input type="checkbox"/> Angulation Diff. (Sev.)	<input type="checkbox"/> Abn. Placmt., A	<input type="checkbox"/> Size Underest. (Severe)
<input type="checkbox"/> Percept. Rot. (Severe)	<input type="checkbox"/> Size Over.; Space	<input type="checkbox"/> Isolated Changes, Size (Severe)
<input type="checkbox"/> Simplification	<input type="checkbox"/> Excessive Margin	<input type="checkbox"/> Curv. Diff. (Mild)
<input type="checkbox"/> Fragmentation (Sev.)	<input type="checkbox"/> Clos. Diff. (Marked)	<input type="checkbox"/> Angulation Diff. (Mild)
<input type="checkbox"/> Overlapping (Mod.-Sev.)	<input type="checkbox"/> Curv. Diff. (Marked)	<input type="checkbox"/> Rotation (Mild)
<input type="checkbox"/> Persev., Types a/b	<input type="checkbox"/> Percept. Rot. (Mdd.)	<input type="checkbox"/> Movement (Abnormal Dir.)
<input type="checkbox"/> Elabor. (Mod. only)	<input type="checkbox"/> Retrogression	<input type="checkbox"/> Movement (Inconsistent)
<input type="checkbox"/> Redr. Tot. Fig.	<input type="checkbox"/> Fragment. (Mod.-Sev.)	<input type="checkbox"/> Cross. Difficulty
<input type="checkbox"/> Incoordination	<input type="checkbox"/> Elabor. (Severe)	<input type="checkbox"/> Line Quality (V. Heavy, V. Light, or Markedly Inconsist.)
<input type="checkbox"/> Concretion	<input type="checkbox"/> Persev., Type b	
	<input type="checkbox"/> Redr. Tot. Fig.	
	<input type="checkbox"/> Simplif. (in chronics)	

DIAGNOSTIC FORMULATION

(Briefly summarize the most pertinent hypotheses, including: general type of pathology; degree of ego impairment; likelihood of further disorganization; kind and degree of anxiety; kind and degree of hostility; primary conflict areas; defenses and coping methods; potential for recovery.)

INSTRUCTIONS: Column A.—Use arrows to indicate direction of movement and number each element in the gestalt to indicate succession, i.e., ①②. Column B—Use a caret (^) to indicate the orientation of the top of the stimulus card. Column C—Use a caret (^) to indicate the orientation of the top of the drawing paper. Use Columns D and E to record the patient's significant verbalizations and test behavior, such as: questions, blocking, sketching, counting and other forms of excessive checking, expressions of

A	B	C	D Copy Phase	E Elaboration Phase
 <p>A.</p>				
<p>.....</p> <p>1.</p>				
 <p>2.</p>				
 <p>3.</p>				
 <p>4.</p>				
 <p>5.</p>				
 <p>6.</p>				
 <p>7.</p>				
 <p>8.</p>				

REVISED PSYCHOPATHOLOGY SCALE

(For definitions of factors and raw scores, where applicable, consult Chapter 7 of *The Hutt Adaptation of the Bender-Gestalt Test*, 2nd edition.)

Circle appropriate values and add for TOTAL SCALED SCORE

Factor	Value	Factor	Value	Factor	Value
1. SEQUENCE		7. CROSSING DIFF.		12. SIMPLIFICATION	
Confused/Symbolic	10.0	Severe	10.0	Severe	10.0
Irregular	7.0	Moderate	7.0	Moderate	7.0
Overly Methodical	4.0	Mild	4.0	Mild	4.0
Normal	1.0	Absent	1.0	None	1.0
2. POSITION, 1st Figure		8. CURVATURE DIFF.		13. FRAGMENTATION	
Abnormal	3.25	Severe	10.0	Severe	10.0
Normal	1.0	Moderate	7.0	Moderate	7.0
3. USE OF SPACE, I		Mild	4.0	Mild	4.0
Abnormal	10.0	Absent	1.0	None	1.0
Normal	1.0	9. CHANGE IN ANGUL.		14. OVERLAP. DIFF.	
4. COLLISION		On 5 figures	10.0	Severe	10.0
Extreme	10.0	On 4 figures	8.0	Moderate	5.5
Moderate	8.5	On 3 figures	6.0	None	1.0
Present	7.0	On 2 figures	4.0	15. ELABORATION	
Tendency, Extreme	5.5	On 1 figure	2.0	Severe	10.0
Tendency, Moderate	4.0	None present	1.0	Moderate	7.0
Tendency, Present	2.5	10. PERCEPTUAL ROT.		Mild	4.0
No collision	1.0	Severe	10.0	None	1.0
5. SHIFT OF PAPER		Moderate	7.0	16. PERSEVERATION	
On all figures	10.0	Mild	4.0	Severe	10.0
On 3-8 figures	7.0	None	1.0	Moderate	7.0
On 1-2 figures	5.5	11. RETROGRESSION		Mild	4.0
No Rotation	1.0	Severe	10.0	None	1.0
6. CLOSURE DIFF.		Moderate	7.0	17. REDRAWING	
Very severe	10.0	Mild	4.0	Very severe	10.0
Severe	7.75	None	1.0	Severe	7.75
Moderate	5.5	TOTAL SCALED SCORE = _____		Moderate	5.5
Mild	3.25			Mild	3.25
Absent	1.0			None	1.0

SCALE FOR ADIENCE-ABIENICE

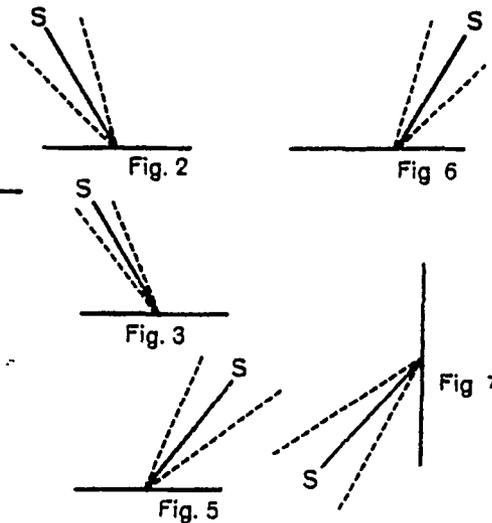
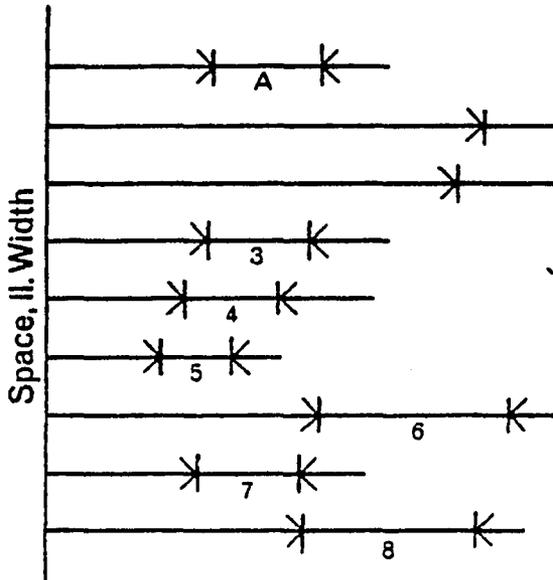
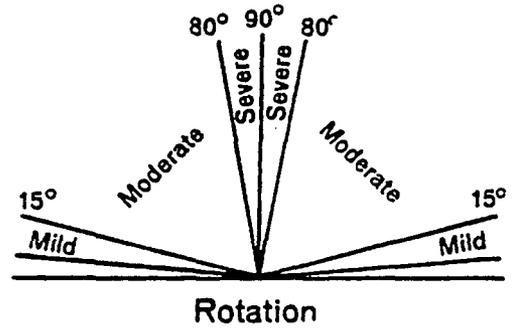
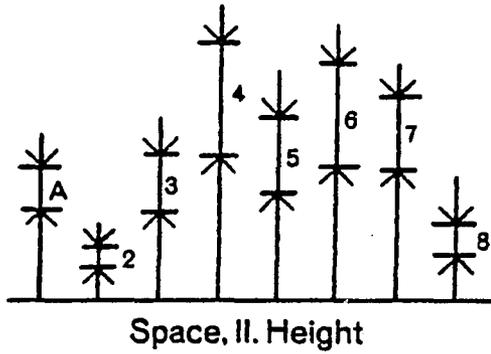
(See text for directions for scoring.)

Circle weights and add algebraically.

Weight	Factor	Weight	Factor	Weight	Factor
-2	Space, 1	+1	Mod. Clos. Diff., 6a	+2	Rot. Abs. 9a
-2	Height, 2a	-2	Marked Cl. Diff., 6b	-2	Rot. Sev. 9b
-2	Height, 2b	+1	No Cross. Diff., 7a	+2	No. Frag. 10a
+1	Use of Page, 3	-2	Marked Cr. Diff., 7b	-2	Frag. Sev. 10c
+1	Method. Seq., 4a	+2	Incr. Angul., 8a	+1	No. Simpl., 11a
-2	Irreg. Seq., 4b	+2	Incr. Angul., 8b	-1	Mod. Simpl., 11b
+2	1st Fig., Norm, 5a	-2	Decr. Angul., 8c	-2	Marked Simpl., 11c
-1	1st Fig., Abn., 5b			+1	No Elab., 12a
				-2	Marked Elab., 12b
TOTAL SCORE = _____					
CORRECTED SCORE = _____					

APPENDIX B

SCORING TEMPLATE FOR THE H.A.B.G.T.



SCORING TEMPLATE
for the
Hutt Adaptation of
The Bender-Gestalt Test

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Angulation

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APPENDIX C

MEAN AGE AND ADIENGE-ABIENGE SCORES FOR THREE GROUPS
(N=12) AND SEX DIFFERENCES

Corrected Adience-Abience Scores and Mean Ages for Groups I, II, and III

Subject	Group I			Group II			Group III		
	S	A	Ad-Ab	S	A	Ad-Ab	S	A	Ad-Ab
1	M	18	25	M	17	24	M	15	30
2	M	17	28	M	19	28	M	17	20
3	M	18	23	M	16	32	M	15	31
4	M	16	28	M	15	31	M	18	34
5	M	16	28	M	15	29	M	16	29
6	M	16	22	M	17	30	M	18	28
7	F	16	24	F	15	29	F	16	27
8	F	17	27	F	18	24	F	17	26
9	F	18	24	F	18	25	F	16	28
10	F	15	22	F	16	26	F	18	17
11	F	16	28	F	17	30	F	18	28
12	F	18	26	F	16	25	F	17	27

Group I - Deaf of deaf parents
 Group II - Deaf of hearing parents
 Group III - Hearing of hearing parents

S - Sex
 A - Age
 Ad-Ab - Adience-Abience Score

Group I

\bar{X} Ad-Ab = 25.41666
 M = 25.66666
 F = 25.16666
 \bar{X} Age = 16.75
 M = 16.83333
 F = 16.66666

Group II

\bar{X} Ad-Ab = 27.16666
 M = 29
 F = 26.5
 \bar{X} Age = 16.58
 M = 16.5
 F = 16.66666

Group III

\bar{X} Ad-Ab = 27.08333
 M = 28.66666
 F = 25.5
 \bar{X} Age = 16.75
 M = 16.5
 F = 17

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