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ABSTRACT

Most language development hazards in infancy and early childhood fall into the categories of auditory impairment, central integrative dysfunction, inadequate environmental support, and peripheral expressive impairment. Existing knowledge and techniques are inadequate to meet the screening and assessment problems of central integrative dysfunction, inadequate environmental support, and severe auditory impairment. Current theory strongly suggests that a continuum of language and related information-processing central dysfunctions underly a broad spectrum of psychological developmental disabilities. Within this continuum are many categories associated with disorders of language development in which it is difficult to distinguish causes and effects. Language dysfunction in its more subtle forms is probably more widespread among children than is commonly recognized. Audiometry and optometry are helpful in evaluating only the first-stage sensory impediments to effective central information-processing operations. Present assessment instruments, including observational inventories, visual perception tests, and language performance tests, are generally too primitive to detect the subtleties of underlying dysfunctions in language development. New assessment methods are very expensive, but major support should be given to accelerating their development. (KM)



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Notes on Language

for

President's Committee on Mental Retardation
Planning Conference

SCREENING AND ASSESSMENT

OF

YOUNG CHILDREN

Bernard Z. Friedlander, Ph. D. Professor of Psychology Director, Infant/Child Language Research Laboratory

The Children's Hospital Medical Center Boston, Massachusetts October, 1972





I. GENERAL ISSUES

- 1. The ability to grow in language is the single most important developmental pathway available to infants and young children in the course of their perceptual, cognitive, and emotional growth.
- 2. There is hardly any such thing as a minor language problem. Any substantial degree of language dysfunction can be assumed to be either the cause or the effect of seriously disruptive developmental disability.
- 3. It is probable that the great preponderance of language development hazards in infancy and early child-hood can be assigned to the following four categories:
 - a. auditory impairment
 - b. central integrative dysfunction
 - . inadequate environmental support
 - d. peripheral expressive impairment
- 4. The primary task of screening is to identify children who manifest a high probability of significant developmental deficits in any of these categories. The task for assessment is to identify as specifically as possible the nature and degree of handicap and the domains of residual competence in order that assistive intervention may be mobilized to attempt to overcome the disability.
- 5. Deficits of auditory acuity are the most readily identified and the most heavily emphasized domain of language impairment. However, deafness is one of the less significant vectors of language disability.
- 6. Existing techniques are reasonably adequate for screening, assessing, and assisting children whose auditory and expressive disabilities are in the mild and moderate range. This is also generally true for peripheral expressive impairments. Society's task in these cases is the expensive but relatively uncomplicated one of mobilizing existing skills in sufficiently large supply and with sufficient personnel to do a job that can be done in

terms of presently known methods.

- 7. Central integrative dysfunction, inadequate environmental support for language development, and severe auditory impairment in its usual context of multiple handicap—these conditions present an altogether different picture. Existing knowledge and techniques are substantially inadequate to meet the complexities of the screening and assessment problems they entail. Present audiological evaluation procedures, which are essentially acoustical in nature, are inadequate for assessing language development disorders based on central integrative dysfunctions and environmental inadequacies.
- 8. The benign consequences of early intervention may have to be regarded as speculative, even in seemingly uncomplicated cases of "simple" deafness treated with early application of hearing aids. Reports of success are largely anecdotal. Without minimizing the importance of single cases in which early identification of hearing loss and early application of hearing aids leads to language learning progress, there are large numbers of cases with less happy outcomes. It is not uncommon in schools for the deaf to find many children who have been wearing hearing aids since infancy for whom speech has little or no meaning. Electronic amplification to overcome deficits of auditory sensitivity seems to have little bearing on the limited progress these children make in their use of spoker language. These are children whose language learning deficits stem from more intricate information processing problems than just the loss of hearing.
- 9. Current theory, increasingly supported by confirmatory evidence, strongly suggests that a continuum of language and related information-processing central dysfunctions underly a broad spectrum of developmental disabilities in the psychological sphere. Learning disabilities are at the mild to moderate end of this continuum, while more severely involved children manifest the symptom patterns associated with schizophrenia and autism. On this continuum, even "mild" can be pretty bad. In our school-oriented society the consequences of learning disabilities are generally highly disruptive to the life of the child and to his family.



- 10. Within this continuum there are many categories of involvements associated with disorders of language development in which it is hard to distinguish causes and effects. Children with language deficits are frequently assigned to intervention programs on the broad basis of retardation, learning disabilities, sensory impairments, emotional disorders, neurological impairments, and behavioral disturbance in the absence of clearly defined pathologies, diagnoses, and prognoses.
- Il. This chaotic situation is not necessarily due to professional incompetence, but to the generally primitive state of the art of assessing language dysfunctions. For example, I know of no existing, validated instrument by which it is possible to make a reasonably clean differentiation between central integrative dysfunction, low adaptive intelligence, and inadequate environmental support for language learning in the cases of children below the age of five whose language development progress is disappointing. This differentiation requires the personal judgments of a skilled diagnostician whose judgments are not necessarily reducible to operational statements.
- 12. In its more subtle forms, language dysfunction is probably far more widespread in the general population of children than is commonly recognized. In one recent study in an affluent suburban primary school, 25% of a randomly selected population showed a previously unrecognized anomaly of language perception—which correlated very highly with the incidence of reading disability. Comparable results have been found in other studies involving hundreds of suburban children. It is probable that the incidence of these subtle language anomalies is even higher in less favored socio—economic communities.
- l3. Further study of this provocative issue might well reveal that dysfunctional language growth lies at the root of many disabilities of academic, interpersonal, and social behavioral development that are presently ascribed to other causes. If this proves to be the case, then the issues of language adaptation will be seen to have more far reaching significance than has thus far been realized.



II. PRACTICAL PROBLEMS

- l. The relatively "simple" sensory deficits of hearing and visual acuity are probably the only disabilities associated with language disorders that are reasonably well-defined in terms of established instruments for screening and assessment. However, important as they are, audiometry and optometry are helpful in evaluating only the first stage sensory impediments to effective central information processing operations in the central nervous system upon which language development depends. Only a small fraction of children manifesting significant language problems suffer deficits of hearing acuity. Hence, these well-defined evaluation procedures apply to only a limited number of the infants and young children for whom effective identification and assessment is needed.
- 2. Language inventories such as Honig's Early Lanquage Assessment Scale provide useful information on external aspects of language performance and gross behavior related to auditory-vocal-linguistic activity. However, these observational inventories are quite limited in their assessment of more covert capabilities of underlying language competence. Also, they are especially vulnerable to false negative identifications. They tend to attribute deficit capability to young children who have difficulty mobilizing their full competence under the stress of test, school room, or intra-family tension. At the other extreme, tending toward false positives, the less severe language dysfunctions of late infancy and early childhood, which may prove extremely disruptive to adequate progress in school, are often masked by adequate patterns of socialization in daily life. In family environments which present limited linguistic demands and limited language learning support, children's real language learning deficits may go unrecognized in the absence of conspicuous behavior problems.
- 3. Generally available instruments for assessing central processing of visual and auditory information associated with language development are extraordinarily primitive in terms of the complexity of the psychological functions they are assigned to evaluate.



For example, in the visual domain, all standard tests of visual perception rely essentially upon static images printed upon flat surfaces. Yet every first-year graduate student in psychology knows that the real phenomena of visual perception involve the high-speed integration of sensory inputs from highly dynamic visual fields in three dimensional space.

Likewise, most methods for assessing language performance employ test items based upon single words, single phrases, or single sentences. Yet it is apparent that the real work of processing language involves much larger units of information. In order to be linguistically competent, children must be able to learn to decode and encode meaning in terms of extended streams of speech if they are to keep pace with the growth patterns that are expected of them in the family, in the classroom, and on the playground. These are the characteristics of language competence that must be assessed when it is necessary to assist the growth of children who manifestly do not keep pace with expected growth.

- New methods for improving the assessment of language disabilities and residual language competence in infants and young children with disabilities are in various stages of development in a number of laboratories in this country and abroad. At present, as far as I know, none of these methods -- including my own -- is sufficiently validated by extensive experience to be regarded as ready for standard operational deployment on a wide scale such as is contemplated in the planning for this Insofar as it may be necessary to include conference. language assessment at early ages in a wide scale program in the near-term future, existing documented scales such as the Illinois Test of Psycholinguistic Abilities, or the emergent evaluation techniques, should be employed only with .caution and full awareness of their limitations.
- 5. Major support should be assigned to accelerating the development of the emergent evaluation methods which offer substantial prospects for improving assessment of the central integrative dysfunctions and the environmentally induced language disabilities that affect such large numbers of children.



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- It should be recognized that assessment of language capabilities at a level of sophistication commensurate with the complexity of language processes will probably pass through a stage of technical development in which it is very costly. There are healthy long-term prospects for developing highly efficient, automated evaluation procedures for examining critical constituents of language competence and performance with considerable efficiency and economy with large numbers of children. As of now, means for attaining this objective are not clearly in sight. But there is the promise that it can be done. For the foreseeable future, meaningful, in-depth procedures for evaluating the diffuse, multilevel processes of language organization cannot be implemented on the model of simple, one-shot test sessions that produce a single score or set of scores. It is still necessary to view assessment of an individual child as an investigative procedure that seeks to characterize complex competencies across a wide range of acousticlinguistic variables at several points in time in repeated test sessions.
- 7. Let me cite two examples. I recently read a report of an emergent language assessment procedure for use with autistic children in which a three-year-old boy was given 6,370 trials over 91 sessions in order to learn if he could combine two lexical units which he had little difficulty identifying when they were presented singly.

In my own laboratory, we are now arranging with several institutions in Connecticut to conduct automated PLAY-TEST evaluations of certain critical functions of receptive language capability in severely retarded children. We will conduct approximately 1200 evaluation sessions at a direct cost of approximately \$20,000, a figure which does not even include such critical costs as depreciation of the instruments and several salaries. This comes to more than \$15 per test session—and some children may require 10 or more sessions if we are to get the infc mation needed to establish the boundary conditions of their basic receptive language integrity.

I may be wrong, but in my judgment procedures this expensive are not yet suitable for wide scale application—even if the information is important and not yet attainable by truly economical means.

I would like to close on both a downbeat and an upbeat note. On the downbeat, psychologists and behaviocal scientists should recognize that our past record in screening, assessing, and evaluating people is not particularly good. While we have a number of very substantial accomplishments to our credit, we also have made some extremely serious blunders. The most serious of these blunders have been those by which we have misclassified people to negative status and negative roles on the basis of tests that measured the wrong dimensions. Looking back over the last 50 years of the intelligence testing movement, it would be difficult to estimate how many hundreds of thousands or millions of children have been deprived of developmental opportunities because psychological technology polluted the atmosphere of linguistic and subcultural differences. We now see that mistaken applications of our technology and just plain sloppy workmanship at high executive levels in the corridors of power have done a great deal of personal and social mischief. If the behavioral science establishment is going to begin to screen, assess, and classify at even younger age levels than in the past, we must take exquisite pains to be certain that the quality of our executive decisions and technical performance in the future is at a much higher level than has often prevailed in the past.

On the upbeat side, we can lock with reasonable confidence to a future in which our society at last appears willing to increase substantially its serious, informed concern for the well-being of children who must start out in life with disabilities which jeopardize their prospects for normal growth and development. We are at the outset of a new period of social evolution when new patterns of care and concern will be matched by new societal institutions through which this care and concern will be transmitted to those who require it. Perceptive and expressive language are the principal means of human communication. It is appropriate that great energy, substantial resources, and special concern be devoted to the search for better methods for understanding the needs and assisting the growth of children who must overcome unusual liabilities in their efforts to join the human community through the medium of language.

