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AN INTERDISCIPLINARY APPROACH IN THE IDENTIFICATION OF MENTALLY RETARDED INDIAN CHILDREN. PILOT STUDY.
BUREAU OF INDIAN AFFAIRS, WASHINGTON, D.C.

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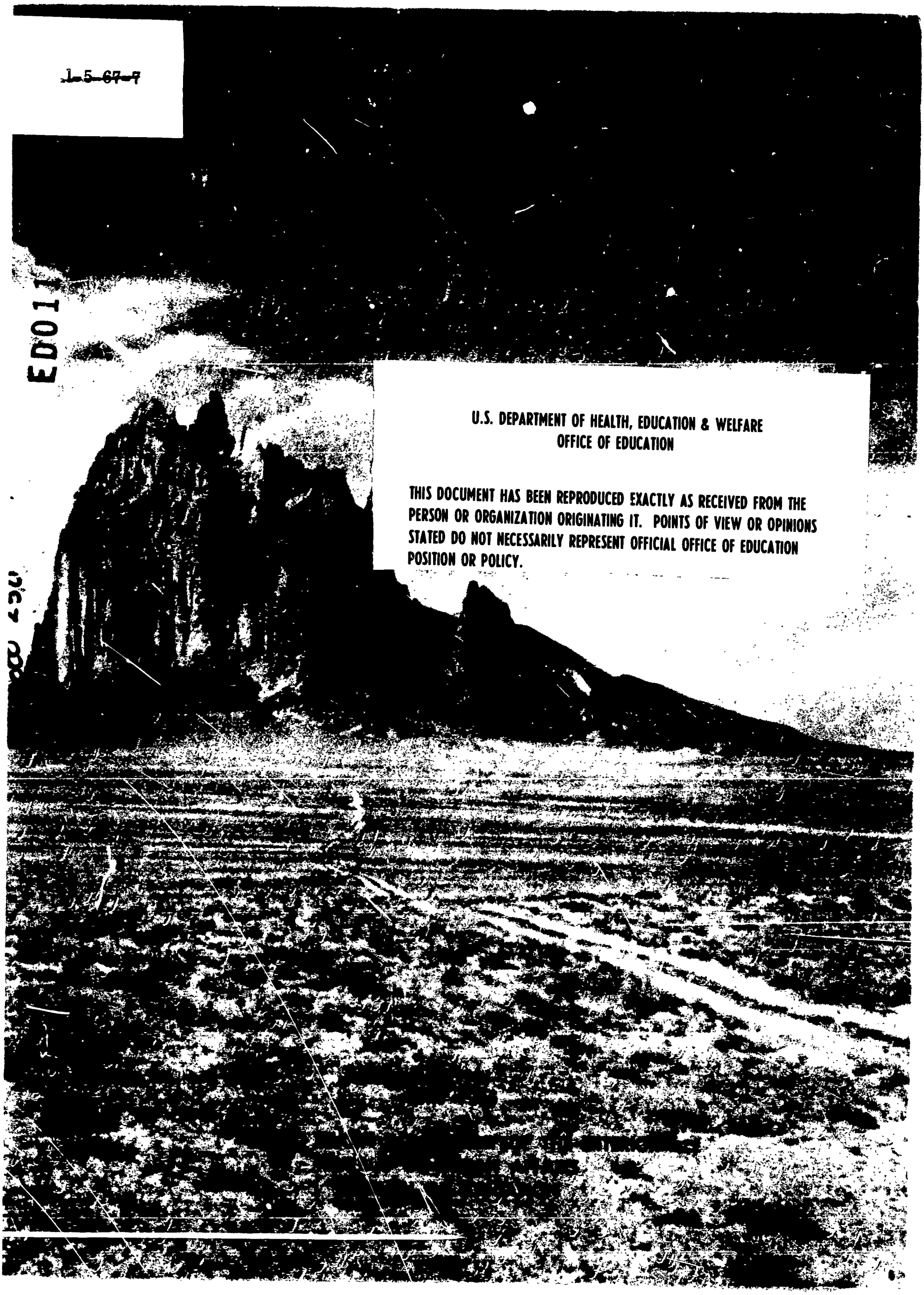
A 1-YEAR PILOT STUDY SCREENED 1,200 NAVAJO INDIAN CHILDREN ENROLLED IN INDIAN BOARDING SCHOOLS OF SAN JUAN AND SHIPROCK, NEW MEXICO. A TEACHER REFERRAL FORM USED FOR INITIAL SCREENING LOCATED 56 CHILDREN BETWEEN THE AGES OF 7 AND 14. INDIVIDUAL BEHAVIOR PROFILES WERE PREPARED FROM PSYCHOLOGICAL AND MEDICAL EVALUATIONS AND SOCIAL HISTORIES. THIRTY-FIVE CHILDREN WERE JUDGED TO BE EDUCABLE MENTALLY RETARDED, AND 15 CHILDREN WHO HAD OTHER HANDICAPPING CONDITIONS NOT RELATED TO MENTAL RETARDATION WERE REFERRED TO OTHER AGENCIES. THREE CHILDREN WHO WERE DIAGNOSED AS BEING SEVERELY RETARDED, BRAIN INJURED, AND EMOTIONALLY DISTURBED WERE REFERRED TO A RESIDENTIAL HOSPITAL. THE REMAINING THREE WERE CONSIDERED NORMAL CHILDREN AND INAPPROPRIATE REFERRALS. PLANS WERE MADE FOR FOUR SPECIAL CLASSES OF 10 CHILDREN EACH TO BEGIN IN SEPTEMBER 1965. TEACHERS WERE TO RECEIVE SPECIAL TRAINING. RECOMMENDATIONS BASED ON THE STUDY ARE MADE. AN APPENDIX CONTAINS THE TEACHER REFERRAL FORM, SOCIAL HISTORY OUTLINE, STAFF DIRECTORY, STANFORD ACHIEVEMENT TEST DATA, ESTIMATED COST OF STUDY, AND THE DIAGNOSTIC SUMMARY AND INSTRUCTIONAL CLASSIFICATION FOR TWO OF THE CHILDREN. (JA)



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An Interdisciplinary Approach in the Identification of Mentally Retarded Indian Children

Pilot Study

June 1965

Summary Statement of Purpose

The purpose of this report is, first, to present the results of a one-year pilot study using an interdisciplinary approach in the identification of mentally retarded Indian children; second, to make specific suggestions for revisions of the procedures and techniques utilized in the pilot study; and, finally, to make recommendations for follow-up actions which the medical, clinical, and educational staff agreed were of particular importance above and beyond the results of this particular pilot study.

Summary Review of Project Design

Although the immediate aim of the pilot study was to develop a method of identifying mentally retarded Indian children, the long-range goal was not different in kind from the goal of educating any child; that is, to pinpoint the children's individual differences in order to provide each child with a meaningful and appropriate instructional program which will assist him in fulfilling his particular individual potential for a useful, rewarding, and creative life as an adult citizen.

Definition of Population

For purposes of this pilot study a mentally retarded child was defined as the term is used in the report of the President's Panel on Mental Retardation. ". . .the mentally retarded are children and adults who, as a result of inadequately developed intelligence, are significantly impaired in their ability to adapt to the demands of society. . ."[1/] Within this very broad

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1/Report on President's Panel on Mental Retardation. 1964.

definition, it was assumed there would be two general classifications within which mentally retarded children would tend to cluster.

Type A: Individuals so markedly deficient in their cognitive and affective abilities and potentialities for purposive striving that they stand out as defective in any civilization. They are equally ill-adapted in a society of savants and a society of primitives. They are not only deficient intellectually, but in every sphere of mentation.

Type B: Another and larger group of individuals are those whose limitations are definitely related to the standards of the particular society which surrounds them. In less complex, less intellectually centered societies than ours, they would have no trouble in attaining and retaining equality of realizable ambitions. Some might be capable of gaining superiority by virtue of assets other than those measured by intelligence tests. They could be successful hunters, fishermen, tribal dancers or, in our urban society, achieve proficiency in so-called unskilled and semi-skilled jobs.[1/]

The principal shortcoming of this group is a greater or lesser degree of inability to comply with the intellectual requirements of their society. In other respects they may be as mature or immature, stable or unstable, placid or moody, as any other member of the human specie. Their "deficiency" is an ethologically determined phenomenon relative to the local standards and, even within those standards, relative to educational postulates, vocational ambitions, and family and community expectations. They are "subcultural" in our society because of intellectual inadequacy.

It should be pointed out that it was assumed that very few Type A severely retarded Indian youngsters would be identified by the pilot study since these children are not usually enrolled in school but are kept at home or institutionalized.

Since the pilot study took place on the Navajo Reservation, most of the youngsters enrolled in elementary boarding schools are educationally retarded due to cultural, social, and linguistic factors. The particular problem of identification and selection criteria was, then, to select out of this total population those youngsters who, in addition to academic and social retardation, also demonstrated clinical evidence of ". . .inadequately developed intelligence. . .to the degree that they. . .are significantly impaired in their ability to adapt to the demands of society. . . ."[2/]

[1/] Mental Subnormality. Richard Mosland, Seymour Sarason, and Thomas Galdwin. New York: Basic Books Inc. 1958.

[2/] President's Panel on Mental Retardation.

Locale

Shiprock and San Juan boarding schools located at Shiprock, New Mexico, on the Navajo Reservation were selected as the site for the pilot study because of their close proximity to Shiprock Indian Hospital, and the fact that their approximate enrollment of 1,200 children ranged from beginner groups through junior high school. This combination of factors constituted an appropriate environment for the proposed pilot study.

Procedures

Organizationally, the project was planned in the following five overlapping phases.

Phase I - Gross screening of the total enrollment of Shiprock and San Juan boarding schools, using a teacher referral form to identify those youngsters whom the teachers knew or suspected of being mentally retarded in addition to their other problems.

Phase II - Preparation of individual behavior profiles on the referral group. Home visit and social history by Bureau of Indian Affairs, Welfare personnel, past medical history, and preparation of cumulative folder for use by the medical and clinical staff.

Phase III - Medical and clinical examinations of the referral group. Studies included psychological testing (Wechsler Intelligence Scale for Children; Porteus Maze; Goodenough Harris Draw-A-Man; a modified Thematic Apperception Test; and Bender Gestalt), pediatric and neurological examinations, electroencephalograms, speech and hearing evaluations, and ophthalomological and psychiatric evaluations on referral from the above staff.

Phase IV - Staffing[1/] of individual children for purposes of arriving at a decision as to which children were mentally retarded and in those cases where data did not substantiate a diagnosis of mental retardation but did indicate the existence of other types of handicapping conditions, the child to be referred to the appropriate agency for treatment.

Phase V - Instructional classification, class organization, and implementation of teacher training program. Classes to be scheduled for September 1965. Analysis of data and preparation of the final progress report on the limitations and strengths of an interdisciplinary approach to the problems of identification of mentally retarded Indian children.

[1/] The term "staffing" refers to the medical practice of bringing together the hospital staff for purposes of discussion of medical problems, establishing a diagnosis, and agreeing on a course of treatment.

Gross Summary

The referral group was composed of 56 youngsters, 34 boys and 22 girls who ranged in age from 7.0 through 14.10 with an average chronological age of 12.06. They had attended school from 1 to 8 years with an average of 4.3 years school attendance. On the Weschler Intelligence Scale for Children their full scale scores ranged from 45 through 111 with an average I.Q. from the group of 68. Preliminary diagnostic classification identified a total of 38 out of the 56 referrals as being children who ". . . as a result of inadequately developed intelligence were significantly impaired in their ability to adapt to the demands of society."[1/]

Three of this group were found to be severely mentally retarded, brain-injured and deeply disturbed. They were dropped from the pilot study and referred for placement to the Los Lunas residential hospital which provides medical and educational care for trainable retardates. The Bureau of Indian Affairs Welfare personnel assumed the responsibility for followup on this recommended placement of the children. The remaining 35 mentally retarded youngsters were judged to be educable and able to profit, in varying degrees, from a specialized instructional program for educable mentally retarded and/or brain-damaged children.

In addition to the above 38 children, 15 youngsters were found to be suffering from various types of handicapping conditions not associated with mental retardation or brain injury including, for example, emotional disorders, hyperthyroidism, hearing impairment, and visual defects. Medical personnel at the Shiprock Indian Hospital assumed the responsibility for followup on this group of youngsters. It was not considered necessary for this group of children to be programed for special education, although three or four would profit from individual tutoring in order to bring them up to grade level.

An additional three children who had been referred in June of 1964 were attending public schools at the time the staffing took place. Results of the diagnostic studies and reports by their public school principals and school nurses indicated these three boys, all large husky teenagers, were normal, healthy youngsters with average or above-average intelligence and were dropped from the pilot study as "inappropriate" referrals with no need for followup or further workups of any kind.

It should be emphasized that no single criteria was used to classify a child as mentally retarded. For example, an I.Q. score of 46 was not in itself considered to be particularly meaningful or valid as an index of mental

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[1/] President's Panel on Mental Retardation.

retardation. However, if this score was made by a child 12 years of age who, after 5 years in school, was working at a first-grade level; whose past medical history stated he was hospitalized for a head injury at 4 years of age; whose parents feel he is "different" from their other children since the accident; and whose medical examinations indicated an abnormal EEG, positive neurological findings, and an inability or "unwillingness" to follow verbal instructions, then an I.Q. of 46 was used as one of a number of appropriate and meaningful factors in classifying this particular child as mentally retarded.

The point of view outlined in the above example may be defined roughly as follows: The term "mental retardation" is a generic one which achieves educational significance only when sufficient information is provided concerning a specific child's life experience and total body functioning in a learning situation. When this information is made available it will become apparent that a number of factors or variables, when combined together, outline a pattern of data which indicates that this child, in comparison with his peers, is intellectually impaired to the point where he is unable to adapt to the demands of his (classroom) society without specialized teaching techniques not normally a part of teacher training or classroom management.

Once this point of view is accepted, then it follows that the task of identification and classification of mentally retarded children is the proper province of an interdisciplinary staff and not any one single discipline.

Specific Procedural Limitations

Phase I: Teacher referral form and gross screening of the total school population.[1] While it is quite clear that insofar as this particular study is concerned the teacher referral form was fairly accurate in screening out of the total school enrollment those youngsters whose learning and behavior problems were and still are a result of or associated with mental retardation, one source of vital information concerning the out-of-classroom behavior of the children referred to the study was completely overlooked in preparing the form.

No space was provided on the referral form for comments and observations of the teacher guidance and dormitory staff which supervise all of the children during all of their non-school hours. In addition to this gross inadequacy in reporting pertinent information as to the children's out-of-school behavior the oversight itself was not recognized until the pilot study was so far advanced that the information which could have been made available by the teacher guidance and dormitory staff would have been too late to be of use

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[1] See Appendix for teacher referral form.

to the examining staff because it had already completed its studies. Certainly if any future use is made of this particular teacher referral form or any other such form, space should be provided for comments and observations by teacher guidance and dormitory personnel.

It also was suggested that rather than confining the role of referral agent to classroom teachers it might have provided a more representative sample of disturbed and/or damaged children if teacher guidance and appropriate dormitory personnel had been included as referral agents. This suggestion should be given thoughtful consideration in planning future pilot studies involving atypical children.

Phase II: Preparation of individual behavioral profile on the referral group, home visit and social history, past medical history, and preparation of the cumulative folders for use by the medical and clinical staff.

1. In the current study insufficient time was allowed in planning the project to prepare the behavioral profiles on 32 children out of the total referral group. This limitation handicapped the social workers when making their home visits since they had no specific information from the school personnel which they could use in explaining to parents why their child's academic performance was a source of concern.

This particular organizational breakdown was due to the fact that the distribution of the teacher referral forms took place too late in the school year to reach the major proportion of teachers, and a second period of time had to be allocated in the fall to complete the task. In the future, plans to use teacher referrals as a screening device should be scheduled no later than April.

2. There was unanimous agreement on the part of members of the diagnostic staff that the single most important piece of data was the social history provided by the Bureau of Indian Affairs Welfare personnel. The format of these histories[1/] was developed in cooperation with the medical staff and incorporated whenever possible information on the mother's pregnancy, birth and delivery, age at which the developmental stages took place (weaning, sitting, walking, talking, and toilet training), any history of fevers, convulsions, seizures, fainting spells, accidents, and infections, as well as the social and economic status of the family, family constellation, and interrelationships.

Because these histories are so detailed, and the majority of parents lived so far from the boarding schools where their children were enrolled, and

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[1/] See Appendix for the social history outline.

because parents were frequently away and visits had to be repeated, it required an average of 11 hours per child or a total of approximately 644 hours over and beyond their normal duties and responsibilities for the Welfare staff to complete the social and developmental histories. In spite of this fact approximately three-fourths of the histories were available to the examining staff by the time the diagnostic studies were scheduled, and by the time the staffing of the youngsters began all histories had been completed.

Although this particular aspect of the project was completed it was handled in addition to the routine workload, and was only possible because of the high degree of professional interest in the aims and goals of the pilot study. In the future every effort should be made to provide additional staff, both professional and clerical. If this is totally impossible, then the organizational plans should provide at least 8 months per 50 children for home visits and preparation of the social histories. This period of time should precede the diagnostic period, otherwise the data will not be available to the examining staff.

Phase III: Medical and clinical examinations of the referral group.1/

This phase of the project is not only the most expensive but presents extremely complex problems of coordinating and scheduling. Funds, personnel, and hospital facilities for this particular phase of the pilot study, were provided by the Public Health Service, Division of Indian Health. The importance of this contribution to the project can be quite simply defined. Without it there would have been no such pilot study.

It should be kept in mind, however, that when the services of a medical staff are employed the project coordinator has a full-time responsibility to see that the scheduling of children for the examinations proceeds with a maximum of efficiency and a minimum of lost time on the part of both physicians and children.

In this particular study it was possible to provide space in the Shiprock boarding school for the individual psychological testing, the speech and hearing examination; and for the consultant psychiatrist.

Since the person administering the psychological test battery was a member of the teacher guidance staff, it was a simple matter for him to arrange his own testing schedule with the teachers of the referral group. In making arrangements for the use of school personnel to participate in a study of

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1/See Appendix for names and affiliations of the administrative, medical, and clinical personnel who served on the project staff.

this type it is wise to provide, when possible, for a substitute to cover the position held by the school staff member, prior to the actual test administration, if the individual is to be responsible for any large scale testing program. This point is made because many people do not realize that administering, scoring, and writing up test protocols is a very time-consuming process, particularly when more than one type of test is involved and when the youngsters being tested speak English as second language and are members of a subcultural group.

The scheduling of the children for the speech and hearing examinations was expedited by the school secretaries who called the children out of their classrooms. As each child left the examination room the project coordinator brought the next child and his cumulative folder into the examination room. A Navajo-speaking interpreter familiar with the administration of speech and hearing examinations was provided by the Shiprock Indian Hospital and worked closely with the audiologist. With the exception of an interpreter, the same combination of personnel and scheduling procedures was used in meeting the needs of the consultant psychiatrist.

One suggestion made by the psychiatrist which bears thinking about concerns his expressed need for someone familiar with the children and trusted by them to spend some time interpreting to them the reason why they were scheduled to "talk to the doctor" about their problem(s). In this particular study no arrangements of this type were provided except in a few cases, because the coordinator felt there was no particular reason for assuming that the youngsters needed any such interpretation. They had already participated in all of the other diagnostic studies and were fairly sophisticated concerning the reason for the examinations; namely, to help us become better teachers by learning more about them, and why they had trouble learning to read, write, and to do arithmetic. It had not occurred to the coordinator that the interpretation of the purpose of a psychiatric interview to the children might be of assistance to the consultant psychiatrist in structuring the interview. As it was, the interviews were not particularly fruitful since the children sat quietly waiting for whatever it was this particular doctor wanted them to do. And the doctor sat quietly waiting for these particular children to tell him what their problems were.

An attempt was made to schedule the neurological examinations and electroencephalograms in the Shiprock boarding school because it reduced the scheduling problems to a minimum, but after a very short time it was quite clear that the school plant facilities were totally inappropriate and the physicians and EEG technician were transferred to space in the Shiprock Indian Hospital where proper medical facilities were available. A Navajo-speaking nurse assisted the physicians in their work while the coordinator worked out problems of delivering children to the physicians and returning them to their classrooms or dormitories with the assistance of the teacher guidance and dormitory staff.

It should be noted that when hospital facilities are being used for scheduling children for examinations and the consultant physicians are from out-of-town, the coordinator must spend full time at the hospital in order (1) to act as liaison between hospital and school personnel, (2) to make certain children are not left unsupervised, and (3) to be of assistance in any way possible to the consultant physicians, hospital administrator, and nursing staff. This is particularly important when the examining physicians schedule their workups on weekends or holidays because those particular days are precisely the time when the hospital staff is least in number and most overworked. The same may be said for guidance and dormitory personnel insofar as weekends and after-school hours are concerned.

In this particular pilot study, the fact that the diagnostic period was completed with maximum efficiency and with a minimum of frustration on the part of examining physicians is largely due to the fact that the hospital administrator, the welfare staff, and the principals and the supervisory staff of the two schools did everything within their power to provide maximum support for the project, whether it was in the form of a principal driving children to the hospital and back to his school, the hospital administrator finding a soundproof room in the hospital for the EEG technician, or a social worker taking a child home for lunch because no one else remembered that if the child waited for the EEG to be completed he would be without food from dawn to dusk. The importance of this kind of interagency cooperation and support is, quite simply, beyond measurement of definition.

Phase IV: <u>Staffing of individual children for purposes of arriving at a decision as to which children were mentally retarded and which were suffering from difficulties not associated with mental retardation</u>.

It is important at this point to be reminded that the approach used in this project was an interdisciplinary one. This point is emphasized because it means that the coordinator should make every effort to set the actual dates for the staffing as early in the project as is possible. Only by planning months ahead is one able to get an agreement among a group of busy physicians, who do not normally work together as to when they can meet on a given date or dates. Once the dates are set every effort should be made to avoid changing them, even if it means one or two of the staff may not be able to attend since changes in dates usually set off a chain reaction of other changes in such things as payment of fees, travel orders, and the followup work which normally postdates the staffing of atypical children.

In planning the agenda it is helpful, though not essential, to schedule the first halfday the staff meets together those children about whom there will be a minimum of conflicting opinions. This procedure builds a solid sense of achievement and success in working together as a group and provides a basis upon which problems of terminology and variations in professional viewpoints can be worked through with a minimum of frustrations. It is

helpful to avoid scheduling in sequence children who represent complicated problems in differential diagnosis since the discussions will tend to wander from the specific children in question to the ever-fascinating exploration of etiology and symptoms of diseases and damage in general.

For example, a total of four days was scheduled for staffing the 56 children with a break of approximately a month between the first two and the second two days. The schedule for the first two days provided an hour per child for eight children per day in order for the staff to work through communication problems. By increasing the working day by only an hour and a half, the remaining 40 youngsters were staffed the second two days without sacrificing pertinent discussion or deleting data.

It has been suggested that it might not be necessary to have the members of an interdisciplinary staff physically present at a staffing of a referral population if the results of their various medical examinations are made available. It should be pointed out, however, that any pilot study or research project involving problems of identification and classification of children with exceptional needs includes complex problems of differential diagnosis. When the approach to the problem is an interdisciplinary one, then it is essential that the members of a diagnostic staff resolve the problems of differential diagnosis in a face-to-face situation. Otherwise, one runs the risk of ending up with a collection of written reports with conflicting diagnostic impressions as to the nature of the children's disabilities--or lack of them--and no way of arriving at a resolution of the problem of establishing a differential diagnosis.

In this particular pilot study one of the most rewarding experiences growing out of the diagnostic studies and staffing was the identification of specific handicapping conditions which interfered with the learning process and which are, in some cases, reversible with proper medical treatment. One child, for example, who had been referred as seriously emotionally disturbed, a compulsive eater, thief and probably mentally retarded was found to be suffering from hyperthyroidism. With proper medical treatment the ravenous appetite which prompted the child to steal food, his random, restless, hyperactivity, irritability, and the other symptoms associated with hyperthyroidism were brought under partial control, and at the last report this youngster was busily engaged in acquiring friends and academic skills. Of the total referral group, the underachievement and antisocial behavior associated with specific handicapping conditions identified in 15 children were found reversible, in varying degrees, with proper medical attention.

Several youngsters were found to have large cafe au lait spots or several small ones. This condition was of particular interest to the neurologist and the pediatrician who pointed out that such spots are sometimes associated with Recklinghausens disease, a relatively rare condition marked by pigmentation of the skin (cafe au lait spots) and the occurrence of multiple small fibrous tumors of the skin and along the course of the nerves. Mental

retardation is one of the results of the disease which is believed to be a hereditary one. Welfare workers agreed to make followup home visits to the families of these youngsters in an attempt to locate any adult retardates who were known to have the cafe au lait spots. Additional studies of the youngsters at the Shiprock Indian Hospital are scheduled, should the results of the home visits indicate the need for followup.

A second finding of particular interest to the diagnostic staff was the fact that out of the 53[1/] children given electroencephalograms 28 were abnormal. These abnormal EEG's had a high correlation with the results of the other studies and examinations which identified those youngsters with mental retardation.

The use of the EEG as a diagnostic instrument is usually viewed with extreme caution but in this particular study, as well as in a number of other comparable projects, it appeared to be a somewhat more reliable index of learning problems associated with mental retardation and/or brain injury than is generally assumed. The extent of the significance of this finding, however, will have to wait until a comparable study with normal controls is undertaken.[2/]

In a number of cases it was evident from the social history that other members of the family in addition to the child referred to the pilot study were known to be "slow" or mentally retarded. The precise number of families falling in this category is not known since the importance of this particular kind of information was not established at the time that the home visits and social histories were first initiated. A proposal for further inquiry into this aspect of the pilot study is outlined in the "Recommendations and Conclusions" section of this report.

One of the most interesting results of the diagnostic studies and staffing of the youngsters is the almost complete absence of that pattern of learning and behavior characteristics which are so frequently found among some brain-injured and mentally retarded non-Indian children.

In general, this pattern of characteristics may be described as follows: A hyperactive acting out behavioral response pattern, forced responsiveness to stimuli, reversals, rotations, perseveration, short attention span, impulsivity, distractibility, visual-motor and visual perceptual problems, immaturity, dissociation, and disturbances in figure-ground relationships.

[1/] Three children had recently been hospitalized and EEG's were made available to the project neurologists by the hospital staff.

[2/] See "Recommendations and Conclusions" for a preliminary proposal for followup study of this finding.

Language and speech behavior frequently demonstrates clinical evidence of dyslalia, dysarthria, clutter and/or stutter symptoms. Expressive speech is frequently characterized by evidence of infantile perseveration, substitutions, omissions, and a wide variety of articulation problems. Neurologists find these youngsters are frequently not orientated for time and space, and are unable to resolve double simultaneous testing or to transpose left and right and have difficulties in fine and gross motor coordination, constituting a common problem for the learner and the teacher.

The above pattern of disabilities does not, of course, describe any single child and the specific disabilities may appear in any combination. No single factor alone is particularly significant, and there are some youngsters who demonstrate the above pattern of learning and behavior disabilities who do not demonstrate evidence of being either brain-injured or mentally retarded. What one can say, however, is that among groups of non-Indian youngsters known to be brain-injured and mentally retarded, the above pattern of specific learning and behavior disabilities is a familiar one.

The group of 56 youngsters studied in this particular project does not fit this pattern. In general, they are quiet, soft spoken, and well behaved and presented no problems of control even when waiting in the halls of the hospital for as much as two hours at a time for the various medical examinations. Only one child was identified as having problems in right-left orientation. The audiologist found a minimum of articulation defects, no evidence at all of central language disorders, clutter, and/or stutter problems. It may be that the brevity of the examinations combined with the children's generally limited use of English as a second language reduced the chances of identifying these very complex and sophisticated problems of language formulation, but the audiologist was an experienced person well acquainted with Navajo youngsters and until such time as a more detailed speech and language examination can be undertaken one must assume that this particular group of youngsters does not share the specific learning disabilities of their mentally retarded, brain-injured, non-Indian counterparts.

In discussing this aspect of the results of the pilot project, it was generally agreed that the absence of the all-too-familiar pattern of specific learning and behavior disabilities is a result of cultural differences. While this may be true, it is hardly an explanation as to what specific kinds of life experiences in the Navajo culture eliminates or ameliorates the results of damage to the central nervous system to the point where the results of the damage are not demonstratable in the clinical setting.

A second possibility not to be ignored is that the problems do exist but because of cultural differences the symptoms of the damage, particularly in the area of speech and language development, are more subtle and less amenable to the diagnostic skills and techniques utilized in this particular pilot study. Whatever the explanation it behooves us to inquire more deeply into the problem rather than to sluff it off under the heading of an example of "cultural differences."

For example, one of the implications of this finding is the need to be extremely alert to the possibility that teacher training programs designed for non-Indian mentally retarded children may be entirely inappropriate to the education of Navajo mentally retarded children.

Phase V: Instructional classification, class organization and implementation of teacher training program.

This phase of the pilot study cannot be reported upon in any detail because it follows the writing of the report. Plans have been made for four classes of approximately ten students, each, to begin special educational training in September of 1965. These classes will be located at Teecnospos boarding school on the Navajo Reservation.

Teachers are in the process of being selected as well as two teacher aids who will assist the four teachers in the preparation of the individualized instructional materials, the recording of progress reports, and in the supervision of group activities when the teacher needs to spend time with an individual child. Plans are underway to provide the four teachers with summer school training in specialized teaching methods for mentally retarded and brain-injured children.

Instructional grouping will take place after the spring achievement testing is completed. Evaluation of the usefulness and appropriateness of the specialized teaching methodology devised for mentally retarded non-Indian children in establishing educational programing for Navajo youngsters will have to wait until at least one academic year has been completed. A complicating factor is that the major proportion of the youngsters assigned to the pilot study classes have already spent several years as frustrated learners, and it will be several months or perhaps the entire year before many of the youngsters will be freed of their assumption that they are unable to learn. Ideally, screening for youngsters with mental retardation should be initiated with the beginner and first-grade groups in order to avoid the ego-crushing experience of repeated school failure.

Recommendations, Suggestions, and Conclusions

The section of the report below contains a wide variety of recommendations and suggestions. Some of them represent the best thinking of the combined membership of the administrative and diagnostic staffs. In other cases the suggestions concern the use of more efficient management techniques at the operational level. There are also practical recommendations for implementing the beginning of a Bureauwide, or at least a greatly expanded program for the identification of atypical children. In two cases preliminary proposals for basic research projects are presented in outline form. In reporting

these various recommendations and proposals no attempt has been made to screen out suggestions which might be considered administrative or financially impractical at this time. Rather, the intent has been to provide some guidelines for staff consideration as to the next steps the Bureau should undertake, if it is to implement the results of the pilot study.

1. Revision of the teacher referral form to include space for teacher guidance, and dormitory personnel to record their observations of children during out-of-school hours.

2. Inclusion of a section in the teacher referral form which would describe infantile speech patterns, cluttering, reversals, omissions, and substitutions as well as articulation defects.

3. The inclusion of a standardized achievement test in the psychological test battery. It was also recommended by the project psychologist that the Revised Stanford-Benet Forms L and M, should be included. (Note: It is the project coordinator's impression that this highly verbal test would penalize youngsters with difficulty in using English as a second language.)

4. Use of the teacher referral form in screening beginners and first-grade pupils in the Shiprock Subagency elementary schools for youngsters suspected or known to be mentally retarded. The teacher referral form is to be accompanied by the Goodenough-Draw-A-Person and the Stanford-Benet Draw-A-Diamond tests for children 7 years of age or older.

5. Plan for a demonstration workshop (summer 1966) in special education for mentally retarded and brain-injured children. Select children for the demonstration class from the Shiprock Subagency beginner and first-grade screening. Use as demonstration teacher(s) one or more of the pilot study classroom teachers and teacher aids. Combine actual classroom teaching experience and the preparation of teacher-made materials with daily lectures in teacher identification of exceptional children, use of screening forms, and educational diagnosis of developmental levels and specific learning disorders. Use workshop as an inservice training program for interested personnel.

6. Two additional recommendations for followup studies relating to mentally retarded Navajo children which have much wider significance than the pilot study itself are as follows:

   A. Electroencephalograms were completed on 53 Navajo children as part of the pilot study for detection of mental retardation in this population. The children were selected on the basis of a questionnaire submitted to their teachers which was designed to detect mental retardation.

Fifty three EEG's were completed and 28 of these records were abnormal. This figure is high and exceeds what was expected. There was a good correlation between the electroencephalographic abnormalities and mental retardation as determined by the various testing procedures employed.

It is proposed that a group of children, matched by age and sex to those already studied, and who are not considered to be mentally defective by the criteria of the questionnaire, be selected from the population at San Juan and Shiprock boarding schools. Similar testing, including physical, neurological, and psychological examinations are to be administered to these children and EEG studies are to be included.

This proposed investigation will enable us to reach valid conclusions relative to the usefulness of the EEG in the detection of mental deficiency in the Navajo. There are, at present, no guidelines as to EEG findings in this Navajo pediatric age group. In order to determine whether the above EEG findings are significant, one would have to know the EEG results on a similar group of Navajo children considered to be mentally normal by the criteria established for the study. It is felt that a comparison of the EEG of normal and mentally defective Navajo children is necessary in order to establish the place of electroencephalography in future investigations of this type.

The unique homogeneity of this population affords an opportunity to make a significant contribution to the knowledge about methods of detecting mental subnormality, particularly in this population. It is emphasized that no previous studies of this type in the Navajo have been performed and that this proposed study would be the first to provide information which could be of great significance.

In a discussion of the above proposal, Dr. Arnold H. Greenhouse, Assistant Professor and Chief Neurology Section, University of New Mexico School of Medicine, and his colleague, Dr. Donald Seelinger, both members of the pilot study's diagnostic staff stated that they felt that further followup on the EEG findings was extremely important since it will enable the pilot study staff to support the validity of its conclusions. Unless the role of the EEG as a diagnostic guideline in identifying mentally retarded and/or brain-injured children is checked against a similar group of normal controls the reliability and usefulness of the procedure will be in doubt. One major reason for such a conclusion is that we do not have any series of normal control EEG's in the Navajo population. The members of the diagnostic staff heartily concurred in the importance of the proposed followup study.

B. A second proposal advanced by Dr. Robert Vander Wagon, pediatrician at the Shiprock Indian Hospital and examining physician of the pilot study staff, may be summarized as follows:

Recently, increased interest has been focused on mental retardation by many disciplines. Pediatricians have become interested in the inborn errors of metabolism that are associated with mental retardation, especially errors of amino acid metabolism. The best known example of this is the condition phenylketonuria. Recently, a number of other amino acids have been found in association with mental retardation. Certain of these metabolic errors are apparently hereditary in nature.

In discussing the proposal it was agreed that the group of youngsters referred to the pilot study would be the most likely group of children in which metabolic errors could be identified.[1/] Amino acid excretion patterns have been determined by Dr. Vander Wagon in a number of children with genito urinary calculus disease as well as in a number of normal controls. It was his feeling, and the diagnostic staff concurred, that a study of this type might be of considerable value in identifying mentally retarded children at a much earlier age than the school-age population, particularly if any familial patterns could be deliniated. Insofar as the diagnostic staff is aware, this type of investigation has not been reported on Navajo children.

7. It was also suggested that every effort should be made at the administrative and supervisory level to provide a parttime school-health physician at the Teecnospos boarding school when the pilot study classes begin in the 1965-66 academic year.

8. Since many youngsters have identical or almost identical names, it was suggested that in future studies the first thing to be obtained on each child participating in a study is a polaroid picture to be fixed to his folder. (This recommendation was an outgrowth of a staff meeting in which the results of the medical and clinical studies on two boys of the same age with similar names became so confused it was necessary to repeat some of the workups.)

9. After considerable discussion as to the relative predictive value of the various disciplines utilized in this study, it was agreed that the speech and hearing evaluations and the psychiatric evaluations did not contribute information as to whether or not a child was mentally retarded. Their usefulness was primarily in the instructional area rather than as diagnostic tools.

1/A list of these specific amino acids and chief clinical features is available in the New England Journal of Medicine Vol. 270, No. 26, June 25, 1964. pp. 378-383

10. Of major diagnostic importance were social histories, pediatric and neurological examinations, and the EEG tracings. The results of the psychological testing were useful in both planning for instructional programing and, when substantiated by the above disciplines. as an additional diagnostic tool. It was suggested that it might be wise in any future studies to include the California Mental Maturity test in order to provide more adequate information as to the intellectual potential of the more severely retarded children. It was agreed that the Goodenough Harris Draw-A-Person test, the Porteus Maze test and the Bender Gestalt test were all valuable testing instruments. The testing psychologist felt that the T.A.T. was the least productive item in the test battery. This statement may reflect the fact that this group of youngsters had limited vocabularies and are limited in verbal output. It is very difficult for them to "tell me what you see in this picture." The T.A.T. was helpful, however, in getting some information as to the children's feelings about themselves and the world they live in. It had little or no diagnostic significance insofar as the goals of the pilot study were concerned.

11. Should this type of study become a regular part of Bureau programing, it was agreed by the diagnostic staff that the Bureau of Indian Affairs should consider seriously establishing a permanent diagnostic staff including a pediatrician, neurologist, psychologist, and an EEG technician with a portable EEG machine. The task of obtaining social histories would necessarily have to remain the responsibility of personnel available at the local level since the usefulness of the history is dependent upon the kind of information which parents make available when they have previous knowledge of and trust in the personnel conducting the interview.

12. One of the most thought-provoking aspects of the pilot study concerns the lack of adequate provision for the identification of possible handicapping conditions which contribute to or are responsible for academic retardation. For example, 15 out of this small group of 56 youngsters were found to be suffering from specific handicapping conditions not associated with mental retardation or central nervous system damage.

    When one considers that these youngsters had been, for the most part, enrolled in school an average of four years without advancing much beyond the first grade before the handicapping conditions were identified, it would strongly suggest the need for establishing a procedure by which consistently under-achieving children are routinely referred to the Indian Health personnel for a diagnostic evaluation. It was agreed that this problem merited the immediate attention of appropriate personnel in the Branches of Education and Welfare, Bureau of Indian Affairs, and in the Division of Indian Health.

13. In concluding this report it should be pointed out that although an unusually high degree of professional competence and interagency cooperation characterized the entire operation of the pilot study, certain individuals made outstanding contributions for which they should receive appropriate commendations: (1) Dr. Leland Fairbanks, Chief Medical Officer, Shiprock Indian Hospital, who not only provided the project staff with examination facilities and equipment but also gave a great deal of administrative time and support to the non-medical members of the staff, particularly the coordinator who could not have functioned without his assistance. (2) Dr. Robert Vander Wagon, Chief, Department of Pediatrics, who provided the youngsters with physical examinations and laboratory workups while maintaining his normal workload. (3) Mr. William C. Howard, Supervisory Representative of the Welfare staff whose social histories were considered by the examining staff to be "absolutely indispensable" in interpreting the results of their respective examinations. It was for this reason that the consultant neurologists requested permission to use the outline devised by Mr. Howard and his colleagues to teach medical social workers what kind of social histories are of maximum usefulness to members of the medical profession. (4) Mr. Joe Jiminez, Teacher-Guidance, Shiprock boarding school who undertook the task of administering, scoring, and interpreting the results of the testing program without previous experience and did such an outstanding job that Dr. Dale Harris, Chairman, Department of Psychology, University of Pennsylvania (who provided some supervisory assistance), pointed out that Mr. Jiminez' scoring of the Goodenough-Harris Draw-A-Person test varied from his own only one point in 6 of the 56 drawings. He also commented on the empathy with the children and the insight shown into their problems, which characterized the analysis of the test results.

In connection with the role Mr. Jiminez filled in the pilot study it is the expressed hope of the Shiprock Indian Hospital personnel that Mr. Jiminez be made available to them on a part-time basis to administer psychological tests to those youngsters admitted to the hospital who present the staff with problems in differential diagnosis.

In conclusion, it is safe to say that an interdisciplinary approach to the problem of identification of mentally retarded Indian children was successful. The remaining question is yet to be answered: Once the child is properly identified what kind of specialized curriculum will best meet his individual learning needs? The answer to this question will be explored during the 1965-66 academic year and will constitute the final phase of the pilot study.

Frances Bentzen
Project Coordinator

APPENDIX

1. Teacher Referral Form

2. Social History Outline

3. Organizational and Planning Staff, Diagnostic Staff, and Related Personnel

4. Stanford Achievement Test Data (1964) and Related Information

5. Estimated Cost of the Pilot Study

6. Samples of Diagnostic Summary and Instructional Classification

BUREAU OF INDIAN AFFAIRS, BRANCH OF EDUCATION
PILOT STUDY IN THE
IDENTIFICATION OF MENTALLY RETARDED INDIAN CHILDREN

Teacher Referral Form — Phase I

NAME OF CHILD_____ BIRTHDATE_____ SEX_____ _____
M F

Chronological age
at time of referral_____ No. yrs. in school_____ Age on entering_____
No. days absent 1963-64 _____

Name and address of parent or guardian_____

_____

Name of referring teacher_____ Grade level taught_____

Area_____ Name of school _____ Date of referral_____

Note to the Referring Teacher

This statement constitutes a guarantee that the child identified by name on this referral sheet will, under no circumstances, be classified as mentally retarded or as possessing any other kind of handicapping condition on the basis of this referral alone. Such classifications will be made only after the results of the individually administered psychological tests and medical and clinical examinations have been evaluated by the diagnostic and educational staff and it is agreed that the data substantiates classification of mental retardation. In those cases where it is determined that the child's learning and behavior problems are not a result of or associated with mental retardation, but due to other types of handicapping conditions, the data will be referred to the appropriate agency and the referring teacher will be so informed. All information on this form and that provided by the diagnostic staff will be treated as confidential information and will be made available only to those professional personnel directly involved in the welfare of this child and his parents or guardians.

Hildegard Thompson
Chief, Branch of Education

EDUCATIONAL EVALUATION AND RELATED DATA

Please Check

1. Average reading level: Readiness_____Preprimer_____Primer_____Other_____

2. Is this child's comprehension level below his reading level?_____ Same?_____Above?_____

3. Spelling: Average grade level?_____Writing: Cursive?_____Manuscript?_____

4. Arithmetic: Average grade level_____at which child reads and solves problems. Knows his multiplication and division facts as far as_____ Knows subtraction facts_____Addition facts_____Has concept of number values: None_____Ones to_____Tens_____Hundreds_____

5. Does this child appear to listen and to comprehend? (Please check) In group situations? Sharing?_____ Storytime?_____ Group Planning?_____ Individually? (In a one-to-one relationship) Does he respond with verbal contributions?_____ Voluntarily?_____ Only when questioned?_____

6. Is this child a non-reader? Yes_____ No_____

7. Is this child able to form his letters correctly? Yes_____ No_____ When copying?_____ When tracing?_____ Independently?_____

8. Is this child right handed?_____ Left handed?_____ Mixed?_____

9. Is this child's eye-hand coordination good?_____ Fair?_____ Poor?_____ Uncertain?_____

10. Is this child able to hop?_____ Skip?_____ Tie his shoe laces?_____ Button his clothes?_____

11. Is this child able to hold and use scissors correctly? Yes_____ No_____

12. In comparison with other children of his age does this child appear to you to be immature? Yes_____ No_____ Socially?_____ Emotionally?_____ Physically?_____

13. Does this child play with his classmates? Yes_____ No_____ Periodically?_____ Does he seem to prefer younger children?_____ Girls?_____ Boys?_____ Does he engage in what appears to be purposeless, random activity? Yes_____ No_____ Periodically?_____ Constantly?_____

14. Is this child overactive and highly distractible? Yes_____ No_____ Constantly?_____ Periodically?_____ Is it difficult for him to shift from one activity to another?_____

15. Is he unusually quiet and withdrawn? Yes_____ No_____. Frequently?_____ Periodically?_____

16. Is it your impression that this child has good hearing? Yes_____ No_____ Is his voice unusually loud?_____ Nasalized?_____ Monotone?_____

17. Many children, some of whom are mentally retarded or brain-injured, have good hearing but they have problems in auditory perception which interfere with their ability to understand and follow verbal directions. Could this statement describe this child's behavior? Yes_____ No_____ Uncertain_____

18. Is it your impression that this child has good vision? Yes_____ No_____ With glasses? _____ Without glasses?_____

19. Many children, particularly among those who are mentally retarded or brain-injured have 20/20 vision but they have visual, perceptual, and visual motor problems which interfere with their ability to reproduce forms, such as a diamond shape which necessitates correct reproduction of oblique lines. Such youngsters frequently have great difficulty in writing, printing, in arithmetic, and, of course, in reading. Could this statement apply to this child? Yes_____ No_____ Uncertain_____

20. Many children are physically healthy, enjoy group games and other types of activities but appear to be unusually awkward in walking upstairs, throwing a ball correctly, and experience great difficulty coloring or writing within lines. Such youngsters tend to bump into desks, chairs, and other children more frequently than other children of their age. Does this statement describe this child's behavior? Yes_____ No_____

21. In comparison with other children his age, is this child unusually deficient in drive and ambition?_____ Does he have an unusually short attention span?_____ A low tolerance level for frustration?_____ Does he have periods when he suddenly seems to lose contact with what is going on around him?_____ Is he a daydreamer?_____ Most of the time?_____ Occasionally?_____Never?_____

SUMMATION

1. Does this child speak English? Yes_____ No_____ If the answer is "yes," is his comprehension and language usage good?_____ Fair?_____ Poor?_____ Very Poor?_____

2. Approximately how many years is this child <u>educationally retarded</u> in relation to chronological age-grade expectancies_____ Is he a transfer from another school?_____ If so, what kind of school?_____ When?_____

3. Is it your impression that this child may be average or above-average in his functioning intelligence, but is <u>not</u> working up to his intellectual potential? Yes_____ No_____

4. Is it your impression that this child may be a slow-learning child who is working up to his intellectual potential? Yes_____ No_____ Uncertain_____

5. Is it your impression that this child's learning and behavior difficulties may be a result of social and emotional problems and the difficulties of learning English as a second language? Yes_____ No_____ Uncertain_____

6. Is it your impression that this child may be mentally retarded in addition to his other problems? Yes_____ No_____ Uncertain_____

THIS SPACE IS FOR ADDITIONAL COMMENTS CONCERNING THIS CHILD INCLUDING NOTES OR RECOMMENDATIONS FROM HIS PREVIOUS TEACHERS. GIVE EXAMPLES OF ANY PARTICULAR PROBLEM IN LEARNING OR BEHAVIOR NOT COVERED IN THIS FORM.

Revised (3-23-65) Date_____

OUTLINE FOR SOCIAL HISTORY OF CHILDREN REFERRED TO PROJECT FOR IDENTIFICATION OF MENTALLY RETARDED INDIAN CHILDREN.

SOCIAL HISTORY

_____ _____ _____ _____

Name of Child D.O.B. Census No.

FAMILY COMPOSITION:

Relationship to child, educational achievement, occupation, and location of each parent and of each adult who performs the usual parental functions (stepparent, grandparent, foster parent, aunt, uncle, sister, etc.). If any of these people are deceased, note date and cause of death.

Name, age, educational achievement, occupation, and location of full siblings, half-siblings, step-siblings, and cousins who are part of the household or who have special significance to the child. Likewise, identify any non-related adults or children who are part of the household. Note date and cause of death of any deceased members.

What tribe or tribes are represented and what language is spoken in the home. Date, place, and type of marriage or marriages (custom or license).

FAMILY RELATIONSHIPS:

Describe relationships between family members as they bear on the milieu in which the child lives at home. With what person, or persons, does the child have the closest affectional ties? Describe family members' relationship to the child while at boarding school; frequency of visits, spending money, and correspondence should be considered.

Enter impressions as to whether child is accepted or rejected by the parents, siblings, and others; are they ashamed of the child--or do they overprotect? Does the family consider this child average, bright, slow, or what? Is this family known to the courts? Describe if child is a ward of the court. Note full details.

SOCIAL-ECONOMIC ENVIRONMENT OF FAMILY:

Describe all sources of family income, amounts, as well as the standards of housekeeping and the family housing--does it have the modern conveniences insofar as electricity, running water, toilet facilities, modern cooking and heating systems? How does the family's situation, income, housing, housekeeping standards, compare with others in the community--similar, typical, or what?

HEALTH:

This social history should emphasize the effects of known health problems on the total family. Explore past hearing or sight problems, serious illnesses, accidents, or other medical problems in this family group which might have a bearing in relation to the child. If there has been severe disability or death of important adult, explore child's reaction to this traumatic event. Any history of enuresis in the extended family--who and when did it start and end? Does this child have any cafe au lait spots (unusual pigmented areas) on his body? Do any of the extended family group have such pigmentation? Any stuttering or unusual speech defects? Are there any persons in the extended family who are known to be "slow," "retarded," or "different" and, if so, describe in what way? Any history of seizures in the extended family? Describe.

CHILD'S DEVELOPMENT:

Early History: Consider the child's physical, emotional, mental, and social development.

Was it a normal 9 months' pregnancy--if shorter term, what precipitated labor? Describe any complications of pregnancy such as illnesses or accidents during pregnancy; describe complications of birth, such as bleeding before onset of labor, extended or unusual lengthy labor; spell out if normal or uneventful labor.

Describe type of delivery, (breach, caesarean section, etc.) place of birth (hospital, home, etc.), and birth weight, if known. Describe condition of child during first week of life--any cyanosis, yellow jaundice, etc. Review all hospitalizations, place, reason, attending physician. Review all illnesses of this child, specifically meningitis or extended high fevers. Note medical treatment given. Did the child go through any stages of unusual lip smacking, unusual crying, unusual eye movements or unusual twitchings? Has this child ever fainted, had dizzy spells, convulsions, or seizures? If so, differentiate and note age of child when these started: frequency, severity, and length of seizures (etc.), when they stopped, medical care or medication given. Any enuresis? Is enuresis associated with seizure history? Any history of draining ears or eye trouble? Does this child have a history of head banging? If so, at what age and for how long?

Describe any deformities noted at birth and how, where, and when corrected. Describe any unusual animation--either deficiency, overactivity, or body rigidity; unusual feeding problems, difficulty in swallowing or nursing. Review accidents or injuries or paralysis child might have had. Describe treatment. Describe development of child before and after injury or accident.

Was child fed by bottle or breast? Note age of weaning. Note age of child at the various developmental stages: teeth, holding up head, sitting,

talking, standing, walking, toilet trained, self-feeding, self-dressing. Parents do not always recall these stages so relate to child's development in relation to other children in the family: slow, normal, fast. Do the parents consider this child active, or clumsy and awkward in hopping, running, walking, and hand movements in comparison to siblings. Enter parents' observations of the child's behavior compared to other children. If girl, enter age menstruation began and difficulties, if any. Note any unusual developmental factors of siblings.

DESCRIPTIVE STATEMENT:

Draw a word picture of the child at this point in time. Compare to siblings and peer group as to size, weight, color, behavior, (does child appear lethargic hyperactive, etc.) head size, habits of cleanliness. Is child satisfied with a halfdone job or is child a perfectionist and places high demands on himself. Try to show child's feelings toward himself (high or low self-esteem).

Observe child, if possible, in relation to siblings, peer group, (school setting) and family. If child is small in stature, describe parents stature or that of extended family. How does the family consider this child: as happy, sad, withdrawn, morose, beligerent, good, bad, charmer, manipulative, repugnant, etc. Discuss these same features with teachers, dormitory personnel, school nurses, or others having extended contact. Teachers can usually give a description of the child as seen by the peer group. Note discrepancies between the observations of the different disciplines.

Attach to social history a snapshot of child. (School or family can usually provide this.)

SOURCES OF INFORMATION:

List the sources of information used to compile the social history.

PLAN FOR SERVICES TO THE FAMILY:

Describe plans for services to any members of the family in the next year for purposes other than the project and also plans for followup with family related to this project.

COMMENTS:

Any significant information not already covered in the history.

DIAGNOSTIC STATEMENT AND RECOMMENDATIONS:

Summarize, briefly, any evidence leading to belief that this child's learning problems are, or are not, related to (1) brain damage, (2) retardation,

(3) emotional problems, or (4) physical disabilities. If social information does not suggest an atypical youngster--so indicate.

More than one factor may be present and in the case of a differential diagnosis, the services of a psychiatrist may be recommended to clarify the problem. If there is evidence of a head injury, one might suggest skull X-rays or other medical procedures.

Bureau of Indian Affairs
Pilot Study in Identification of
Mentally Retarded Indian Children

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STANFORD ACHIEVEMENT TEST DATA - 1964
(note: "--" = Primary test does not include this item)

SCHOOL	NAME OF CHILD	D.O.B.	CA SEPT 1965	W.I.S.C.	NO. YRS. IN SCH.	CA AT TEST DATE	PARA. MEAN.	WORD MEAN.	AV. READ.	SPELL.	LANG. USAGE	ARITH REAS.	ARITH COMP.	AV. ARITH.	SOC. STUD.	SCIENCE	STUDY SKILLS	BATTERY MEDIAN
Shiprock	Cst	12/15/52	12.9	V - 70 P - 99 FS- 82	6	11.11	3.1	3.4	3.3	2.9	2.1	4.0	4.6	4.3	4.2	2.9	2.9	3.1
"	Pbi	4/2/55	10.5	V - 66 P -107 FS- 84	3	9.6	2.2	2.6	2.4	0	0	1.3	0	0.7	--	--	--	1.3
"	Lib	8/19/54	11.1	V - 45 P - 69 FS- 58	4	10.0	1.6	1.3	1.4	1.1	0	0	1.4	0.7	--	--	--	1.3
"	Jab	3/22/54	11.6	V - 56 P - 78 FS- 63	5	10.7	1.5	1.6	1.5	2.3	0	1.6	2.8	2.2	--	--	--	1.6
"	Jnb	6/7/52	13.3	V - 56 P - 67 FS- 57	5	12.4	2.1	2.2	2.2	1.9	--	1.2	2.9	2.1	--	--	--	2.1
"	Lbi	9/6/55	10.0	V - 55 P - 83 FS- 65	3	10.0	1.3	1.6	1.5	1.4	--	1.3	2.4	1.8	--	--	--	1.5
"	Rbi	10/20/54	10.11	V - 45 P - 55 FS- 46	4	11.0	1.3	0	0.6	0	--	0	1.6	0.7	--	--	--	0.6
"	Ljb	6/1/53	12.3	V - 45 P - 85 FS- 60	4	11.4	1.8	2.0	1.9	1.2	--	1.0	2.4	1.7	--	--	--	1.8
"	Sbi	1/6/55	10.8	V - 45 P - 46 FS- 46	4	9.4	0	0	0	0	--	1.0	0	0.5	--	--	--	0
"	Ebi	9/30/51	14.0	V - 62 P -122 FS- 90	7	13.0	4.9	4.8	4.8	7.4	5.1	4.9	5.6	5.2	5.2	5.6	5.1	5.1
"	Pib	6/21/50	15.3	V - 45 P - 62 FS- 48	6	12.9	3.9	3.3	3.6	4.3	7.1	3.3	3.9	3.6	4.5	2.6	3.4	3.7
"	Gsc	3/29/54	11.6	V - 51 P - 78 FS- 64	4	10.7	1.8	1.6	1.7	1.9	--	2.3	2.5	2.4	--	--	--	1.9

Diagnostic Summary and Instructional Classification

Pbi

I. Reason for Referral

After 3 years in school Pbi is working at a preprimer level. He is hyperactive, and socially and emotionally immature, and is unable to differentiate beginning sounds. Can follow verbal directions but unable to do the same tasks when presented visually on the blackboard.

II. Pregnancy and Birth

Full-term baby. Normal delivery (Phoenix Indian Hospital); breast fed until 7 months.

III. Growth and Development

Mother feels child was very slow. Sat alone at about a year. Stood alone at 2 years. Spoke one syllable words at 2½. Toilet trained at about 3 years. CA 4 learned to dress self. At CA 2 had a sore and draining ear for about a year, otherwise he has been a healthy, husky child. Pbi is almost 10 years old and tires very quickly. He has a short attention span and when frustrated breaks out into hostile aggressive acts against his siblings. Mother and stepfather visit children frequently and enjoy having them home. Siblings--8, 7, 6, 4. All living and well. Mother and stepfather feel Pbi is "different" from other children and difficult to manage. Plays alone a good deal.

IV. Physical Exam

Ears normal. Visual check reveals that Pbi is probably unable to read letters correctly. He squints when trying to see and on the Snellen chart achieves a 20/40 in both eyes. There is a good chance this boy is a mild microcephalic. Head circumference is that of a 5-year-old.

V. Speech and Hearing

Normal

VI. Neurological

Essentially normal

VII. Psychological Testing (CA at time of testing 9.8)

W.I.S.C.--V-66, P-107, FS-84. Performance score more reliable than verbal. Supported by Porteus Maze Test Quotient of 120. Maximum score of CA 11 plus with a mean M.A. of 8.10. Bender reproductions were well executed. On all memory and coordination tests Pbi did very well. T.A.T. indicates Pbi identifies with rebellion and has developed an anti-learning attitude. There is some evidence he is headed toward a passive agressive personality disorder.

VIII. Diagnostic Summary

Emotionally disturbed. Needs guidance and counseling.

IX. Instructional Classification

Pbi's problems in learning are emotional blocks rather than specific incapacities in intellectual endowment. He deals with frustration by pouting and lying. His classroom environment must be changed to allow him no more rewards for either of these behaviors. Rewards should be given freely for honesty and hard work. He has few inner controls and should be managed with definite firmness, kindness, and fairness.

Diagnostic Summary and Instructional Classification

Rbi

I. Reason for Referral (10-16-64) CA 11

After 4 years in school Rbi has not progressed beyond the readiness level. She does not understand directions, is a complete non-reader, is socially and emotionally immature, listless, has a short attention span, low tolerance level for frustration, and spends most of her time staring into space. She is completely unresponsive and totally lacking in ability and interest in learning. "Slowest child I ever saw in my life." Other children tend to "bang her around a good deal."

II. Social Summary and Developmental History

Natural mother unstable. Provides inconsistent and unpredictable care for Rbi and older brother. Brother, 13 years old--1st grade at Intermountain. Thought to be slow and very disturbed. Father deserted family and is now married again. Mother contracted three additional common law marriages having one child by each marriage. One, released for adoption, has a congenital hip defect and heart disease. Grandmother is dominant relation. Living quarters of both mother and grandmother are extraordinarily dirty and slovenly--a truly poverty stricken family. The mother, underwent treatment for alcoholism at Turquoise Lodge '63-64. Pregnancy, birth, and delivery were uneventful. Rbi was born at Keams Canyon Indian Hospital in Arizona. Grandmother reports child had recurrent colds and draining ears and states Rbi has been hard of hearing ever since the infections began. She also felt that Rbi is not mentally retarded but very deprived emotionally, socially, and physically.

III. Physical Exam

Teeth are in extremely poor condition and need attention. Eyes need a detailed examination, questionable Babinsky on left otherwise examination is within normal limits.

IV. Speech and Hearing

Normal

V. Neurological Exam

Normal. However, this child was very slow to respond, and comprehended and followed through directions very slowly.

VI. EEG

Normal

VII. Psychological Exam (CA at test date 11.0)

W.I.S.C. scores--V-45, P-55, FS-46. Bender reproductions were all primitive, disorganized and distorted. T.A.T. indicated Rbi is shy, hostile, and suspicious with many fears. Goodenough-Harris test scores were all below the 4th percentile. Porteus Maze test age was a poor 8, giving a test quotient of 79. All test results were those expected from a 5-or-6-year-old.

VIII. Diagnostic Impression

Mental Retardation

IX. Initial Instructional Classification

Currently functioning on a level which would make it difficult for her to respond to a specialized instructional program. Suggest placement classification of severely retarded. Evaluate progress at midyear of 1965. Will need special attention to eye-hand coordination and visual-perceptual problem.

ESTIMATED COST OF T STUDY
STAFF

Education

Mrs. Frances Bentzen, project coordinator (Salary, travel and per diem)		$13,000.00
Mr. Joe Jiminez, project psychologist (Estimated time - 56 days)		1,350.00
Maxine Bowman, medical secretary (part-time)		2,500.00
Testing equipment and supplies		150.00
	Estimated Total	$17,000.00

Indian Health Service

Medical consultant fees and travel (Neurology, audiology, psychiatry, and consultant psychologist)		2,320.00
Electroencephalograms and technician		1,283.00
Transportation for 2 children to Albuquerque		60.00
Dr. Robert Vander Wagon (approx. 18 days) (Physical exams, lab studies, staffing)		600.00
Dr. Fairbanks (estimated 10 days) (Planning conferences, administration, and supervision of diagnostic staff, 4 days staffing time)		500.00
	Estimated Total	$ 4,763.00

Bureau of Indian Affairs Welfare

Social histories and staffing (estimated 644 hours) (Home visits, preparation of social histories, and clerical assistance)		4,536.00
	Estimated Total	$ 4,536.00
	GRAND TOTAL	$26,309.00

Estimated per pupil cost--$470.00

Note: Not included in the above gross estimate is the cost of interpreters, transportation cost for Welfare personnel, and time and travel cost contributed by Central Office staff of BIA Education and Welfare, and time allocated by Division of Indian Health Assistant Director of the Navajo Agency.

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