This paper deals with the role of the child developmentalist in improving interdisciplinary assessment and treatment of children with behavioral and learning problems. A specific task of Developmental Services of the Texas Research Institute of Mental Sciences was to optimize the utilization of professional staff in a development assessment clinic. Clinic procedures utilized force-field analysis principles adapted to a problem-oriented record and an interdisciplinary staff consisting of medical, social work, clinical psychology and child development specialists. Focus for the child developmentalist was primarily on screening of children from birth to six years. The unique perspective of each discipline was represented and incorporated into the management plan. Illustrations are given of how the child developmentalist emphasizes the significance of developmental sequences and adds an understanding of the importance of the context in which behavior occurs as well as the context in which the child develops. The child developmentalist identifies critical points in parent-child and child-environment interaction patterns and indicates to the parents how they may be able to change the developmental outcome of their children. (Author/BF)
THE UNIQUE ROLE OF THE CHILD DEVELOPMENTALIST
IN AN INTERDISCIPLINARY TEAM

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The Unique Role of the Child Developmentalist in an Interdisciplinary Team

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This presentation extracts from the routine assessment techniques currently used in Developmental Services, Texas Research Institute of Mental Sciences the unique contribution of a child developmentalist. It illustrates how this perspective improves the quality of an assessment and facilitates the attainment of the therapeutic goals for the child. The clinic procedures utilize force-field analysis principles adapted to a problem-oriented record and an interdisciplinary staff. The incorporation of child development principles, however, in the total assessment process yields significantly more informative data and more relevant issues affecting the child. Thus, the social history is taken with an eye to the crucial developmental stages as they interact with the child's environment, the pediatric history is recorded in conjunction with the developmental sequence and the assessment process is varied to meet developmental needs and to evaluate the developmental level according to the context in which the behavior is observed.
The Unique Role of the Child Developmentalist
in an Interdisciplinary Team

Nancy Cook, Ph.D.
University of Houston

In diagnosing the etiology of children's behavioral and learning problems, professionals have tended to adopt models which assume a chain effect reaction in which one event causes specific developmental outcomes. Typically research findings have also been applied to the clinical setting in similar ways. For instance, several studies indicated that birth weight, a readily identified manifestation of possible neurological impairment, positively correlates with intellectual development (e.g. Wiener, Rider, Oppel, Fischer, & Harper, 1965). Thus, many times parents are told that their premature infant needs to be watched closely for possible developmental delays or increased illness. In fact, the majority of the longitudinal studies (Drillen, 1964; Werner, Bierman, and French, 1971; Niswander and Gordon, 1972) contradict this initial simple linear relationship when they follow this premature population until school age. Several studies identified unfavorable environmental factors as a key distinguishing variable in later developmental outcome. The parent and the home environment, therefore, also become critical factors in a child's developmental outcome. The simple chain event causality only partially explains the relationship between factors such as birth weight and developmental outcome.

The study of caregiver-infant interaction illustrates the same defects in the chain effect model. Early studies postulated a unilateral interaction pattern in which maternal attitudes and behavior shaped the child's behavior. Parents were, therefore, advised to modify their parenting styles according to the generalizations drawn from these studies. With the advent of the concept of infant temperament (Thomas, Chess, and Birch, 1968), researchers identified a mutually influenced reciprocity between mother and infant in which the mother's
willingness to adapt to her infant's needs and the infant's ability to communicate
his state of arousal simultaneously alter the nature of the emerging relationship
(Stern, 1974; Brazelton, Koslowski and Main, 1974). In addition, Jerauld, Kennell,
Wolfe, Chester, Kregor, McAlpine, Steffa and Klaus (1974) identified the environ-
mental factor of early contact between mother and neonate as a key variable in
modifying the initial characteristics of the mother-infant relationship and to some
extent in influencing developmental level. The transactional model postulated by
Sameroff and Chandler (1974) more accurately portrays the dynamic relationship
between family members, key professionals and environmental factors in assessing
developmental outcome and more easily identifies critical points in the interaction
between those variables. In a clinical setting this model, however, requires an
interdisciplinary team assessment which utilizes the unique perspectives of each
discipline.

An Interdisciplinary Clinic Setting

As a child developmentalist, I worked in such an interdisciplinary setting at
the Texas Research Institute of Mental Sciences (TRIMS) which attempted to utilize
this transactional model for the assessment and treatment of children with be-
havioral and learning problems.

TRIMS is the primary research and training facility of the Department of Mental
Health and Mental Retardation in Texas. The Institute has three major goals:
innovative training of mental health workers, the development of unique models of
mental health care to the metropolitan Houston population, and research to improve
the quality of mental health services in the state. The specific mission of Develop-
mental Services, where I worked with an interdisciplinary team, was to optimize the
utilization of professional staff in a development assessment clinic and to develop
cost effective treatment strategies which would keep children from "falling through
the cracks" in social, educational and medical service delivery systems.

The interdisciplinary staff consisted of (1) a medical component including a
pediatrician, who was the head of the clinic, a child psychiatrist, and a pediatric nurse practitioner (PNP); (2) a social work component including an M.S.W. social worker and several case workers; (3) a clinical psychology component consisting of doctoral and masters level psychologists; and (4) a child development component consisting of myself.

The population typically served by this clinic included children whose presenting problems were behavioral or learning, e.g., hyperactivity, short attention span, poor school performance; thus, they were usually suspect for organic problems. As a child developmentalist, I primarily focused on screening children between birth and six years of age.

Initially the family or referring agency contacted a developmental caseworker who arranged an appointment and recorded some basic demographic information about the child, his family, and the presenting problems (See Appendix A). During the initial clinic appointment the child was given a battery of screening tests including the Draw-A-Person, Denver Developmental Screening Test, and the Peabody Picture Vocabulary Test, as well as a neurological exam including "Soft Signs" (See appendix B) and generally blood and urine screening tests. The parents were asked significant questions regarding family and pediatric history in an attempt to reconstruct the environmental characteristics in which events occurred. The caseworker particularly focused on critical coincidences and sequences of family events.

The caseworker then presented the findings in a staffing to the entire interdisciplinary team in an effort to identify the strengths and weaknesses of the child and his family, to assign a significance to each, and to develop a management plan for each strength and each weakness (See Appendix C). In this way the unique perspective of each discipline was represented and incorporated into the management plan prior to any parent conference. Sometimes when the medical staff decided to give medication, the child developmentalist and/or social worker questioned the necessity due to factors related to the child's development or family history. In other cases,
when, as a child developmentalist, I identified specific developmental delays, the medical staff presented evidence of physical reasons for the developmental delays. Thus, the management plans, as well as the screening procedures, reflected an interdisciplinary focus.

Frequently the child developmental discipline is omitted from an interdisciplinary team of this type probably because many other disciplines typically incorporate components of child development into their own training. I would like to illustrate several areas where I feel that the child developmentalist's basic predisposition to unraveling the child's life task of learning highlights unique strengths in the child and helps to shift the assessment process, as well as the management plans, to a more effective, positive treatment plan.

The Significance of Developmental Sequences

The child developmentalist characteristically brings a more comprehensive integration of developmental sequences when he views a child as well as the parent. The significance of this reliance on developmental sequences becomes more obvious as management plans are designed. First, the identification of a carefully sequenced series of behaviors provides a framework for conveying realistic expectations to the parent, rather than announcing only a diagnostic term. This is true regardless of the developmental age of the child. The treatment plan shifts in some cases from the shock of how delayed the parent's child is, to what can we as parents do which will optimize our child's development. It shifts from obliteration of the future for their developmentally disabled child to what can we as parents expect to see emerging in our child's behavior.

For example, I worked with a young couple and their 14-month-old firstborn who had had meningitis shortly after birth. The parents had not been particularly alarmed by their son's development until they saw a normal 14-month-old child. They were then shocked by the enormity of their son's delays. Their baby was func-
tioning at approximately a two to three month old level at best. A treatment plan was developed to include stimulation techniques appropriate for his developmental level and also to offer the parents specific information about the behaviors they might anticipate next in their infant's repertoire. The parent conference stressed the fact that these behaviors probably would be very slow in emerging. This management plan did not minimize the tremendous impact of the medical diagnosis of severe retardation, but it began to modify the parent's overwhelming despair into more cautious, realistic expectations in which the parents played a key role.

Second, an awareness of developmental sequences constructs a framework, not just for evaluating delays, but for highlighting inconsistencies in development regardless of their age appropriateness. For example, a young girl from a high achieving family was evaluated as above age level in all areas, but in the fine motor area she performed at age level. Given that her environmental supports offered optimal stimulation, as a child developmentalist I was struck, not by the obvious finding of her above average abilities nor the fact that there were no delays, but by the inconsistency of one area with her total development.

This same principle applies to children who are significantly delayed developmentally. The clinic evaluated an 18-year-old psychotic, severely retarded male. He was functioning at approximately a two year old level. On a psychiatric wing in a hospital, the attendants tuned in only to the diagnosis of psychosis so that his stealing money for the vending machine reinforced their evaluation of his lack of progress. From a developmental perspective, however, he exhibited behavior appropriate for a two year old who is fascinated with the sounds, the lights and the replicability of a vending machine's response. His six foot stature easily disguised this judgment. This perspective did not, however, disguise his need for an enormous dosage of sedatives for his psychosis, nor his need for psychiatric therapy, but it offered some realistic guidelines for evaluating his daily behavior and the
extent of his improvement. It illustrated the level of learning capacity so that an appropriate instructional plan could be developed.

Third, developmental sequences, particularly as developed by Piaget, construct a model for assessment strategies. Piaget postulated that each stage has a period of initial formation, gradual organization of the composite structures and finally a period of attainment which enables the child to formulate new questions thus pushing him into the next stage. By adapting this model to developmental assessment techniques, it becomes essential to attempt a task in a variety of settings to insure accurate results. If the concept is just emerging, the child typically will only be able to perform the task in a limited number of situations. For instance, I tested a ten-and-a-half-month-old infant who had been hospitalized all his life -- approximately six months in an intensive care unit. He had been born with a ruptured appendix and had had a series of subsequent complications requiring several operations. His movement had been severely restricted by the numerous tubes attached to him during his hospitalization. While he was sitting I found him unable to complete the search for a hidden object, but I had observed him frequently looking toward the door when his mother left the room. I placed him on his stomach and immediately he demonstrated his competence in object permanence. Instead of expending his energy on maintaining his balance he now had energy to solve the problem. This information, however, could have easily been omitted from the developmental assessment if the evaluation had not incorporated a Piagetian perspective of developmental stages.

Focus on the Child within his Environmental and Total Development

Another major component of the child development tradition emphasizes the perspective of the child within the context of his total development, that is not just looking at his developmental age, but observing how the child operates, how he perceives his world and how the adult perceives him. For instance, since affective and cognitive development especially during the early years of development appear
to be integrally related, the characteristic parent-child interaction patterns play a significant role in developmental outcome. I watched a mother's communication patterns during a developmental assessment of her 14-month-old, mildly delayed female infant. When the mother talked to her little girl, she used every modality of communication to reinforce her statements. In spite of the infant's delays, the infant was developing a socially responsive pattern of interaction especially with her mother but with adults in general. The mother had not identified one modality for her infant's optimal learning so she persisted simultaneously with a variety of stimulation patterns to insure communication.

The significance of these observations is frequently missed in routine assessments which concern the extent of developmental delay, issues regarding medication dosage and the complexities of family history. The characteristic pattern of mother-infant responses to each other, however, constitutes the context in which the developmental delays will be maintained, escalated or minimized; the issues of medication frequently will be modified by the extent of responsivity between infant and caregiver; and the complexities of the family history will become important primarily in relationship to the infant's current behavior.

Another aspect of the child development tradition of viewing the child within the context of his total development draws on the child's ability to draw a clearer perspective on his world. Typically the adults with whom he interacts help him organize the external stimuli but the balance between the child's exploration and dependence is frequently facilitated or impeded by the adults in his environment, especially by the child's primary caregivers. From a developmental point of view the child who fails to utilize the adults as a resource is equally significant as the dependent child who is more readily identified for treatment. After evaluating a two-year-old, Down's Syndrome boy, I was struck by his willingness to leave problems unsolved rather than request adult assistance. Up until that point no one had identified this learning style as in any way hindering his
development primarily because compared to other children his age with Down's Syndrome, he was exceptionally well-adjusted and only minimally delayed. By working with the teachers in his educational program, we were able to maximize this child's learning potential so that he no longer viewed adults as an interference but also drew on their knowledge to facilitate his learning.

Third, the child within the context of his total development includes evaluating development in relationship to the environment -- type of living arrangements, changes in family members, and number of family uprootings. The clinic evaluated an eight-year-old girl whose presenting problem was extreme dependence on her mother, a behavior that was inappropriate for her age. The degree of inappropriateness for this child, however, was minimal. By combining the expertise of a social worker and a child developmentalist, the evaluation data indicated that she had moved 30 times during the first two years of her life and subsequent additional family uprootings with father changes had occurred. From a developmental point of view, the child exhibited her intelligence by figuring out the significant family member -- mother--since she was the only stable factor in the child's life. A treatment plan was, therefore, developed to resolve some of the factors surrounding the girl's dependency, but also the mother was shown the "temporary appropriateness" of her child's responses given the numerous changes in her life. For mother, this change in perspective helped her to be more supportive and less negative around her daughter.

Unique Liaisons with Early Childhood Programs

Another dimension that a child developmentalist adds to an interdisciplinary team is the specific educational recommendations and easy rapport between a teacher in the school setting and the child developmentalist in the clinic. After a comprehensive evaluation of a severely retarded, three-year-old girl, I suggested that she be placed in a public school early childhood program for handicapped children. I was particularly concerned about her long-range development because her mother was very young, and had experienced a divorce in relation to this child. The mother
seemed to be growing impatient with her daughter home all day. In addition, the mother was expecting her second child by a subsequent marriage. I finally located a public school, early childhood program that was just beginning near her home. The teacher was excited about enrolling the child after I discussed the extreme importance of this child's entering the program. About one week after the program began, I got a call from the teacher, conveying her anxiety about how delayed this child was. I listened carefully to the concerns and realities of the teaching situation and made several carefully-developed educational suggestions appropriate to this child. The teacher began the training process again and soon became the child's primary advocate for future schooling. My experiences and training in developmental assessment and planning helped me to identify critical points in the process of enrolling and maintaining this child in an educational program, but my suggestions were credible to this teacher because I had been in the classroom too.

Conclusions

In summary, the child developmentalist adds the dimensions of developmental sequence to both the assessment data and the treatment plans, adds an understanding of the importance of the context in which behavior occurs as well as the context in which the child develops, identifies critical points in parent-child and child-environment interaction patterns and facilitates the liaison with the educational setting. In relation to the parent, the child developmentalist identifies for the parent, the parent's potency or ability to change the developmental outcome of their children by identifying emerging behaviors in the child's development and by identifying specific behavioral patterns which the parent as well as anyone else would have difficulty handling. The child developmentalist lends a knowledge base which expands the understanding of the child and checks simplistic interpretations of the data and thereby balances the assessment results and the reality of the child's behavioral patterns. The child developmentalist's contributions are max-
imized in an interdisciplinary setting where the unique frame of reference can balance a simplistic, unidimensional assessment with a transactional model and where the child development perspectives can be expanded to include the significant considerations of other disciplines.
REFERENCES


Appendix A
DEVELOPMENTAL SERVICES
DEMOGRAPHIC DATA SHEET

DEVELOPMENTAL SERVICES TEAM: ____________________
CASE #: __________ INSURANCE Co. or MEDICAID #: __________
Date of Referral to TRIMS:__________________________
Date of Developmental Services Staffing: __________
Date of Birth: ____________________
Age: ____________________

Primary Language Spoken: __________
Other Languages: __________

Personal Physician: ____________________
Last Complete Physical Examination: ____________________
Date: __________ Person: __________ Address: __________
Findings: ____________________
Last Vision Screening: ____________________
Date: __________ Site: __________ Results: ____________________
Last Hearing Screening: ____________________
Date: __________ Site: __________ Results: ____________________
Last Dental Exam: ____________________
Date: __________ Site: __________ Results: ____________________

PARENTS/GUARDIANS: (circle person calling/informant(s) Referral, Parents, Agency, Other
Living with Child: (circle relationship)

Mother/Stepmother/Foster Mother:
Name: ____________________ Address: ____________________
Occupation: __________ Employer: __________

Father/Stepfather/Foster Father/neither:
Name: ____________________ Address: ____________________
Occupation: __________ Employer: __________

Legal Guardian, if not living with child: ____________________
Name: ____________________ Address: ____________________
Occupation: __________ Employer: __________

Natural Parents, if not living with child:
Mother: ____________________ Address: ____________________
Occupation: __________ Employer: __________
Father: ____________________ Address: ____________________
Occupation: __________ Employer: __________
REFERRAL SOURCE
Name
Agency and Address

REASON FOR REFERRAL:

He/she is/is not presently enrolled in an educational program. He/she is in (regular/other) grade if applicable school or program

Address of school district or agency

The following special resources are being utilized:

(For additional information, see Progress Flowsheet)
Appendix B
SCREENING NEUROLOGICAL ASSESSMENT

Name: __________________________ Age/Race/Sex: ____________________ Birthday: __________

Date of Examination: __________ Place of Examination: ________________________________

Examiner: ___________________________

Height % Weigh % HC %

MENTAL STATUS

General Appearance and Behavior: attentive/cooperative/passive/restless/quiet/distractab

State of Consciousness: alert/drowsy/other (note) _____________

Mood: natural/anxious/depressed/other (note) _____________

Affect: laughs: excessively/inappropriately/appropriately/none

sadness or crying: excessively/inappropriately/appropriately/none

Stream of Talk: talks excessively/spontaneously/answers cooperatively/little or none

Thought Content: clear/confused/bizarre/hallucinations/delusions

Intelligence: memory intact/oriented to time, place/digit retention

CRANIAL NERVES

---EOM's, Shrug shoulders, Tongue movements, Show teeth, Frown

✓ = normal

O = abnormal

X = not tested

Finger-to-Thumb Opposition
(slow; clumsy; reckless; synkinesis) 0 O.K. MILD MODERATE SEVERE

Alternating Hand Movements

Tandem Walk: Forward
Backward

Romberg

Positive/Negative

Articulation ("Pa-ta-ka")

Right-Left Confusion

a) R hand on L ear
b) L hand on R knee
c) R hand on exam, L knee

19
Write to dictation: A boy had a dog; A dog saw a bird; My name is ________; Please come quickly; The question was about the constitution.

- a) reversals and inversions
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- b) labored writing
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- c) spelling, departure from "phonetic logic"
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- d) reckless speed
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

MOTOR SYSTEM

- Muscle tone
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Muscle strength
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

SENSORY SYSTEM

- Tactile
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Superficial pain
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Stereognosis (coin, paper clip)
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Graphhesthesia # 2, 8
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

REFLEXES

- Biceps
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Patellar
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

- Plantar
  - 0 = no response
  - 1+ = low normal
  - 2+ = average; normal
  - 3+ = high average
  - 4+ = hyperactive

SUMMARY COMMENTS: ________________________________
_________________________________________________________________________
_________________________________________________________________________
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_________________________________________________________________________
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_________________________________________________________________________

Examiner __________________________ Consulting Physician __________________________
Appendix C
**TRIMS DEVELOPMENTAL SERVICES SECTION**
**ANALYSIS OF PROBLEMS AND STRENGTHS**

**Date of Birth**

**Goal:**

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<th>IMPEDING FORCES (Away From Goal)</th>
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**Management Plan Notes**

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**Name**

**Patient No.**

**COORDINATOR**

TRI form 231 7-23-75