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PSYCHIATRIC AND PSYCHOLOGICAL EXAMINATION OF CHILDREN

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The diagnostic process in child psychiatry has gradually evolved over the last 150 years into a usually trustworthy pattern of study in trained hands. It began as a descriptive approach and made its greatest gains during the past sixty years, with the development of dynamic concepts of human behavior and the perfection of a variety of pertinent psychological instruments. More modern diagnostic efforts began around the turn of the century, with interested and concerned pediatricians moving into the disturbed child's home and living with the family for a period. A modification of this was what Leo Kanner called "noodle soup psychiatry," in which the diagnostician was invited to have dinner with the patient and his family. The most significant statements of the most current status of the psychiatric and psychological diagnostic examination of the young are in the Group for the Advancement of Psychiatry's "The Diagnostic Process in Child Psychiatry," Anna Freud's "Normality and Pathology in Childhood: Assessment of Development," and James Simmons' "Psychiatric Examination of Children."

The present form of diagnostic examination of children had its beginnings in the retroactive studies initiated by Sigmund Freud in psychoanalysis and Adolf Meyer in psychobiology. Its greatest impetus came from the development of the child guidance movement and the fields of child

psychoanalysis, clinical psychology, and pediatric psychiatry. Important contributions about constitutional factors came from the pioneers in developmental neurology, such as Bronson Crothers and Samuel Orton, from such pediatricians as Donald Winnicott, and from the fields of mental retardation and cerebral palsy. Psychology contributed not only intelligence testing, projective techniques, and basic information about learning but also their use as sources of clinical information. Psychiatric social work added the important component of family dynamics and environmental influences on the child, leading to the more recent inclusion of information from anthropology and sociology about cultural and societal forces. Add to these the specialist in educational diagnosis and the speech pathologist, and one sees not only how the classical clinical team concept became an accepted approach to the diagnostic process but also how the team has expanded.

It is also obvious that there needs to be a coordinator of the team, an integrator of the information about the individual child and the influences from his family, school, and community. The more or less expanded team functions chiefly in the outpatient clinic, treatment center, community mental health program, and hospital, but it is also found in such settings as school systems, juvenile courts, family agencies, and more recently in comprehensive child health programs. The private practitioner may combine the roles of various team members or work with collaborators from other disciplines who are also in private practice. Similar combining of roles takes

place in many clinics. The role in diagnosis for the rapidly growing category of nonprofessional mental health workers is an expanding one. These valuable additions to the clinical team, if properly trained and supervised, have provided an extension of the clinical team in the inner city and rural areas for communication with otherwise hard to reach community resources, including neighborhood and regional action programs.

Goals

Almost everybody is a diagnostician. Almost everybody has an opinion as to what is wrong with a disturbed child. The goal of the psychiatric and psychological examinations, however, is to obtain as complete and valid a picture as possible of the child's current status. This includes evaluating the areas of weakness and strength in the child, his family and living situation, his environment, and his community as a basis for defining not only what has gone wrong and how the patient became the way he is but also what can be done about it correctively.

In dealing with the child himself, one begins with how he is put together constitutionally. In addition to information about developmental milestones and medical history, a current physical examination should be part of every diagnostic study. The pertinent information about contributing constitutional factors may come from the prenatal period. For example, a hyperactive child

may have been a “whirling dervish” even in utero. Individual differences beginning in the newborn period are important to annotate, such as hyper- or hypo-sensitivities to touch and sound, excessive passivity, high or low impulse levels, imbalances, poor coordination and integration, poor control patterns, and tolerance for anxiety. Here Lois Murphy’s vulnerability inventory has been quite valuable.

The constitutional “givens” of the child should be matched with their interaction in and with the environmental matrix. What have been the facilitators, the inhibitors, the distorters, and perpetuators of any constitutional hazards to normal development? This information comes both from history and direct observation.

There should be an evaluation of how the child has developed in a range of expectable (ego) functions. These include his patterns of coping and adapting (defenses), cognitive abilities, memory, relationship patterns, reality testing, self-image, autonomous functions, space orientation, language, and synthetic functions. The latter should particularly be examined in terms of the response of patterns of organization and integration in the presence of stress. Especially important is knowing whether there is disorganization of thinking and acting in the presence of anxiety or pressure. This body of information is also obtainable from both history and direct observation and testing.

Another area of information gathering about an emotionally disturbed or malfunctioning child is in terms of how he has moved along the lines of development in a range of maturational patterns. These include patterns of relationships and socializations both within and outside his family. How have dependency and basic trust developed? How has the individual dealt with survival problems, with separation problems, with negativism, with aggression, with sexual interests, with work, with impulse control and body control (including sphincters)? What kind of conscience (and other superego components) does the child have, what concepts of property rights (including "owning" people), and what response to rules? Are there identity distortions? Are there habit and/or fear patterns that indicate earlier fixations and immaturities? These questions too can be answered by both history and direct examination.

Technical Aspects of Psychiatric and Psychological Examination of the Child

The basic components of a diagnostic study for children are the history, the psychiatric examination, and psychological testing. The clinical team of psychiatric social worker, clinical psychologist, and child psychiatrist traditionally divided these facets, but there has been considerable blurring of disciplinary lines and overlapping of functions as professionals who developed more than one area of competence progressed in the child mental health field and trained others in their fields. Thus, in every step of an

evaluation, clinical observations are being made, beginning with history taking. The psychiatric social worker, the public health mental health nurse, the psychologist, and the child psychiatrist use their formal examinations, including contributions about constitutional factors, to obtain history information and define dynamic processes. It is no longer valid to treat the psychological study simply as a form of laboratory testing, as was true in many settings in the past. Sometimes, where indicated, more than one member of the team will see children and parents together for a combined history and clinical examination in a family diagnostic type of study.

The History

Usually there is a scrutiny of preliminary information about a patient (in the clinic most often in an intake conference) as a basis for deciding the most appropriate patterns of examination by psychologist and psychiatrist.

Where indicated, additional information may need to be obtained first from the members of the extended team, or the pediatrician, neurologist, geneticist, biochemist, teacher, special educator, speech therapist, police, and/ or probation officer.

History taking in child psychiatry needs to include information from the prime child-care agents, who may be parents or outsiders. These outsiders may be relatives such as a grandmother, or a babysitter, nurse, or governess.

This is especially important when the mother works full time or is otherwise relatively unavailable. In addition, there should be information about the parents' health, developmental problems, and value systems, as well as their interests and relationships and/or problems with their own families. It is useful to have information on intercurrent events that influenced critical stages in personality. The patient's systems and the parent's understanding and handling of them are important, but should not preclude obtaining a comprehensive picture including the social and cultural influences on the family. Finally, the history taking should end with helping the parents prepare the child for the diagnostic visits. One way this can be done is to explain that there are people who know how to help children get over troubles or to make plans, such as about school.

The Psychiatric Examination

The setting for the examination and battery of tests will be determined by the age of the child, his symptom complex, and the questions to be answered. The preschool child will need different toys and tests than the school-age child. The pubertal child may need to be seen in a playroom or, depending on maturity, to be treated more like the adolescent in an office interviewing setting. An especially fearful child or one with marked separation problems may need to be seen with a parent present, so that history taking cannot then be simultaneous. Sometimes the examinations

must take place in other than clinic or office settings. Thus, children are seen in day-care centers, nursery and other schools, detention centers, welfare programs, or child-care institutions. A portable kit with appropriate toys and/or testing materials is useful for such purposes. It can be particularly appropriate for examination of hospitalized children. Some have used the World Game for this purpose.

For the psychiatric examination of preschool and school-age children, a playroom is ideal. It is also quite possible to carry out such studies with toys in a closet, desk drawer, or in a box. As is well established, toys serve a triple purpose. First is the need for interesting, even enticing, a child patient who usually sees no reason of his own for a visit to the examiner. Second is the child's use of playthings as a means of working out developmental problems. Third is the child's use of play as a means of expressing himself, both as a nonverbal language and as a medium and expeditor of fantasy. In observation of and participation in their play there is also the opportunity to take note of children's body language as still another form of nonverbal communication.

It is particularly important for the examiner to become expert in "reading" children's nonverbal language, because by four or five years of age children have usually learned to use words to cover up how they really feel. Dr. Charles West, who founded the Hospital for Sick Children (Great Ormond Street) in London in 1854, wrote in his lectures to medical students, "Your old

means of investigating disease will here to a degree fail you, and you will feel almost as if you had to learn your alphabet again. [It is] as if you were to hear around you everywhere the sounds of a foreign tongue, and to observe manners and customs such as you had never seen before." He then added, "If you are not fond of little children you cannot learn it, for they soon make up their minds as to who loves them, and when ill, they will express their real feelings, whether by words or signs, to no one else."

The variety of toys is planned to explore the child's developmental and interpersonal concerns and his method of dealing with them. For exploring relationship interests and patterns, there should be human figures, puppets, and an unstructured dollhouse where possible, with the usual furniture, including kitchen, toilet, and bedroom items. Toy animals should be available for those children who are too sensitized to deal directly with their feelings about people. Some children may need to avoid anything resembling the living (dolls, stuffed animals) and can only respond to relationship play with families of inanimate objects, such as blocks or cars.

Movement toys, such as cars, trucks, and airplanes, help to define a child's motor and control problems. Soldiers, blown-up clowns, and guns and rubber-tipped darts help to show the child's interests and solutions to aggressive patterns. A few games, appropriate for different ages (and not time consuming), can show competitive interests and attitudes toward rules. For

younger children, a pull toy is useful. Communication toys are useful, such as one or two toy telephones, a typewriter, and a few books for children with difficulties in communication. Blocks are good to provide demonstration of constructive and destructive interests, motor and spatial orientation. In their use for house building, they can give clues to body image. Drawing materials are helpful for this purpose as well as providing an avenue for constructive interests, fantasy, self-image, and such scorable tests as the Goodenough Draw-A-Person test and the house, tree, and person drawings (see discussion of psychological approaches). For adolescents it is useful to have such materials readily at hand for doodling or drawing as a basis for face saving (hopefully), temporary retreat, or regrouping of defenses. Other construction materials, such as clay, finger-paints, and Play-Doh, are helpful not only in expressing feelings and ideas but in showing interest in messiness or orderliness. A traveling toy kit for a playroom interview on a spontaneous basis, such as on hospital ward rounds, consists of pipe cleaners, tongue blades, blank paper, and paper clips. Pipe cleaners can make people, animals, and houses. Tongue blades can become people, animals, autos, planes, trains, and so on. Paper for drawing, making cutouts, or folding to make planes and helicopters is useful. Origami is a helpful skill.

The psychiatric examination begins in the waiting room. There is considerable value in structured waiting-room observations. A method to accomplish this has been developed, utilizing a checklist, which can be filled

in by a receptionist, secretary, or mental health aide. Not infrequently parent-child interaction goes on in the waiting room and ceases when the examiner appears. The mothers and children who are very close or far apart, the fearful mother or child, the permissive mother whose child climbs all over her with hands under her clothes, the hyperactive child whose parent sits helplessly, unnoticingly, or mildly reproves him from across the room when he hits another, throws things around, or pulls the paper out of the secretary's typewriter are providing usable information often otherwise unavailable.

The examiner's role in the psychiatric examination is to establish a working relationship with the patient in which the child is free to share feelings, thoughts, actions, and fantasies. With a warm, friendly, interested approach, most children will respond favorably, particularly since they want to be liked. The examiner's manner should be calculated to establish confidence and a feeling that he is there to help the child. To minimize the child's mistrust, the parent or substitute should be helped as part of the intake process to prepare for the examination by explaining that the examiner is there to find ways to help children get over troubles and to make the best kind of plans for school, for example, and not because he is "crazy." This is not always effective, however, because the child may have been threatened that, for example, if he did not stop wetting his bed, he would be taken to a place where they would make him stop. The child is then wondering all through the visit when and how he will be made to stop. Or the child has been tricked into

stopping at the clinic or office on the way to the movies or to see Santa Claus. The examiner's neutrality and interest in the child must be established, especially when the patient has been sent for evaluation by the juvenile court, school authorities, or lawyers or judges in a custody suit.

After the usual introductions, it is useful with verbal children for the examiner to explain what will happen, stating, for example, "We have a room with all kinds of toys and we invite boys and girls to visit with us there to play and talk. Do you know what happens when we are finished? [Without waiting for an answer] Then you go home [or back to school and so on]. Let me show you where it is." The child and often the parent are relieved when a complete gestalt is presented in some such way about a feared unknown experience. Comfort or discomfort with separation is seen at this point. Some children need the visual (more than verbal) permission of the parent before making a move.

On the way to the playroom a number of mental notes can be made about gait and other large muscle movements. A hand briefly on the child's shoulder (not with adolescents) will show the individual who melts into the examiner's side or pulls away, uncomfortable with closeness or with a stranger. Some children will wait to have their hand taken to be led to the playroom or will insist on the parent's accompanying them. Some will run on ahead, acting all knowing, or having to explore every door or touch every

picture on the way. Some show their negativism, fear, or need to control the situation by stubbornly refusing to go. The resulting parental cajoling, bribing, anger, or helplessness can be the reenactment of a familiar script or tableau as a demonstration for the examiner. With the fearful or willful preschooler, a pull-toy may be brought out or a ball bounced to woo the child or change the subject. When a child brings a favorite toy or book with him, he can be invited to bring it along.

Once in the playroom (or other examining setting) it is important to note the patient's first interest. The child with relationship problems often will go first to the dolls or doll-house. A boy may only look at it carefully, then back away and perhaps say "Only girls play with that," thus suggesting an underlying interest. The hyperactive child who goes first to the movement toys and plays patterns of controlling movement tells of an interest in solving his difficulty with control. The aggressive child may pick up the guns. The child with communication problems may go first to a telephone or a typewriter. The child concerned with fears of bodily hurt will spot a doll or a toy soldier with a part missing, sometimes even when these are not obvious, and may ask how it happened. The child concerned with problems of order or impulse control may say "This is a messy place" and proceed to line up the toys. On the other hand, the child with any of these problems who studiously avoids the toys or play related to his underlying problems, even when later introduced by the examiner, is also telling something about his motivation

and defenses.

The anxious child may flit from toy to toy, touching or testing, and moving on. The child concerned with dependency may pick up something he knows quite well, such as a gun or ball, and ask “What’s this?” or “Can I take this home?” to test the examiner’s interest in helping, giving, or responding to him. The inhibited, shy, or overly passive child may stand immobilized in the middle of the playroom and wait for help in getting involved. The too uninhibited child who is the tyrant or “bad one” in the family or the bully may immediately turn a gun on the examiner or throw something at him to test from the start who is in control. The all-knowing child who is the family autocrat may declare that he knows all about the games, has all these toys, and much better ones. The exhibitionistic child will demonstrate something he knows or a dance step he has learned. The rivalrous or competitive child will ask to start a game in which scores are kept, sometimes setting his own rules or changing them if he is losing.

With the younger (preschool) child one may need to structure the play for most of the examination. Describing the examining situation is important with children available to verbal approaches. The first step is to explain the ground rules, such as saying “This is a place where you can play with anything you want and do anything you want here, but we have one rule.” If one asks the child to guess what this rule is, interesting and often telling answers

result. Then the usual playroom rule is shared with the child, such as "You can't hurt yourself, and you can't hurt me." This is not only reassuring but also gives the examiner considerable leeway in deciding what will be harmful to the patient.

Then it is useful to repeat the examiner's function as one to help children get over troubles or make plans: "The best way he knows to help is to get to know the child and his views by having a visit with him and by not having to rely on what others have said." This also provides an opening for a question, such as "Tell me what troubles [problems] 'they' say you have." Then confidentiality should be stressed in such terms as "Whatever we talk about here is just for us here." Some prefer to add "You can say anything about it to anyone. We won't."

For those examiners who prefer to take notes during the visit, it is good to clarify the basis for this with the child and even ask his permission. This can be done in terms such as "I like to write down some of the things we talk about. My memory isn't always so good and I would rather not forget. Is that all right with you? I don't have to if you would rather not." Seldom, if ever, will a child refuse permission. However, the mistrustful or suspicious child may later ask what is being written or surreptitiously peek at the notes. It is useful to note at which point this occurs during the examination. Reading the last sentence aloud, letting the child look at the notes, or simply saying that only

what has been happening is being noted is usually enough to stop the questions. With adolescents note taking is adjusted to the individual situation and attitude. More often than otherwise, notes are not taken, particularly with hostile, reluctant, rebellious, or paranoid teenagers. With any age group it is well to put aside pencil and paper when discussing particularly sensitive areas, such as sexual interests, details of a stealing episode, and runaway plans. On the other hand, it is important to make an obvious note of suicidal thoughts and attempts.

In order for the examination to provide information that will achieve the goals and objectives outlined above, both the psychological and psychiatric studies should be a combination of structured and unstructured approaches. The psychological is obviously the more formally structured. In contrast to treatment interviews, diagnostic examinations are calculated to obtain as much information about a child as possible in the time available.

For those who have the luxury of an extended diagnostic period with a number of visits, usually less structure is necessary for the psychiatric examination. However, the pressures for service have made it more appropriate to obtain the necessary information in a single visit if possible. There are exceptional situations in which additional visits are necessary. Usually, sufficient data can be made available in the single hour, particularly if the psychological examination can be counted on to complement the needed

clinical data for a useful evaluation. The one-shot psychiatric examination, which is part of a consultation or the private office visit, thus has the hazard of providing only a single time segment of behavior, which can give less than a comprehensive picture of the child.

The less structured part of the examination provides opportunity for tuning in on the child's nonverbal communication. One watches for the points at which he changes play patterns, such as what was happening in play at the moment when one activity is given up. Was it in relation to the reaction of the examiner as a participant, as an observer, or as a questioner of what is happening? Particularly if a question was raised, watch for the next bit of activity because it may be a playing out of the real answer, in spite of what verbal answer was given. Watch for the reactions to frustration or failure, whether it is giving up, persistence, projecting blame elsewhere, wanting his mother, or becoming disorganized, awkward, demanding, aggressive, destructive, dependent, unavailable, overactive, messy, and so on. Watch for the body language. What is the point at which a brain-damaged child begins to drool? Can the child calm himself down when he becomes overstimulated? At what point does the enuretic or encopretic child begin to wet or soil himself or ask for the toilet? What is happening at the point at which the child puts his hands to his genitals to protect or reassure himself about them? Glances, grimaces, looking over the shoulder at the examiner, eyes beginning to tear, blushes, and fearfulness are examples of forms of communication, as

in the old song “Every Little Movement Has a Meaning All Its Own.” With a large majority of verbal children it is quite possible to have a productive diagnostic interview sitting at a desk, with emphasis on verbal communication while the child is playing or otherwise occupied. It has been commonly said that child psychiatrists stop seeing children when at age fifty they cannot get down on the floor so easily. Lippman, however, described and demonstrated how one can be less physically active and still effective as a diagnostician (and therapist) with children and, as always, with adolescents.

The verbal approach, following the preparatory comments to set the stage as described above, should begin with some evidence of the examiner’s personal interest in the child. One time-honored way of starting this is to say “I know very little about you. I am not even sure about your age. Can I guess?” Then the guess is at least a year older than the child really is, which is almost always flattering. If the child indicates that he is often thought of as being older or younger, this can be followed by an inquiry as to whether that is good or bad.

Explorations into specific areas of a child’s functioning should begin with a neutral area, much as in a physical examination, where the sore throat or abdomen are examined last, if one wants a cooperative patient. The exception is where the complaints about him, his troublesome symptom, the habits he wants to get rid of, the basis for his failure, the parent, the sibling,

the bully giving him trouble, the unjust accusations of the police, the unfair teacher, and so on are on the surface, and the child himself may introduce it. Sometimes a parent will, as the last word as the child leaves with the examiner.

A cardinal principle in the verbal approach to school-age and pubertal children is to avoid direct questions as much as possible. Particularly the word "why" is the most abused word in the examiner's lexicon and should be avoided whenever possible. Children have usually become expert at parrying questions, especially to "why," or giving the answer that they feel is the "right" or expected one. Besides, mostly they want to please. The exceptions are the passive child who cannot resist pressure for a reply to questions about even the most sensitive areas and the resistant sullen, suspicious, or withdrawn child who retreats into silence. Even with the latter group, there are nonverbal responses, particularly when key areas are touched on. For example, if they are drawing or doodling suddenly the spaces must be filled in, or the lines become fragmented or wild or tighter. Examples of the use of positive statements, the "tell me" approach, instead of questions will be given in the discussion of specific areas to be investigated. It should also be kept in mind that one should not stop with the factual information about a specific area. The thinking or fantasies behind it should also be looked into. The examiner should also realize that the objective of the examination is to get a rounded picture of the child's personality development and the factors

underlying it. Therefore, the frequent tendency to spend most of the inquiry on the presenting symptoms should be avoided. Thus, in spite of the child's and examiner's often necessary pressure to get the details of a rape, suicidal attempt, stealing episode, runaway, or acid trip, the questions to be ultimately answered are "How did it get there?" and "What can be done about it?"

Where possible, the sequence of areas explored should lead naturally into each other. If one begins by looking into the school situation as a neutral subject (where the major complaints do not center around school), this can be structured to lead into attitudes toward aggression, friends, and fantasies. An example of one way this can be done is with the following sequence:

> "Everybody goes to school. Tell me about your school. I don't even know which grade you are in."
>
> "Tell me how many other schools you were in and which was the best one."
>
> "Tell me about the best [easiest] thing in school."
>
> "Tell me about the worst [hardest] thing." Specifically, learning problems should be looked at further.
>
> "You know how in every school that there are bad children and ones who get into trouble. Tell me about the ones who fight and what you do if they fight you." Where there is complete denial of anything bad or aggressive in the child's experience, one can add: "Tell me what you heard that the bad ones do in other schools and outside of school. Tell me about the ones who tease and call names and the best thing to do about it." If stealing has been a problem, this is an easy place to introduce it.

"Tell me about children who steal in your school [neighborhood] and why they steal." The child can then, on a face-saving basis, tell about at least conscious awareness of motives.

"You know how some children like to help each other and like to play together. Tell me if you like to be with friends or to be alone."

"Tell me what kind of fun you have with friends." With the girls who prefer sports, horses, and boy's games and boys who like girl's games this should be further explored as to sex identity preferences.

"Tell me what you like to do when you are alone. Lots of boys and girls like to pretend when they are alone or play or make-believe." With adolescents, talk about daydreaming. "Tell me what you like to pretend." Particularly with those children who avoid fantasy (and usefully with all children) one can add: "I'll bet I know one thing you like when you're alone —television. Tell me which are your favorite programs." This can be varied to include movies, comics and books. "Tell me one thing that happened in that program [movie, book], the first thing you think of. I don't mean the whole story, just one thing that happened."

The use of the child's favorite media as a projective approach can lead to further insights about dynamics, since each child seeing a program is looking at it in terms of his own experience, motives, and interests and usually is reported in a version that includes the individual's own preoccupations and concerns. The incident reported should be followed up. Questions are more appropriate for this, such as "I wonder what made him do that?" or "How come that happened?" One may add "How did it end?" "Why?" For children who attend Sunday school or church, the Bible can be used as a similar projective technique, such as "Tell me one thing that happened in the Bible."

One can hear some startling versions of incidents in the Good Book and the motivations behind them. And the Bible is a remarkably complete record of human experience.

In exploring the patient's family and relationships, one can get a picture of where the child sees himself and the others in terms of closeness or being left out by asking him to draw a picture of his family. "Tell me which one is the biggest nuisance [or who makes the most trouble, or is bad, if the child does not know what a nuisance is]." Attitudes about parents are better assessed by impersonalizing. "Tell me what a mother has to do to be a good mother. Any mother, not yours." "You must know what bad mothers do; you see them on television and in movies." "Tell me what old witches do." The witch is the age-old symbol for the bad mother. Similarly for good and bad fathers. One can usefully explore sleeping arrangements or have the child draw the interior of the house for this purpose.

In some situations it is helpful to check on early memories, especially screen memories. One way to accomplish this is to say, "Some children can remember way back when they were little. Tell me how far back you can remember. What is the first thing you can recall, not what somebody told you?"

Patterns of closeness, alienation, trust, and self-image relationships to

others can be explored by the use of selected Duss fables. One of the most useful of these is the desert island story. It can be introduced by saying "Let's pretend again for a few minutes. Let's say you had to go far away to five on a desert island [or on a piece of land in the middle of the ocean with no one living there]. But you could take one person from the whole world. Tell me whom you would take." Some children will need additional reassurance that this is only daydreaming or fantasy. The usual school-age child will take a friend. The deprived, untrusting child will take God, Jesus, an angel. The child reaching out hungrily for any port in a storm will want the examiner, never having seen him before. The rivalrous, hurt, or neglected child may go alone or take a sibling or a pet animal. The fearful child may take Superman, Batman, or Hercules. The immature child or the oedipal child will want one or the other parent. The answer should be interpreted in terms of the normal expectations about relationships at any given age.

Another form of projective approach to check on a child's self-image as to competence, dependency, separation, and close relationships is the game of providing an ending for a structured story. One of the most frequently used Duss fables for this purpose is the baby bird story. "Let's pretend that there was a baby bird living in a nest with a mother bird and father bird. The baby bird could fly just a little bit. Then along came a big wind which blew the mother bird out one way and blew the father bird out the opposite way. Let's make up a story about what happened to the baby bird. Remember it could fly

just a little bit." The answers forthcoming give clues to the child's own fears about hurt and survival, to hopelessness with separation and abandonment, to trust that someone will care for it, to feelings of readiness to be on one's own and coping with outside dangers, to magical solutions, to optimism versus pessimism, to getting rid of one or the other parent, and so on. Here, too, it may be necessary to say "Tell me how it ended for the mother and the father."

When exploring fears, it is well to establish that the examiner is comfortable talking about fears, that he knows that all children have had them, and that the patient is expected to be like all other children. This area can be opened with a statement such as "You [and I] know how children are afraid of things when they are little, like before they go to kindergarten or the first grade. They are afraid of the dark and animals and storms and ghosts and witches and robbers and kidnappers, and monsters. Tell me what you were afraid of when you were little." Later one can add, "Sometimes these fears don't stop when you go to school." Then it should be followed up by finding out who takes care of the fears, and what is done about them. Similarly one approaches dreams. "You [and I] know how everyone has dreams, good ones and bad ones. Tell me something that happened in a dream. Only one thing, not a whole dream." This can be followed up by exploring how the dreams are cared for. Especially with nightmares: Does the child then have to get into bed with someone, and who is it?

Sexual areas can be explored in the same way, that is, first establishing the normality of such interests and then expecting that this child has been like others. This type of structuring in terms of normality often is most reassuring and relieving to a youngster who had never dared to talk about this part of his makeup. "You [and I] know how when children are little, even before they go to school, they like to play with their wee wees or whatever they call them. Tell me how old you were when you first found out about it. Some children find out at home, some outside, some from friends, some from brothers or sisters or big boys and girls, and some find out by themselves. Tell me how you found out." The leads opened up can be followed, such as fears of self-hurt or hurt by others as a basis for giving up sex activities. With the overstimulated or sexually active child one may need to talk in the child's vernacular about "getting pussy."

With teenagers this area can be explored in terms of "making out," "going all the way," "making first, second, third bases, or a home run," and so on. One must use judgment in opening up the question of sexual fantasies with adolescents, keeping in mind the risk of creating a crisis in a borderline psychotic individual or one close to a homosexual panic. In general, it is surprising to some how much of this type of information is available in a diagnostic interview, in contrast to treatment interviews. One often has an opportunity at this time to find out about a girl's concept of menstruation, her preparation, difficulties, and understanding of it. With young adolescent boys,

asking factually about wet dreams can be helpful. With younger children, it may be appropriate to look into their concept of how babies are born as well as sex differences and how one finds out about these.

Health and medical background as seen by the child should be looked into, including reaction to hospitalizations, operations, accidents, and so on. In the child with psychosomatic manifestations, finding out what helped and his own views of what's wrong in contrast to those of others can be useful. "Drawing the pain" is a technique developed at the Children's Hospital, Washington, D.C. The child with headaches or abdominal pain is asked to draw a picture or an outline of a head or an abdomen of the size and shape of the pain. The child with an organically based pain will look at the examiner as though there is something wrong with him. However, the child with a psychological basis for the pain usually seems to know just what is meant. Often the resulting drawing will be inconsistent with anatomical nerve distribution, for example, a sharply outlined small square or a pinpoint or a circle the size of a dime. One girl with headaches, who had been raped by her father, drew the area of the pain in the shape of a penis. One girl drew the shape of her chronic back pain as a bell. On being asked what the shape reminded her of, she replied "It's a bell, but the clapper is missing." Adolescents, especially those with poor self-concept or in an identity crisis, can be asked: "If this were a physical examination and you were examining yourself, what would you find wrong or think could be better?"

If the symptoms or complaints that brought the child for study have not yet been discussed, they should be covered before ending the interview. Important to bring out is not only the child's picture of the situation but also what he has been told about the basis for the problem, incident, or manifestation and what the child really believes.

An additional area to explore is a child's present interest for the future, as well as what he used to want to be. The psychiatric examination should be ended where possible on an optimistic forward-looking note. One way of doing this is to return to the open-ended fantasy such as these two time-honored approaches to underlying fantasies: (1) "Let us pretend again for a little bit before we have to stop. Suppose you were walking down the street and found $100. Tell me what you would do with it if it is all yours." (2) "Let us pretend that there is someone magic, maybe with the powers of God, and they gave you three wishes. Tell me what you would wish for."

Structured play as part of the psychiatric examination is preferred by some examiners to the purely verbal approaches. It is also an important adjunct with the less verbal child, with the shy, reticent child, and with the otherwise unavailable child, such as those with autism or other psychiatric features. It is useful, too, as a means of validating or clarifying an ambiguous verbal response or one that is suspect of being the response the child thinks the examiner wants or that the child feels is the "right" one. It is also the

approach of choice with the preverbal child.

The use of structured play was highlighted by David Levy in his research studies on sibling rivalry and maternal overprotection. It was further refined by Conn and Hambidge. It can be facilitated by having the range of toys available in the world game as developed by Margaret Lowenfeld.

The principle involved is setting up a play situation that creates an opportunity for the child to bring his own reactions and solutions to an area of functioning to be evaluated. This offers the possibility of re-creating and reenacting traumatic situations encountered in the patient's life about which details have been repressed. One can also set up details of school, home, neighborhood, aggression, property rights, habits, special symptoms, and so on. It is possible too, to play out open-ended projective approaches, such as the Duss fables.

The use of puppets and role playing in expressing feelings go back in history to long before psychology and psychiatry were developed. One variation in the use of puppets in diagnostic settings is for the examiner to adopt a puppet character, which explores the areas to be investigated and acts as commentator as the child plays.

With the preverbal child, the psychiatric and psychological

examinations are attempting to explore the same areas of constitutional personality and mental makeup as with the older child and with the same goals outlined earlier. Mother-child interactions should be closely observed, both in and out of the examining room. With the very young child who has separation fears, it is better for the examiner as a stranger not to look directly at the child for the first few minutes, concentrating on the mother until the youngster decides from the mother's responses that the examiner is safe. Otherwise, one has a crying, fearful, uncooperative subject from the start. When the mother is in the playroom as necessary, it is well to include her in the child's play at the examiner's direction or else she becomes the observer or examiner of the examiner, a less than comfortable examining climate.

It may be necessary with many young children to "prime the pump" as a means of initiating play. This may take the form of rolling a ball back and forth, building with blocks and knocking them down, rolling cars and having them bump into one another, and so on. In addition to the child's own specific play interests, structured play situations should include relationship situations, a child getting hurt, getting punished (spanked), toileting, bathing, aggressive play (hitting), sleeping, fears, dreaming, and so on. The desert island story and baby bird story can be played out. Mothers and fathers can go out together, fight, or go to sleep together. At a family meal, one of the family can eat poisoned food or have a stomachache. A sleeping child can wake up, perhaps on a far off place (desert island), and be afraid or have a bad

dream. What is the fear or the bad dream?

The clinical psychiatric examination of infants has not yet been developed into an organized art and science. However, it is in the process of being defined, and portions of the process are more or less refined. The problems and principles involved have been outlined by Cytryn. A great deal has been written about mother-infant transactions and their observations as well as about infants in institutions for research purposes. Individual differences in babies and their meaning in terms of vulnerability to developmental distortions have been defined by Heide, Murphy, Thomas, Chess, Birch, Hertzig, and Korn. Psychosomatic responses have been studied by Lourie and Richmond. Psychological patterns have been defined by Wolff and autonomic responses by Lipton, Steinschneider, and Richmond. Nutritional and developmental neurological pathology are increasingly available.

As this type of information becomes accessible, the reluctance to think of particularly vulnerable infants having emotional problems is gradually disappearing. Also, as the searchlights increasingly highlight the first few years of life at the time when the roots of personality and adjustment problems are laid down, a more defined basis for infant psychiatric evaluation becomes necessary and will be available.

In the psychiatric examination of adolescents, a few additional technical points can be added to those already mentioned. Though the diagnostician is usually better advised not to use teenage slang or "hip" language, it is often helpful to let the individual know of the examiner's familiarity with such colloquial communication patterns. Some teenagers are afraid to talk about themselves because they might find that they are "crazy," particularly as they are afraid of the nature and intensity of their wishes, fantasies, impulses, and so on. In other words, many adolescents come to the diagnostic interview on a basis that handicaps communication. Such individuals require patient approaches, sometimes repeat visits and an opportunity to test out the examiner's integrity before trust can develop.

There are many ways in which the psychiatrist can be fooled by the adolescent. The florid quality of symptoms may convince the psychiatrist that he is dealing with a schizophrenic patient, whereas he may only be seeing a transient episode of short duration from which his patient returns to adequate functioning without residual deficit. Episodes of great aggressiveness, running away, or seemingly total disorganization can be short-lived and have no ominous implications. On the other hand, one sees seemingly inexplicable suicides and psychotic episodes for which only the most minor antecedents can be discovered. There has been a trend to underestimate the seriousness of adolescent psychological conflict and to hope that the developmental process will take care of it. Careful assessment

will forestall the great waste of therapeutic time that can occur when a patient is over-treated or treated inappropriately. For example, the impulse-ridden, delinquent teenager may be taken into intensive outpatient psychotherapy under the false notion that he can utilize this treatment situation effectively. Obviously, he cannot, and the result is that the therapist becomes the rider of a runaway horse.

Toward whom is the problem directed? Planning is greatly facilitated by narrowing down the areas of major conflict into manageable proportions. This helps both diagnostician and adolescent to see what their work will be. Is the conflict between mother and child or father and child? Is the problem one of displacement from parental figure to a schoolteacher? Since school failure or a drop in grades is often the signal for psychiatric consultation by the parents of teenagers, it is exceedingly important to understand the true significance of such phenomena. For example, failing in courses may be secondary to preoccupation with sexuality or jealousy and have little to do with the actual school situation. It may reflect a conflict between teacher and youngster. It may also reflect a lag in the conceptual and abstractive development of the youngster. Each would require a different kind of therapeutic intervention.

The Psychological Tests

The point at which the psychological examination enters the psychiatric diagnostic process is a function of the preferences of the team members, or of practical scheduling problems, or most importantly, of the questions that are asked about the child. In some private psychiatric practice, the psychologist-clinician is asked to make a preliminary survey of the child's difficulties, to secure the pertinent history (either directly or through a social work colleague), and to advise the psychiatrist where the principal locus of the problem appears to lie, that is, in an inhospitable or inappropriate environment, in the child's constitutional (including neurological) deficits, in the child's emotional and social development, or in some combination of these factors. A preliminary review by the psychologist is particularly useful when the child's principal presenting problem is focused on the school—the underachiever, who is presumed to be emotionally disturbed, the slow learner, who is presumed to be constitutionally handicapped, the hyperactive disruptive child, who is viewed as handicapped or hostile according to the forbearance of the teacher—since in many such cases the psychologist may clarify the primary or secondary nature of the omnipresent emotional problem. In some instances, the psychiatrist may then see an approach to the problem that obviates the need for direct psychiatric intervention, for example, the psychologist's communication to the school with suggestions for remedial teaching and/or better classroom handling. More usually, the psychological examination is seen by the psychiatrist as a complementary

concomitant to the psychiatric examination and the developmental history.

The psychological examination within the psychiatric diagnostic study has as its primary goal the exploration of aspects of the child's functioning not easily accessible to the psychiatric interview nor established decisively by the developmental history.[2] In addition, the psychological examination may investigate areas covered by the psychiatrist from a different vantage point, with the possibility of corroborating, extending, or questioning the latter's interview findings, thus leading to the need for reconciliation of the disparate interpretations from the data and the emergence of a fuller picture of the child and his difficulties.

The formal psychological examination is primarily mediated through the use of psychological tests, though it often encompasses an interview and always includes clinical observations of the child's elicited and spontaneous behavior in the test setting. The psychological test may be defined as a systematic procedure for comparing the behavior (performance, characteristics, responses) of an individual to a criterion, the criterion usually being the age-appropriate behavior of the population on which the test was standardized. In contrast to most other interview techniques (for the psychological examination is itself a type of standardized interview), a psychological test is characterized by reproducibility, standard administration, systematic recording and scoring, and explicit criteria for

interpretation and evaluation. (The structured psychiatric interview, used primarily with adults for research purposes, has many qualities that approximate a formal psychological test.)

Psychological tests used by the clinician may be classified according to the structure of the test and the purpose or domain of the test: There is a class of tests described as structured, objective, or psychometric. These tests typically focus on the subject's response as a product, a discrete, scorable answer to a definite question or to the request for an act demonstrating skill in nonverbal tasks. At the other end of a continuum are unstructured, projective, or open-ended tests, which typically focus on the subject's individual mode of responding, the coping process he engages in when confronted with conditions of relative ambiguity. Stated another way, with the class of structured tests both the subject and the examiner have a clear idea of the nature of the expected answer (even if the subject does not know the "correct" answer). A child asked "Who discovered America?" will respond with the name of a person (or "God"). Asked "How many legs does a dog have?" he will respond with a number. Asked to copy a design, he will attempt to make his product look similar to the model. Asked to arrange picture cards to tell a sensible story, he will move them around to form a sequence corresponding to his story. In the case of the unstructured, or projective, tests, the subject is not privy to the examiner's frame of reference for judging the response, and in fact the subject is given to understand that there are no

right or wrong answers, and is invited to respond in his own way, which leads to a revelation of his personal associations, mode of response, and style, with only incidental information about his level of knowledge or ability. Asked to tell what a Rorschach inkblot resembles, the subject has as his only clear cue that a verbal response is expected, but no guidance as to the nature of the expected answer (the subject matter category, the level of organizational complexity, the dominant determinant reform or color, the portion of the blot to be interpreted, and so on). Asked to tell a story to a Children's Apperception Test (CAT) picture, the child is ignorant of the examiner's intention to see his responses to animal pictures as analogues of his responses to humans and, more particularly, as reflections of his perceptions of himself and his interpersonal world. Although structured and unstructured tests differ along the dimension of the explicitness of the examiner's response expectations, they also exist along a continuum of more or less structure and more or less opportunity for revelation of personal style. As an example, the Bender Motor Gestalt Test, which requires the subject to copy nine designs, may be seen as a highly structured test with explicit directions to make the product closely resemble the stimulus, that is, to reproduce the form with accuracy; unspecified are such aspects as the size of the copied designs, their arrangement on the page, and the quality of the lines. The Bender has both psychometric and projective aspects, both of which contribute to the examiner's understanding of the subject. In similar fashion, the relatively

structured Wechsler Intelligence Scale for Children (WISC) has questions that permit the observation of personal style, while the test is formally scored on the basis of a limited range of acceptable answers for each task. For example, to the question "What should you do if you saw a train approaching a broken track?" with the expectation of an answer reflecting the child's awareness that one needs to warn the train and/or summon help, following are some of the answers that seem to reveal more about the child's self-concept than about his level of intellectual functioning. A thirteen-year-old underachiever answered: "I wouldn't do anything; what's the use, after all, the engineer would look out and see a little kid trying to signal, and would ignore him." An aggressive eleven-year-old boy said: "Nothing, I'd just stand back and watch the action." An anxious ten-year-old girl replied: "I'd move back as fast as I could; you could get hurt, you know."

The relatively unstructured Rorschach, though permitting open-ended response possibilities, does consist of a standardized set of ten cards, each having discriminable objective attributes of size, shape, shading, and color, as well as complex gestalt stimulus properties which tend to elicit certain responses far more often than others (the "populars," which represent the subject's ability and/or willingness to give a socially expected response). The Rorschach responses are scored on several variables, including the level of form perception, that is, whether the subject's match of a verbalized image to the stimulus is among those that can be or have been consensually validated.

There are then psychometric aspects to performance on an unstructured test, related to reality testing and the acceptance of group norms.

A second classification of tests in terms of their purpose or domain would include tests of cognitive functioning, such as intelligence tests, tests of perceptual-motor functioning, tests of language function, those revealing personality structure and interpersonal perceptions, those reflecting vocational interests or vocational aptitudes, achievement tests in specific subject matter or skills, and tests empirically developed to reflect the presence of impaired neurological functioning.

When we turn from the classification of individual tests to the psychological examination, we can consider some of the factors that influence our choice of the tests we use with an individual patient. One basic assumption underlies the psychological examination, namely, that the behavior we observe, elicit, and record in the testing situation, in relation to the tests, the examiner, the environment, or to a combination of all these factors, is in some sense representative behavior, from which we may generalize to the subject's real life. This assumption, relating to the validity of the tests and the examination process, can only be tested against the success of the resultant prediction, post-diction, or contribution to understanding of the subject's behavior. Within the testing situation, we need to get a representative sample of the subject's behavior, that is, we need to observe

the subject's responses across enough stimuli, under varying conditions of difficulty, so that we can be confident that the behavior is somehow typical of the subject and not a momentary aberration. Further, this broad sampling permits us to specify the contingencies that elicit various behaviors. For example, we may observe that a child handles questions on the structured tests very confidently, but shows uncertainty and agitation when faced with the projective tests. Or, we may see that a child is very slow and seemingly inhibited in handling verbal tasks, yet comes to life with the nonverbal tasks. It is therefore generally desirable to rely on batteries of tests rather than on single tests, since the broader sampling permits a wider range of observations, a comparison between intra-test and inter-test variability, the testing of tentative hypotheses across situations (permitting a statement concerning internal consistency, which is one criterion of validity), and sequential observations, including responses to fatigue, variability in concentration, and motivation.

In planning the test battery, it is important to include tests sensitive to the child's overt problem areas as stated in the presenting complaints or uncovered during the course of the playroom interview and/or developmental history. If, for example, a child is described as absent minded and forgetful, it would be desirable to include tasks tapping recent and remote memory and his ability to concentrate, as well as tests that might reveal the role of fantasy in his lapses of attention; if a child comes with a

history of slow speech development and learning problems, it is important to include verbal tasks of sufficient range and difficulty to assess the current problem and its contribution to the learning difficulties, as well as other tests related to school performance (such as an intelligence test and the Bender Gestalt).

A cardinal principle in test selection is to choose a test or battery of tests appropriate to the subject. Thus, we would not use a test of adult intelligence with an eight-year-old, nor a test requiring vision with a blind subject, nor a test involving full command of English with a Spanish-speaking subject. It is assumed that a test is valid only when applied to subjects similar to those in the standardization sample. When we test members of minority groups with instruments standardized on the dominant cultural group, where their test performance is judged against the majority norms, we violate one of the assumptions in test administration. While it may be possible to compare their performance with the standardization norms, and to assess their ability to adjust and/or compete where the majority standards hold sway, it is hazardous to extrapolate further.[3]

Where there is a sufficient background of experience with minority group children, such that there exist formal or informal norms for their performance, it is possible to report their performance in relation to their own peers. In addition, such tests as the intelligence tests can be legitimately

used as clinical instruments, exploring the child's strategies for coping with a variety of problem situations, some within his grasp and some frustrating, leading to insight into his cognitive processes, attitudes toward school-related tasks, ability and/or willingness to concentrate, and feelings about authority figures who make demands on him. Then the child's relative standing in his peer group and the clinical observations of his functioning can be reported with attention to his individual needs and recommendations for remediation.

The psychological examination is often spoken of as objective, scientific, and partaking of the validity of a laboratory procedure, because its tools are standardized tests—reproducible, scorable, and using explicit criteria for interpretation. Though there is some truth in this assertion for many of the more structured tests, particularly tests of cognitive function, it is far less true of the projective tests, which are really specialized, standardized interview techniques with certain rules of procedure, standard stimuli, scoring criteria, and general rules of interpretation, in fact, multiple systems of scoring and interpretation.

The face-to-face testing situation with an examiner and an individual patient shares many characteristics of other two-person interactions, and in assessing the formal test findings, it is important to recognize and take into account various factors that may influence the test results. Under the heading of examiner variables, it is important to consider the examiner's philosophy

of testing, which includes his perception of his role, whether he views himself as a diagnostician who relates to the patient neutrally and divorces the diagnostic interview from the helping process or whether he relates to the patient with more positive affect and believes that any contact with a professional should have therapeutic implications. In both cases, it is possible to follow standard testing procedures, but the atmosphere and stimulus to rapport are quite different. In the same connection, examiners differ in their view of whether the patient should be examined under minimal stress conditions, to elicit his best functioning, or under greater stress conditions, to investigate his breakdowns in functioning. The testing situation is, of course, inherently stressful for many children and adults who perceive it as a threat to their privacy and to their defenses against feelings of inadequacy. A case can be made for testing under conditions facilitating the greatest cooperation and effort on the patient's part. His failures and difficulties are usually reported at length in the presenting complaints and developmental history. What often remains unreported, unless the interviewer of the parents is very skilled and knowledgeable, is the area of strengths and assets. A sympathetic examiner, supplying reassuring structure and appreciation of the child's efforts, can begin to sort out the basic capacities from the inefficiencies associated with internal and/or external stress. In addition, the accepting, interested adult may lessen the child's need for a defensive armor, so that more of his covert problems may be open to exploration.

Another set of examiner variables includes his own personality makeup, race, social class and professional identification, and self-awareness regarding prejudices, stereotyped expectations, and power needs in relation to a patient. These variables may exert a subtle influence on the test results either through their effect on the examination itself, mainly in terms of the rapport and level of encouragement of the patient's optimum efforts, or in the evaluation of the test results, and possibly in both. Though there is clearly a serious problem in the validity of test results where the examiner is openly antagonistic, contemptuous, condescending, or admiring of the patient, or where the examiner and the patient cannot communicate adequately because of a significantly different cultural frame of reference or language barrier, the greater danger lies in the less blatant, more covert examiner attitudes and practices.

On the patient's part, there are also variables influencing his performance in both obvious and covert ways. The issue of trust is perhaps paramount: In the very young child, it will come in immediately and directly in the child's refusal or willingness to leave his parent and participate in the test situation. In the latency child, it is more likely to take the form of reticence or willingness to verbalize freely or to engage in any projective task. In the adolescent, the issue of trust may be expressed in a direct confrontation with the examiner regarding the implied invasion of privacy, the examiner's perceived role as the agent for the complaining parents, and

against the examiner's identification with the establishment. In all cases, the basic issue is the patient's concern and fantasies as to the purpose of the examination. From the child's viewpoint, his degree of cooperation with the examiner will be very different if he feels the examiner is a benevolent adult, interested in his side of any reported troubles and understanding of his worries, as against his perception of a demanding, punitive, authority figure who has the power to recommend significant changes in his way of life. Though the child's responses may reflect his habitual pattern of reaction to perceived threat, and therefore provide valid data for observation, his responses to a particular examiner may not be representative of his responses to stress situations generally and may be more a function of his fears and expectations regarding school authorities, probation officers, or doctors. His approach to the examination may limit the amount of information available to the examiner, or obscure his assets and conflict-free areas of functioning, or give a distorted picture of his functioning in other situations.

It is the examiner-clinician's role to be aware of the interpersonal, situational, and intrapersonal factors affecting the psychological evaluation and to assess the validity and representativeness of the findings. The process is analytic, inferential, synthetic, and evaluative, and the report communicated to his mental health colleagues is neither a laboratory summary nor a direct reading of the raw test data but ideally an integrated

clinical judgment. Overall, the criteria for evaluating the child's test performance relate to his coping ability: How adaptive or maladaptive is his behavior, that is, does it seem to further the goals of the organism, to reduce discomfort, achieve individuation, maintain dependency, achieve mastery, and so on? How efficiently does the child achieve his goals, that is, with what degree of effort and at what cost to other competing needs? How appropriate are his solutions to his chronological age, that is, what is his level of maturity in relation to the expected stages of development (cognitive, psychosexual, social)? How well can he communicate with significant others to elicit environmental support, to give necessary feedback, or to relieve stress, and so on?

The movement in psychological assessment is away from diagnostic classification with its inherent emphasis on pathology and with its potential for hampering a flexible approach to remediation (for example, the despair of mental health professional with an autistic child, the distrust and despair toward a sociopath, the frequent loss of interest in the emotional problems of a retarded child). In fact, the clinical psychologist as diagnostician has recently come in for increasingly heavy criticism from several sources: from minority groups who see the tests as invalid instruments inimical to the needs of their children; from schoolteachers and special education teachers who feel the tests do not speak directly to methods of remediation and therefore offer them little useful information; from behaviorally oriented

psychologists, who feel the findings are too inferential and the tests invalid because their rationale is frequently unsupported by research and there is insufficient spelling out of the contingencies under which behavior is elicited and maintained, and therefore insufficient information for effecting change.

In the light of all the above, following is a discussion of psychological test instruments and their principal uses. The instruments cited are those used in individual diagnosis with children and adolescents, omitting group intelligence and achievement tests, which are typically administered in a school setting. This list of tests is selective and consists of those common in clinical child psychology practice rather than highly specialized instruments reserved for intensive neurological diagnosis or research.

Let us first consider the area of cognitive development and functioning, which is usually assigned to the psychologist for formal investigation in the psychiatric diagnostic process. The principal tools in this investigation are the individual intelligence tests, which have a comparatively long history, beginning with the first attempt to predict a child's capacity to profit from school experience. The test devised by Binet in 1905 was different from previous laboratory tests of single functions in that it assumed that the capacity to learn in a school setting was a complex function including adequate language development, problem-solving ability, computational skills, social judgment, and command of other complex tasks. Here the

concept of intelligence is broad and related to the capacity to learn from experience, where experience is assumed to be daily life experiences, not directly linked to school learning. The usual distinction between intelligence and achievement tests is misleading in that it implies that the intelligence test is not an achievement test. In fact, it is a generalized achievement test with emphasis on a wider sampling of behavior and of acquired concepts than the usual standardized achievement test, which focuses on specific subject matter or skills.

The intelligence tests most commonly in use report their results as a summary IQ, which reflects the relative standing of a subject in comparison to his own age group.[4] It is a deviation IQ, based on the assumption of a statistically normal distribution of intelligence within each age group, and expresses the degree to which a subject resembles the average or deviates from it in either direction. Underlying the use of a summary score is a concept of general mental ability reflecting the finding of high correlations among the mental tests making up the intelligence scales. But the many tasks also provide an opportunity for the observation of individual patterns of ability.

There are two basic assumptions underlying the interpretation of intelligence test results: (1) the subject taking the test has been exposed to the relevant experiences reflected in the test questions; (2) one can best predict future learning capacity on the basis of the evidence of past learning.

Differences in the level of achievement on the intelligence test are therefore interpreted as evidence of the organism's capacity to learn, where environmental opportunities have been similar to those of the standardization population. The leading individual intelligence tests have been standardized on white subjects from a range of socioeconomic groups and geographical areas but with the predominant socioeconomic level within the middle class and white collar workers in urban settings. The assumption of comparability of experience is challenged when these same tests are given to children of different racial-cultural backgrounds, socioeconomic level, and social status in the society.

Opposition to the use of intelligence tests with nonwhite, minority group children is particularly intense where the test results are interpreted as bearing on the genetic superiority of one group over another. There is little argument that genetic and other biological factors operate in the realm of mental ability, but there has been a lively controversy for many years on the relative importance of nature and nurture, and the controversy has boiled up anew with the publication of a review by Jensen purporting to support the greater role of heredity in explaining white-black differences in IQ results.

For the clinician, the study of the individual child in the context of his own racial-cultural peer group is more defensible and diagnostically more significant for highlighting individual differences in ability and coping style.

Thus, intelligence test results of minority group children are best reported in terms of their more restricted but relevant norms, with appropriate comments regarding the qualitative aspects of their performance. Where a minority group child is in a situation of direct confrontation with the majority norms, or where it is anticipated that he will be, it can be useful to indicate his standing in the larger group, together with the implications for his success or need for compensatory work. The concept of intelligence as reflected in the intelligence tests is held to include nonverbal problem-solving ability and the area of social competence and judgment. Though the tests were designed to evaluate cognitive functioning, the level of functioning at any one time is a function of basic capacity (genetic-biological, modified by environmental-experiential influences); attitudinal, emotional, and motivational factors (habitual and pertaining to the immediate situation); environmental factors (the setting and the examiner); and the subject's way of meeting intellectual challenge (including test-taking experience, expectations, and behavior). The individual intelligence tests are moderately successful in predicting school performance, with implications for future work possibilities, for groups of subjects, but have less success in predicting the school performance of individuals whose rate of growth may vary from the norm and whose environment may undergo marked alterations. Significant changes in a child's health, life experiences, emotional development, or environmental expectations may greatly affect his functional intelligence in either a positive

or a negative direction, though for most children in stable living conditions the IQ, reflecting their relative standing among their peers, tends to remain relatively constant (that is, within five to ten IQ points).

The predictive value of intelligence tests declines sharply as we go down the age scale. The best prediction comes from sampling of behavior comparable to the later requirements of the criterion, that is, in predicting school performance, language development and concept formation are most relevant. Infant scales survey the repertoire of responses and behaviors of the infant and toddler, but language development is in its preliminary stages and cannot be assessed reliably. It is possible to observe whether the child is showing developments normal for its age, what pediatricians call developmental milestones, but few of the observations will be predictive of later performance. The only two areas correlating somewhat with school-age performance are early vocalization and fine motor control. Moderately and severely retarded children usually show lags in development while still in infancy, but the mildly retarded child may show sensorimotor development and relationship patterns within normal limits until the stage of language and concept development, when the deficit first becomes apparent. The rise in predictive capacity of tests for two- and three-year-old children, though still modest, in some sense reflects not only the increasing appearance of speech and language development but the inherently more reliable test subject, re-attention and alertness. Early childhood is a period of a very rapid rate of

maturation and change and the acquisition of new responses to environmental stimuli. Until the repertoire of behaviors is reasonably well stabilized, attempts to conduct a formal examination are necessarily unreliable.

The most recently standardized infant scale is the Bayley Scale of Mental and Motor Development for children two to thirty months. The standardization sample included minority group children (about 25 per cent of the total sample of 1,200 to 1,400 babies). The Bayley scale took items from the Gesell, Cattell, and Griffith (an English scale) scales, through standardization determined the best items, and added some new features to form the best standardized infant scale now in use. The Cattell Infant Intelligence Scale is a downward extension of the Stanford-Binet (see below), for testing ages two to thirty months; the Gesell Developmental Schedules, for ages four weeks to six years, is a schedule of behaviors in the areas of motor, adaptive, language, and personal-social behavior, similar to a careful pediatric examination.

In the age range from eighteen months to five years, the preschool period, the intelligence tests have greater predictive power than the infant scales, but the young child's short attention span, distractibility, insistence on immediate gratification and discharge of tension make for considerable unreliability in single session samples of behavior. It is in this age range that

the examiner's patience, skill, and flexibility are put to the greatest test. The preschool tests have many performance tasks that have a play quality, helping to engage the child's attention and cooperation. With some overlap with infant scales, the most commonly used scales for the preschool child are the Stanford-Binet Intelligence Scale, for the child who does not perform below a two-year level on any function measured by the scale (the Binet is discussed further under the school-age tests), the Merrill-Palmer Scale of Mental Tests (ages two to five), and the Minnesota Preschool Scale (ages one and one-half to six). For the developmental assessment of infants and preschool children, who for behavioral or physical reasons are unable to participate in the testing, it is possible to interview the mother or other responsible adult with the Vineland Social Maturity Scale. The Vineland, developed to evaluate the social competence of mental retardates in conjunction with an intelligence test, has a substantial correlation with IQ and can yield developmental information in areas of socialization, self-help, self-direction, communication, locomotion, and occupation. The largely nonverbal Merrill-Palmer can be helpful in surveying the abilities of children with delayed speech or language problems, but the absence of verbal items makes it hazardous to predict to later school adjustment.

Bridging the preschool-school range is the relatively new Wechsler Preschool and Primary Scale of Intelligence (WPPSI) for children from four to six and one-half years of age, a downward extension of the WISC. For children

of elementary school age, and up to middle adolescence, the two most commonly used instruments are the Stanford-Binet, form L-M, and the WISC. The Stanford-Binet can be used from early childhood through the entire age range, including adult life. There is a set of Wechsler scales covering the range from age four to six and one-half (WPPSI), five to fifteen (WISC), and sixteen through adult life (Wechsler Adult Intelligence Scale [WAIS]), all of which are descendants of the Wechsler-Bellevue Intelligence Scale, dating from 1939. There exists a vast literature on the Binet and Wechsler Scales as intelligence tests and as diagnostic instruments, and this survey will touch only briefly on their characteristics and uses.

The Binet scale is organized by age levels, from age two to superior adult 3, and at each level the subject is presented with tasks appropriate to that level, so that the test given to the three-year-old is different from the test given to the eight-year-old, not only in the level of difficulty but in the very nature of the tasks. Below age six, the tasks are fairly evenly divided between verbal and nonverbal, but above age six the test is heavily weighted on the verbal side. The range of abilities surveyed is very wide, including language development and usage, reasoning, concept formation, computational skills, rote and meaningful memory, planfulness, verbal abstraction, understanding of absurdities, visual-motor development, and problem-solving. Though the test is not organized to focus on evidence of differential abilities within the scale, it is possible to analyze patterns of successes and failures to reveal

consistent areas of handicap or deficiency. Qualitatively, the Binet test is particularly useful in the evaluation of very bright children and adolescents because it has so high a ceiling (into the superior adult range) and because it presents the intelligent subject with many different novel and challenging tasks, thereby sustaining interest and motivation. Its low floor (at the two-year level) permits an adequate sampling of behavior and abilities in young children and retardates, with economy of time, which is important in the testing of subjects with short attention spans. The Binet provides varied opportunities for clinical observations of cognitive style as well as cognitive efficiency. The inclusion of the absurdities tasks and interpretation of proverbs within the under sixteen age range provides the examiner with samples of verbal behavior useful in the identification of a developing thought disorder.[5]

The Wechsler scales consist of verbal and performance subtests, leading to separate verbal and performance IQs as well as a full-scale IQ, each computed on the basis of the subject's relative standing in his age group. In contrast to the Binet grouping of items in age levels with mixed content tasks, the Wechsler scales are point scales which expose each subject to the same range of subtest tasks; within each subtest, items are arranged in order of difficulty, and the raw scores attained on the subtests are converted into scaled scores, that is, normalized standard scores, with a mean of ten and standard deviation of three. There are five or six verbal and five performance

subtests, affording opportunities to observe varied classes of behaviors, some general problem-solving behavior across modalities, and a more explicit analysis of abilities in different areas from those possible with the Binet. Correlation between the WISC full-scale IQs and the Binet are high, but the WISC verbal scale IQs are even more highly correlated with the predominantly verbal Binet. Yet, IQs of bright young children run consistently higher on the Binet. Average or bright children above six with visual-motor handicaps, might fare better on the largely verbal Binet, because there would be little opportunity to reveal the deficit, whereas the timed performance tasks on the WISC would highlight the problem. Between the ages of four and six and one-half, the WPPSI is an interesting and varied test, but mainly for bright, highly motivated children; for the slower and/or duller child, it takes too long to administer, leading frequently to loss of attention and frustration, and it tends to underestimate the IQs of the bright children in comparison to the well-established Binet. Thus, its purpose to extend the WISC downward, where the WISC has proven weakest (in the five to seven year period), has been only partially achieved.

As a group, the Wechsler scales permit analysis of the patterning of subtest scores, from which one may derive diagnostic hypotheses beyond the issue of overall mental ability, but the “profile analysis” must be used cautiously in individual diagnosis, where careful qualitative examination of responses may reveal supporting evidence, or may lead to a rejection of the

hypothesis. As one example, the finding that the verbal IQ is significantly greater than the performance IQ may, on closer examination, be a function of (1) the fact that all the performance tasks are timed, whereas only the arithmetic subtest is timed on the WISC, resulting in a lower performance IQ in the case of a depressed subject; or (2) the inadequate visual-motor ability of a mildly neurologically handicapped subject of average verbal ability, whose qualitative performance on the nonverbal tasks as well as timing are relatively poor; and (3) the relative verbal-language acceleration in development of a bright young subject, whose physical motoric maturation is proceeding at a more average pace.

A performance test concerned with a special aspect of intelligence, namely, foresight and planning ability, is the Porteus Maze Test, which has been used extensively since 1922, usually in conjunction with standard intelligence scales (in fact, mazes have been included in the performance scale of the WISC as an optional task). It can be analyzed quantitatively, in terms of level of achievement, and also qualitatively, in terms of details of performance in the areas of impulsivity and persistence. (It was among the tests used to study the effects of prefrontal lobotomy, and reflected the loss of future-oriented behavior in the lobotomized patient.)

For the examination of physically handicapped children, it is possible to give the verbal or performance Wechsler scales, depending on the area of

handicap. The Columbia Mental Maturity Scale is a brief nonverbal test consisting of large cards with three or more items, requiring the child only to point to the item that does not belong with the others, yielding two derived age-based scores: the Age Deviation Score and the Maturity Index. In its 1971 edition, it is standardized on a new sample of children purported to be representative of socioeconomic level and ethnic group membership as determined in the 1970 census, and suitable for ages three and one-half to nine years. Spanish directions are included in the manual for Spanish-speaking subjects. It gives information on abstract reasoning, an important component of intelligence. As was noted earlier, the Vineland Social Maturity Scale is suitable where subjects cannot themselves cooperate for physical or emotional reasons and an informant is available.

A truly developmental approach to cognitive maturation is offered by Jean Piaget and his followers, which traces the orderly sequence of changes in the nature of thought processes as the child grows from infancy to maturity in adolescence. An increasing number of psychologists are becoming interested in assessing a child's cognitive processes in terms of his stage of intellectual development in the Piaget sense, rather than in comparison to other children in his peer group. It would then be possible to have a scale of the developmental maturity of the thought processes. One endeavor to construct a standardized test using Piaget's concepts of development was that of Laurandeau and Pinard, who investigated the mode of precausal thinking, one

of the early stages of cognitive development, which they found generally decreasing with the increase in chronological age.

There is a burgeoning field of writers on the applications of Piaget's developmental theories to the process of education, establishing direct links between the child's stage of functioning and efforts at education and remediation.

A host of tests were designed to explore the child's level of perceptual-motor maturation, integration, and intactness of functioning. They offer developmental norms and often include scoring criteria for pathological deviations, or there are pertinent research findings permitting assessment of neurological central processing functions and dysfunctions. They are particularly useful in studying children with learning disabilities because they deal with less complex, more basic response capacities of the child than are generally tapped in the intelligence tests, and frequently have associated remediation suggestions and programs. For most children, these tests generate relatively little anxiety and represent conflict-free areas of functioning. The exceptions are of course the children with moderate to severe perceptual-motor problems, who are aware of their inadequacies and may find such tests very trying. However, the clinician is then in a position to observe how the child deals with his anxieties and frustrations in tasks similar to classroom requirements in learning to read and write. The tests, as

a group, can give information as to the child's readiness for classroom learning, can indicate children who constitute high risks and need special handling before or on entering the formal educational channels, and can tag some children as needing careful neurological study because of pathologically deviant performance. Though these tests are relatively culture free, that is, less directly reflective of differences in socioeconomic level and cultural group than the intelligence tests, there are indications that rate of maturation and other normative criteria may differ between groups, and deviations from majority group norms should be treated cautiously in diagnosing pathology in minority group children.

Following are pencil and paper perceptual-motor tests that involve copying of designs, where both the visual-perceptual and motor-expressive aspects are necessary for successful performance: The Developmental Test of Visual-Motor Integration by Beery and Buktenica can be used with children as young as two years of age and goes up to age fifteen. The Haworth Primary Visual Motor Test can also be used with young children.

The Bender Visual-Motor Gestalt Test (1938) has become a standard part of most test batteries for children from five years of age (with no upper age limit on its use). With the appearance of the Koppitz scoring system for ages five to eleven, and with the widely used Pascal-Suttell system, which is applicable in adolescence and adulthood, its usefulness as a developmental

test and as a diagnostic instrument for neurological dysfunction in the visual-processing sphere has been enhanced. The Background Interference Procedure was designed to increase the sensitivity of the Bender to neurological dysfunction. The Bender is a useful diagnostic tool beyond the issues of neurological maturation and dysfunction since it permits observations on the management of motility—the strength of drive, the capacity to control, the style of control, that is, the defensive patterns—and in this area of motility patterns are many diagnostic clues in cases of hyperactivity, behavior disorders generally, compulsivity, and childhood psychosis. Within the Wechsler intelligence scales, the WISC Coding subtest and WAIS Digit Symbol are speed tests that demand adequate visual perception of simple geometrical figures and rapid motor reproduction, with norms for ages five and above. They also afford an opportunity to observe attention and concentration since the subject is required to move along rows of symbols, shift constantly from one to another, and monitor his own performance without any help from the examiner. The fact that there is no inherent structure to engage the subject's attention, nor inherent interest in the material, makes this type of task useful in extrapolating behavioral expectations to other situations, such as the classroom, where the child is put to work on his own to master dull repetitive material. Among the pencil and paper tests, the Graham-Kendall Memory for Designs introduces an immediate memory factor since the subject draws each of fifteen geometric

designs after looking at it for five seconds, then the stimulus card is removed. The test was empirically developed as a test of neurological dysfunction, and errors resembling those most frequent in an independently diagnosed population of brain-damaged subjects are most heavily penalized with a higher score. There are some manifestly brain-injured subjects whose performance on the Bender, though slow and uncertain, is not clearly pathological, but whose Memory for Designs performance reveals gross errors in perception of the gestalt, with loss of symmetry and fragmentation of the gestalt most prominent.

The Frostig Development Test of Visual Perception surveys different areas for children four to seven, such as spatial relationships, position in space, form constancy, figure-ground relationships, and eye-hand coordination. Also an associated remedial program is offered to develop proficiency in visual perceptual abilities. The Frostig test and remedial program are specifically aimed at identifying and helping the child with potential learning difficulties.

Another group of tests, also involving visual perception and motoric execution, is constructional in nature, the assembling of a gestalt out of discrete pieces. The Wechsler Object Assembly has the subject put together a concrete object (a manikin, horse, auto, hand), where the subject will usually have guessed the nature of the object early on, and the task then requires the

integration of the parts into a perceived whole. The Wechsler Block Design, on the other hand, has the subject reproduce a nonrepresentational design from the examiner's model or a drawing, using discrete blocks. This entails perceptual analysis first, into the component parts, then organization and synthesis. In both the object assembly and block design tasks, the motor element is minimized in that the subject has only to move the pieces around, which requires much less manual dexterity and fine motor control than the drawing tasks. The mosaic test is a much less structured task, in which the subject is invited to construct something using multicolored, multi-shaped flat plastic chips. The completed product is judged on a variety of dimensions, with the overall criterion the successful construction of a recognizable gestalt, representational or nonrepresentational, using the forms and colors to form patterns showing inner coherence and organization, appropriate to the child's age and developmental level. The task calls on internalized imagery and self-organization, as well as awareness of the adequacy of the overt production and is particularly difficult for brain-injured subjects.

Another test in the area of visual perception, the Draw-A-Person (or any of its variants, for example, House-Tree-Person and Harris-Goodenough) calls on the internalized body image of the subject and therefore has a memory factor, a perceptual factor, and a motor factor. The test originated in 1926 with Florence Goodenough's Draw-A-Man test as a measure of intellectual maturation, gained considerable prominence as a projective technique for

adolescents and adults with the Machover description of the drawings as projections of personality (1948), and was expanded into the Buck House-Tree-Person test (1948); it has been brought back into the area of intellectual maturation with the Harris (1963) adaptation of the original Goodenough test. More recently, Koppitz published a scoring method for children's human figure drawings with explicit developmental considerations, drawing attention to the elements expected at each age level as well as other normative information. The figure drawings are a source of information about the child's self-concept and concern about body functioning, often expressed through omissions, exaggerations, and distortions of parts of the body, and sometimes displaced from the locus of anxiety. It is particularly important to judge personality dynamics in the context of the developmental expectations, or else there can be a confounding of intellectual-maturational and personality conflict features. The human figure drawings are often very useful in the diagnosis of neurological dysfunction, with special attention to such elements as consistent unilateral disproportions (asymmetry) and 90-degree rotations of the figures. It is often true that children with emotional difficulties, with or without neurological dysfunction, will produce human figure drawings that score below chronological age expectations, and it is therefore unwise to use the drawings as a primary source of information about intellectual maturation.

The Lincoln-Oseretsky Motor Development Scale, for children six to

fourteen, is primarily a motor test, with associated perceptual elements. It is a revision and restandardization by Sloan of a test of motor proficiency originally published in Russia in 1923. It consists of thirty-six items, about one-third of which involve gross motor behavior, and the remainder, hand and arm movements that demand speed, coordination, rhythm, and dexterity. It provides age norms, yields developmental and maturational information, and has proved useful in the diagnosis of neurological dysfunction.

The foregoing tests all involve some motor expressive components. On the other hand, the Columbia Mental Maturity Scale (revised 1971) requires the subject only to point to the pattern that is different, making it almost purely a test of visual discrimination. It is useful as a non-language screening test of intelligence, but it demands comprehension of the concept of "different." Raven's Progressive Matrices also largely eliminates the motor element and requires the subject to indicate which one of four possible choices is appropriate to complete a series of items. It has complex visual-discrimination elements and is also used as a test of nonverbal intelligence.

The Illinois Test of Psycholinguistic Abilities (ITPA) was described by its authors as a diagnostic test of communication abilities for children two to ten years of age designed to delineate specific abilities and disabilities in children's communications with a view to remediation. It is called a diagnostic test of specific cognitive abilities, as well as a molar test of

intelligence. The twelve ITPA subtests are intended to pinpoint problems in two channels of language input and output (auditory-vocal and visual-motor), three processes of communication (receptive, expressive, and a central mediating organizing process between the receptive and expressive), and two levels of language organization (the representational and the automatic). It shares with the foregoing tests of central processing in the perceptual-motor area immediate relevance to learning problems, with associated remedial implications, and the ITPA has become a respected test in the repertoire of the school psychologist. Its applicability to the preschool child makes it particularly valuable in helping the clinician to analyze early language disturbances, such as delayed speech, and permits early intervention where appropriate. Taken together with the verbal material on the intelligence scales, the language usage observed on the projective tests, and the spontaneous language interchange with the examiner in the test situation, the child's varied communications patterns can be surveyed and described in rich detail.

Of all the psychologists' test instruments, the projectives are the most well-known and the most frequently requested in a diagnostic study. This is so despite the fact that the psychiatrist has interview techniques for children at his disposal that overlap with the domain of the unstructured and semi-structured tests (see the discussion above on playroom observations, the World Test, Duss fables, and so on.) Among the projective techniques, the

Rorschach is most in demand by the psychiatrist-client and is rarely omitted from a clinician's test battery. The Rorschach is considered a multidimensional test of personality, but it is at its base, according to Rorschach, "a diagnostic test based on perception." Rorschach believed that through the ten symmetrical inkblots, with their variations in form, shading, and color and ambiguity of associative value, he could elicit an individual's unique way of perceiving, interpreting, and responding. He further believed that the person's way of responding bore a lawful relationship to that person's view of the world, his reality orientation, defensive structure, and diagnostic group. It is important to stress that underlying is the assumption that the person is capable of performing the basic perceptual task—finding in his mind a matching engram, a memory image to correspond to the ambiguous visual stimulus before him. In fact, the individual must repeat this process of searching the stimulus and his associations for an appropriate fit at least ten times. With some neurologically damaged subjects the task is too difficult, and they fall back on perseveration, primitive naming of stimulus properties, and repeated expressions of impotence. In such cases, the individuality of the subject is obscured by the pathological interference with spontaneity and normal variability, much as a patient with Parkinson's syndrome, seen at a distance, will resemble other Parkinson victims rather than reveal a unique gait and expressive movement. The Rorschach may indeed reflect the neurologically damaged organism's problems with lack of

structure, but will scarcely do justice to the multidimensional personality of the subject. For the same reason, when the task is developmentally beyond a young child, the results are meager regarding personality structure.

The Rorschach has definable overt properties and response tendencies (from normative studies), and yet provides an open-ended opportunity for response (except for some group administration versions that require the subject to choose a response from a fixed number of alternatives). As a test based on perception and association, predictions regarding the subject's behavior are inferential, and there can be no direct translation from the verbal behavior elicited by the test stimuli to actual behavior in life situations. What can be defined are response tendencies of the organism, but the probabilities governing their emergence would depend on environmental contingencies and the internal state of the organism at some particular moment in time. The information regarding personality structure would be useful in clarifying the subject's expectations and needs from the environment, his probable competence in unstructured situations, and his repertoire of responses in comparison with others of his peer group, but would not help specific, short-term prediction without other kinds of information, such as evidences of past performance under similar conditions.

As an example, a sixteen-year-old boy, hospitalized for wild acting-out episodes, including the taking of hallucinogenic drugs, multiple and varied

sexual experiences, and gradual withdrawal of interest from school and other adolescent peer activities, presented the picture of adequate if slightly shaky reality testing on the WAIS and a floridly anxious, bizarre, confused picture on the Rorschach. On the hospital unit, where a conscientious psychiatrist-administrator surrounded him with firm but appropriate behavioral expectations and limits, his behavior was controlled and steady, but he complained a lot and his room was chaotically messy. Could one predict from the Rorschach to the hospital behavior? Not without assessing the degree of structure in the hospital setting and the firm parental role taken by the administrator, and certainly not from the Rorschach alone, since a predictive clinical judgment should rest on an adequate sampling of the patient's behavior, which in this case would include his performance on the more structured, emotionally less stimulating intelligence test.

Within the class of projective tests, the Rorschach is one of the least structured. There is a group of semi-structured tests requiring the subject to make up a story, largely involving pictures of human beings interacting in different combinations and situations. These tests retain open-ended response possibilities, but their effective range is greatly restricted. The oldest and most famous is Murray's Thematic Apperception Test (TAT), supplemented by Bellak's Children's Apperception Test (CAT) involving animal figures, and a later CAT (1965) using human figures. There is also the Michigan Picture Test and Schneidman's Make-A-Picture Story. These tests

are called “content” tests, in contrast to the Rorschach, which is a test of personality structure, and the content they are eliciting is largely interpersonal: the protagonist in relation to a single significant figure; in relation to a group; in relation to parental figures, peers, sexual love objects; and by himself in relation to situations suggesting a coercive environment, a state of depression, loneliness, fearful fantasy, suicidal concerns, and so forth. There are multiple ways of analyzing these content tests, beginning with Murray’s thematic approach to the subject’s need and the environmental press, but in most approaches there is interest in representing the subject’s view of his world, his drives, his emotional reactions to the different figures, his conception of the parental role, his overt and covert presentation of the protagonist’s role, his mode of resolving conflict and dealing with anxiety, his level of immersion in fantasy and the quality thereof, and his ability to organize and present his ideas, with implications for diagnosis. However, the content tests are particularly useful as part of a test battery for clarification of interpersonal perceptions rather than as a primary contribution to diagnostic classification. With adolescents, the TAT is the best instrument; with elementary school children, probably the Michigan Picture Test is most useful (particularly selected cards, including the first, which is the only card showing a whole family together); for younger school and preschool children, the CAT in either version is useful. The Make-A-Picture Story test can be given to children and adolescents and offers an attractive theatrical quality, since the

subject can choose his own dramatis personae and backgrounds for his stories.

Sentence completion tests are attempts to survey a subject's interpersonal attitudes, self-concept, and relations to such institutions as school and job and are suitable for older children and adolescents for whom reading is not difficult, since they are usually self-administering.

Though any of the semi-structured content tests permit interpretation along psychoanalytic lines, only the Blacky test was expressly designed to evaluate psychoanalytic concepts and to analyze the subject in terms of his psychosexual development. The protagonist of twelve cartoon drawings is a dog named "Blacky," whose adventures are supposed to relate to the psychoanalytic stages of development, oral, anal, and genital, with subthemes around oral eroticism and oral sadism, anal sadism, guilt over masturbation, castration anxiety, oedipal rivalry, and penis envy. Thus, the Blacky pictures provide a specific structure within which personality dynamics are studied in a developmental context. It is appropriate for children six to twelve years of age.

A new approach to assessment comes from the behaviorists, some of whom hold that operant technology is consistent with an approach to the study of individual differences: "An effective diagnostic procedure would be

one in which the eventual therapeutic methods can be directly related to the information obtained from a continuing assessment of the patient's current behaviors and their controlling stimuli." A major point is that knowledge of a subject's responsiveness to reinforcing contingencies could lead to successful prediction of behavior. In an experiment reported by Moore and Goldiamond, form discrimination was taught to preschool children using a behavioral fading technique. Such behavioral approaches might lead to the observation that a differential rate of learning under specified conditions might be seen as an assessment technique for separating out children with various types and degrees of learning problems.

Let us now reconsider the psychologist's contribution to the total diagnostic process with children, in terms of the areas where his contributions are of primary importance, or secondary but significant, to flesh out or test hypotheses derived from other sources. Within the division of labor between the psychiatrist and psychologist in their formal examinations, (and before other specialists are brought in, such as neurologists, educators, speech and hearing experts), the psychologist has primary responsibility for formal investigation of what Hartmann and Rapaport discussed under the autonomous ego functions, those inborn biological apparatuses that form the core of ego development—memory, perception, and motility—as well as others such as affect expression and stimulus barrier. In addition, the psychologist is particularly charged with investigating the direct derivatives,

such as cognitive development, synthetic functions and their vicissitudes under stress, concept formation and language development, and the relationship of these functions to the central processing efficiency of the nervous system. Still of interest but not crucial for the psychologist are patterns of adapting and coping in the interpersonal sphere, the role of fantasy, self-concept, and reality orientation with respect to meeting environmental pressures and demands (for example, school, home). In terms of developmental lines, the psychiatrist can usually investigate psychosocial and psychosexual development adequately without psychological test inputs, but in the larger framework of psychobiological growth and development, including the maturation of the perceptual-motor apparatus, cognition, and the management of motility patterns, the psychologist's input is immediately relevant and important. A detailed exposition of how each of these goals is to be met through the psychological examination is outside the scope of this chapter, but following is a brief survey of the psychologist's approach.

Perception and the association of perception with motor patterns (perceptual-motor functioning) can be investigated through tasks within the intelligence tests, through the tests of visual perception and visual-motor processing, such as the Beery-Buktenica Developmental Test of Visual-Motor Integration, the Bender Visual-Motor Gestalt Test, or the Frostig Developmental Test of Visual Perception, and through the ambiguous stimulus properties of the Rorschach. Motility patterns can be studied

through any of the performance tasks on the Wechsler scales, through many items on the Merrill-Palmer and Binet tests for younger children, through the Lincoln-Oseretsky Motor Development Scale, and through the motor expressive aspects of the Bender. Affect expression can be examined in relation to the Rorschach and the content tests and often is a part of the human figure drawings. Stimulus barrier is studied across all the tests in a battery, in terms of the inherent neutrality versus stimulus attributes of the different tasks, but can be looked at in a focused way in the differential nature and sequence of Rorschach responses to the varied and known stimulus properties of each of the ten cards. Overall cognitive development and the related areas of concept formation and language development are in the domain of the intelligence tests, including the Piaget approach to cognitive maturation, but can also be studied with the ITPA, particularly where the issue is one of efficiency of communication. The synthetic functions need to be looked at in the context of the entire psychological examination, in terms of the subject's baseline level (his habitual patterns in the area of higher cortical functioning where the synthetic functions are mediated) and in terms of breakdowns in functioning (when they occur in the temporal sequence of the test; where they occur in relation to the neutrality or emotional charge inherent in the particular task; how and to what degree the inefficiency is expressed behaviorally, for example, in delayed responses, in confused sequence, in manifest disorganization; and how discrete or pervasive does

the breakdown become, that is, can the subject recover when a new task is presented or does the incipient or manifest disorganization immobilize his usual coping resources). Within the test battery, the Rorschach, with its combination of anxiety-inducing ambiguity (that is, stress), variability in stimulation attributes (the color, chiefly), and sequence of stressful and relatively unstressful cards (cards 1 and 5 are relatively neutral stimuli, whereas cards 2 and 9 are frequently experienced as stressful), proves to be a useful microcosm for the study of the synthetic function. A full TAT analysis could also contribute significantly.

In general, specific questions within the diagnostic process regarding interpersonal behavioral patterns, self-concept, and fantasy can be answered from analysis of the projective tests, including the human figure drawings.

In the exploration of structural or constitutional or organic versus functional or emotional factors in children's difficulties in coping, the psychologist is not so much called on to rule in the emotional, which is usually present as a primary or secondary factor, but rather to rule in the organic factors, if they can be identified. In any sense, we can never rule out a factor that may be resistant to our examination, but we can speak to the probability of its contribution to the genesis or persistence of the presenting problem. Certain test findings have the consistency of syndromes, and as such can be readily identified. For example, a combination of adequate or better verbal-

language development, relatively poor perceptual-motor development, excessive stimulability with a tendency to cognitive disorganization, poor self-concept, and observed behavioral hyperactivity in the test session leads to the diagnosis of minimal chronic brain dysfunction (or whatever current term is more acceptable to a behavioral approach). In most instances, the psychologist's suggested diagnosis of neurological dysfunction rests on the integration of several lines of inquiry: Are the inefficiencies and errors in performance related to basic processes such as attention, retention, motor control, perceptual discrimination, perceptual flexibility versus perseveration, and excessive concreteness versus appropriate levels of abstraction? Is there greater difficulty with tasks requiring self-organization and perceptual flexibility than with structured, specific answer tasks? Are the breakdowns pervasive or limited to emotionally charged material? Are the elicited verbalizations appropriate in content, mood, and intensity, aside from their level of cognitive maturation? Does the self-concept fairly approximate the level of deficit? Is there a depressive response to the self-concept of damage? What are the compensatory and/or defense operations in relation to the deficit, and how adaptive are they? There are very few pathognomonic signs, which taken in isolation are valid indicators of neurological dysfunction, and the usual clinical test battery is not geared to explore neuropsychological connections in any detail. For that, such batteries as the Reitan-Halstead are recommended and should be administered by an

experienced neuropsychologist.

Summary

The analysis and interpretations of the findings from these examinations can seem like putting together a complex jigsaw puzzle, unless there is an organizational pattern in which they are structured. This pattern starts with the information about what kind of basic constitutional makeup the child has as gleaned from his history and the physical, psychological, and psychiatric examinations. This is then matched with the parental and family makeup and situation and any special problems and conditions that would influence the manner in which the child has dealt with expectable stages of personality development and ego functions. Stock is then taken of the resolution or lack of it for each of these stages and functions. Any unresolved areas and developmental defects and lags are annotated. These then are examined in terms of their interaction with the child's living situation and both daily and out of the ordinary events in it. Particularly the reactions to anxiety-producing situations are looked at, whether they are created by the child's own fixations at earlier levels along unresolved developmental lines or by inappropriate or distorting handling or life experience which perpetuates or exaggerates them. Then the child's symptoms and other manifestations internalized and externalized are correlated with these reactions and examined as his attempts to defend against the anxieties, to find better

answers to the unsolved problem areas, to maintain homeostasis and/or to perpetuate and reenact the conditions and situations that led to the unsolved problem area. One takes stock of the cumulative poor answers as the unresolved answers to earlier stages make for additional poor or incomplete answers to later stages. The end result should be a picture of the child's current functioning with as logical as possible an ordering of the factors and forces that created and continue to influence it.

This process is carried out by picking up clues from any part of the examination and looking for validation of these leads. The data one uses involve soft facts for the most part, and care should be taken not to be misled by unvalidated clues. Interweaving the material from psychological and psychiatric clinical and testing examinations enlarges the opportunity for such validation.

Unused clues are not discarded but are stored. Later information or observation may not only provide their validation but also may change the emphasis in the diagnostic formulation. It is always interesting to look back at the diagnostic study after a treatment program has filled in the fine print to go with the headlines written in the diagnostic formulation. One usually finds that the diagnostic study never can provide a complete picture.

The recommendations are logical outgrowths of the factors and forces

underlying, perpetuating, and/or exaggerating the child's symptoms, his family's current status, and the conditions and resources in his community. Therefore, the survey of assets and weaknesses in the child, family, school, and community, matched with dynamic and genetic factors, should be made with an eye on the possible resources for remedial approaches, the ideal and the practical and possible. This should include a picture of the availability and readiness of the child and family for change. It should be kept in mind that one does not give up on the possibility of change in the child even if the family is unavailable or resistant. It has been reassuring to learn how much tolerance children can learn to have for the difficulties parents can present.

Diagnostic labels may need to be carried out on two levels. The ideal type of diagnostic formulation identifies the etiology, psychodynamics, and predominant symptom and/or character patterns. At times, however, from a practical point of view, another component should be added to indicate what treatment plan is needed. This can help a school, court, treatment institution, or insurance company understand the legitimate nature of the problem and the child's needs for a therapeutic program they can support.

The diagnostic study is never complete until it is shared with the family and/or other responsible individuals. The principles of interpretation of findings so that they can be heard, understood, and carried out should be always kept in mind. These principles include the translation of findings into

understandable words, presenting the present problems in developmental terms to assist in seeing how the difficulties arose, relieving guilt (such as inappropriate handling or mistakes having been made not on the basis of hate but in the interests of helping the child), and describing what can be done about relief or help with the problems. The latter should include practical suggestions about trying changes in handling, appropriate medications where indicated, and contacts to be made. The family, school, referring physician, court, and so on should not be left with only promises of help in the future. They should not be left helplessly waiting while a treatment plan is being worked out. They should be given things to try or do.

The mental health professional often can feel helpless when social pathology or distortions in the system are heavily implicated in some cases. The questions one must ask are how has this child and this family responded to these conditions and what can be mobilized to help and modify these responses. At the same time, the needed changes in the system should be shared with community planners, community change agents, and community advocate programs.

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Notes

1 Chapters on mental retardation will be found in Volume IV: Organic Conditions and Psychosomatic Medicine.

2 The psychological examination will vary in its goals and emphases depending on the referral source

(for example, pediatrician, neurologist, schoolteacher, or parent) and the nature of the presenting problems and questions to be answered.

3 There is, particularly in the communication of IQ scores to school authorities, the constant danger of setting up conditions to foster self-fulfilling prophecies in the case of poor inner-city black and other minority children. The IQ scores for the majority of such children are below the national norms. School authorities accept the idea that IQ scores are predictive of school performance, which is generally true for the majority population, but in the case of areas where there are large numbers of underprivileged minority children, the schools are discouraged by the implied prediction of their poor learning ability, and school personnel lower their expectations, lose their enthusiasm, and lessen their investment in these children, thus helping to fulfill the prophecy.

4 The IQ no longer retains its meaning of "intelligence quotient," that is, a ratio between the mental age (the chronological age at which the average child does as well as the subject does) and the child's actual chronological age, where level of performance higher than chronological age (the precocious child) yielded an IQ over 100 and level of performance below chronological age yielded an IQ below 100, with the majority of subjects having IQs between 90 and 110. The IQ was originally meant to represent the child's rate of mental development.

5 My first experience with the Binet as a clinical instrument was with adult psychotic patients at St. Elizabeth's Hospital in Washington, D.C., where it proved to be very sensitive to schizophrenic modes of thinking, particularly in the aforementioned tasks.