

THE DEVELOPMENT OF SYMBOLIC PLAY AND LANGUAGE IN
A LANGUAGE DISORDERED CHILD IN A CLINICAL PROGRAM

by

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B.S., Kansas State University, 1981

A MASTER'S THESIS

submitted in partial fulfillment of the
requirements for the degree

MASTER OF ARTS

Department of Speech

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

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ACKNOWLEDGMENTS

This project serves as a beginning as well as a culmination. To those people who are responsible for my having had the opportunity to grow from this experience, I would like to express my thanks:

To Dr. Bruce Flanagan, Dr. Harold Nichols, Dr. Ken Kallail, and Dr. Susan Wanska for their generous support and expertise;

To Dr. Jan Bedrosian, for convincing me to try, and for her careful guidance as both an advisor and a much respected friend;

To Deb ("D.B.") Warne, for her steady influence and ability to make me see the humor in almost any situation;

To my parents, for a lifetime of loving support;

To my husband, Dennis, who qualifies for sainthood for seeing me through graduate school with such love and understanding;

And to the Canon Corporation, for creating the frustrating and forgiving machine that enabled me to complete this project.

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CHAPTER I

Review of the Literature

The Development of Intentionality

One of the major shifts in the study of child language acquisition during the last decade has been to view language from a broader perspective - that of communicative intent (Bates, 1976). This shift has focused partially on the development of communicative intent, as expressed through the child's gestural and/or verbal productions. Thus, the study of verbal behavior has shifted from language structure to function with an emphasis on cognitive foundations for emerging communication skills. A description of the emergence of intentionality in the domains of cognition and language follows.

Piaget's (1962) first three sensorimotor stages (birth to 8 months) of cognitive development are characterized by repetitive actions and preintentionality. This preintentionality is also reflected in the child's development of communication. The child cries or vocalizes and the parent interprets the need or goal (Bates, Bretherton, Camaioni and Volterra, 1979). At this time, however, it is doubtful that the infant realizes his/her cries serve a communicative purpose; the cries are a "built - in reaction to a particular internal state" (p. 34). Bates et al. termed this period "perlocutionary," or lacking in intent.

Sensorimotor stage IV (8 to 12 months) is marked by the onset of intentionality. No longer is it an accident that the child achieves his/her goal. Old methods of obtaining desired objects and events are not abandoned, but are combined in new ways. The onset of intentionality is also observed in the

child's communication. Gestural forms of commenting, requesting for objects, and rejecting appear (Chapman, 1981). Initially, vocalizations are typically in the form of the child repeating a spontaneous vocalization that an adult has just imitated. At nine or 10 months of age, the child begins to alternate eye contact between the goal and the adult while vocalizing, and to alter the vocal signal contingent upon the changes that the adult displays towards the goal. The child changes the the signals into shorter, more organized sounds that vary in intensity according to the adult's reactions. The conventional social acts of ordering, advising and urging which appear during this period were referred to as "illocutionary" by Bates et al (1979).

True intentionality appears in the fifth sensorimotor stage (12 to 18 months). Intentional communication was defined by Bates et al. (1979) as "the signaling behavior in which the sender is aware a priori of the effect that a signal will have on his listener, and he persists in that behavior until the effect is obtained or failure is clearly indicated" (p. 36). The manifestation of novel means to familiar ends is seen in both the child's cognitive and communicative performance. In social interactive sequences with adults, the child engages in such nonverbal communicative behaviors as: using the adult to obtain an object or perform an action, referred to as the protoimperative communicative function; and directing the adult's attention to some event or object, referred to as the protodeclarative communicative function (Bates, 1976). Early

forms of commanding and declaring are exhibited through these functions, respectively. Commenting, requesting and rejecting are now combined with vocalizations (Chapman, 1981). Early single word forms appear (Werner and Kaplan, 1963), and are global in meaning in that they refer to the total context that the child is experiencing.

The final stage of sensorimotor activity is the sixth stage (18 to 24 months) which is considered the beginning of representational thought. The child uses inner representation of ways and means, no longer limited to overt trial and error behaviors, to obtain a solution to a problem. In terms of communication, one-word utterances now reflect the semantic notions of location and possessor (Bates, et al., 1976). Because the child now has the ability to form mental representations and use symbols, referential speech, or that involving a "one-to-one link between words and the objects they represent" (Miller, 1981, p. 41) appears. The communicative functions of the child's utterances include requests for information, responses to questions, and acknowledgements (Chapman, 1981). This last stage was termed "locutionary" by Bates et al. (1976). In order to provide further evidence regarding the relationship between sensorimotor abilities and the development of performatives, Bates et al. (1979) suggested the importance of training studies.

In an attempt to provide that evidence, Steckol and Leonard (1981) investigated the effects of training sensorimotor stage V (12 to 18 months) schemes for relating to objects and/or the effects of means-ends schemes on the development of performative

communication in 32 children. All of the children were at or below sensorimotor stage IV (8 to 12 months) for schemes for relating to objects and means-end, demonstrated no performative behaviors, and were not at the one-word utterance level. At the end of a six month training period, results indicated that none of the training conditions proved significantly different from the control condition. Subjects who had been trained on schemes for relating to objects, however, demonstrated greater use of performatives. These investigators suggested a relationship between schemes for relating to objects and communicative performatives in terms of the homologue model proposed by Bates, Benigni, Bretherton, Camaioni, and Volterra (1977); the two aspects are related through the sharing of common operative principles.

Several investigators have examined the development of communicative intent in normal populations (Halliday, 1975; Dore, 1975; Bates, 1976, and Bates et al., 1979). There remains a need, however, for examining the development of intentionality in the language disordered child.

Development of Symbolic Function

At the end of the sensorimotor period, symbolic orientation begins; thought becomes representational or detached from action. Piaget (1962) described symbolic function as "the capacity to represent reality through the intermediary of signifiers that are distinct from what they signify"(p. 68). When cognitive distancing is separated from direct stimulation, distinct signifiers begin to appear, and the cognitive

underpinnings for verbal behavior have been established. Distinct signifiers are of two types: symbols and signs. Symbols have a link of resemblance to an object or event. They are personal, often being invented in play. Signs are typically words, are arbitrary, social in that they are shared by others, and form linguistic systems. The child at this stage now possesses the necessary means for learning linguistic systems and processes.

Development of Symbolic Play in Normal Children

Although Piaget delineated several manifestations of symbolic functioning, including deferred imitation, drawing, and mental imagery, his descriptions of the development of symbolic play have provided the theoretical framework for a great deal of recent research relating to language development. Before discussing numerous research articles describing the stages of symbolic play, a discussion of Piaget's model is warranted, as it forms the foundation for later studies.

The Piagetian (1962) model of symbolic play is delineated into four levels. The first, primitive symbolic schemes, appears during sensorimotor stage VI (18 to 24 months) and consists of everyday actions centered on the child's own body. The progressive differentiation between the "signifier" and the "signified" that appears at the end of this stage indicates Piaget's first true symbolic play level (Type I). A subtype of Level I, Type IA, is characterized by the projection of the schemas seen in sensorimotor stage VI onto new objects or receivers of action. For example, the child feeds a doll. The

other subtype, Type IB, consists of the child imitating and then carrying out on other objects/persons schemas modeled by others. For example, the child pretends to be the doctor.

The second level of Piaget's framework also consists of two subtypes and marks the onset of symbolic substitution. Type IIA is characterized by simple identification of one object with another (e.g., child uses a pencil as a toothbrush). Type IIB is characterized by the child substituting part or all of his body for that of another person or object (e.g., child acts as a cat).

True symbolic combinations, capable of unlimited development, appear clearly only after the age of three or four years. This third and final type of play described by Piaget is characterized by complex episodes that cannot be subdivided according to the predominance of assimilation (Type A) or imitation of others (Type B). The child at this level borrows real scenes and greatly elaborates them until they become a whole scene, not the isolated imitations or assimilations of one object to another, as seen in earlier types. Also at this level, the child will create an entire episode in order to correct reality, rather than reproduce it for pleasure. For example, the child is forbidden to eat a piece of candy, but creates a complex episode in which she does eat candy. This type of play is also characterized by "liquidating combinations," where the child is faced with an unpleasant situation and deals with it by transposing it symbolically (e.g., child sees a dead bird and later is seen lying motionless on the floor. When asked what she is doing, the child says "I'm

the dead bird.").

The development of symbolic play in the young child has been carefully examined by Nicolich (1975, 1977) influenced by Piaget's framework. She defined the underlying basis of symbolic play as "the juxtaposition of a real action and an intended fantasy"(p. 786). The criteria for evidence of pretending were: a) everyday activities are performed in the absence of necessary materials (e.g., child eats from an empty spoon); b) the child performs actions usually performed by someone else (e.g., child cooks); c) inanimate objects are treated as animate (e.g., child feeds doll); d)activities are not carried out to their usual outcome (e.g., child puts on coat, waves bye-bye, but doesn't leave); e) one object is substituted for another (e.g., child picks up a pencil and calls it a toothbrush); and/or f) the affected tone of the child reflects awareness that the play has a nonliteral quality in that the behavior is usually accompanied by smiles and exaggerations in movement.

Nicolich (1977) described the transition between sensorimotor activity and symbolic functioning in an ordinal sequence of five levels in a longitudinal study of five children. The children were between the ages of 14 to 19 months at the onset of the study, and were all exhibiting single-word utterances. Observations were made of each child while engaged with a set of 36 toys (adapted from Sinclair, 1970). Each mother was present, but asked only to respond to her child's overtures rather than initiate any play activities. The data

were divided into episodes determined by the child's involvement with a toy and transitions between involvements. The symbolic maturity level assigned to each play episode depended on the following: a) the source of the scheme (e.g., Did the child initiate the activity or model another's behavior?); b) evidence of pretending; c) objects and participants employed in the scheme; d) the number of schemes; and e) whether any planning of schemes was evident. For each advancement to a higher level, more than one instance of the activity was required in order to credit the child with that ability.

Nicolich described the first step in the transition from sensorimotor activity to symbolic functioning as presymbolic schemes. At this level, the child showed an understanding of the use of an object through brief recognitory gestures. The actions, however, showed no evidence of pretending. The second level was termed autymbolic schemes, and consisted of a play quality being attached to the previous level. Only those actions that were in the child's daily routine were seen (e.g., eating) and were limited to actions by the child on his own body only. Level 3, single-scheme symbolic games, had the quality of decentration. The child recognized the meanings of various actions and their separation from self. For example, the child now fed a teddy bear. Nicolich noted that this type of play was evidence that the child had cognitively differentiated the world; actions were now seen as separate from participants. Combinatorial symbolic play schemes (Level 4) were evidenced by the child's ability to join two or more pretend behaviors in a sequence. Two types of sequences were identified: the child

acted on several participants in the same manner (e.g., the child combed self, doll, and mother in sequence), or the child acted on one object using several different schemes (e.g., the child fed doll, combed doll's hair, and put doll to bed). It was in these two ways that the child integrated several meanings into a single framework. Nicolich noted that her subjects had more difficulty in combining several different action schemes than in repeating the same scheme. Toward the end of the second year, internally directed symbolic games (Level 5) appeared. The child was able to integrate games and schemes mentally, prior to performing them. The hierarchical structure of Level 5 required coordination of at least two representational schemes and a covert mental intention or transformation that directs schemes. (The child may or may not announce the activity at this level, but it is apparent to an observer that planning has taken place.) Also at Level 5, the child exhibited the first appearance of object substitution and began to search for needed objects. Nicolich reported that the subjects in her study progressed through all five levels of play between the ages of 18 to 26 months.

Several other researchers have examined the development of symbolic play in various age groups of young children. Fenson, Kagan, Kearsley and Zelazo (1976) observed the developmental progression of play in children between the ages of 7 and 20 months. Each child was observed with his/her mother in a free play setting which included a child's tea set and other toys. Each mother was instructed not to direct the

child in any way, and to disregard overtures made by the child to draw her into play. Fenson et al. (1976) defined three classes of play acts: The first was described as relational combining or relating of objects, which were acts involving: appropriate associations between objects, or "accommodative acts"; associations between objects in other than a clearly appropriate manner (e.g., child touched teapot lid against side of cup), or "simple relational acts;" and combination of two similar objects (e.g., two spoons), or "grouping". The second classification was described as symbolic acts, including eating (but not mouthing), drinking, pouring, stirring and spooning. The final class involved sequential acts, consisting of two or more successive responses which occurred in a clearly sequential order (e.g., the child stirred in the pot, then in the cup). The diversity of play was determined by the frequency of different acts performed by each child within each of these three classes. The results suggested a progression in the development of play: from banging (at seven months), to simple relational acts (at nine months), to accommodative relational acts (at 13 months), and finally to symbolic acts, which emerged at 13 months and was present in all children by 20 months. Sequential acts appeared to develop more slowly and were not apparent at 20 months.

A slightly older group of children was observed by Sinclair (1970) in order to describe the developmental progression of symbolization in children from 12 to 26 months of age. Each child was observed in monthly fifteen-minute sessions in a playroom equipped with a variety of familiar toys and objects.

The investigator briefly attracted the child's attention to the toys without suggesting play behaviors, and then backed away. The data were divided into three categories. The first category included all activities involving investigation of object properties. The second consisted of those activities involving spatial/functional organization of the objects (e.g., the child put one object on top of another), and the last category was defined by the child acting "as if" (e.g., the child used a tissue box as a doll bed). Sinclair categorized the play behaviors of her subjects into three age groups: 12 to 16 months, 16 to 19 months, and 19 to 26 months. Children in the youngest group did not exhibit any pretend play, and primarily investigated objects. The 16 to 19 month-olds exhibited some pretend play, although it was limited to actions on their bodies only. The oldest group used both appropriate use of objects and symbolic play involving others as well as themselves. These results were further described in terms of a developmental progression: the child first explored objects indiscriminantly, then purposefully and appropriately. Finally, the child was able to substitute objects symbolically with objects removed from the immediate material context.

Lowe (1975) investigated the early stages of symbolic activity by establishing the development of trends in the meaningful use of objects in children between one and three years of age. In her sample of 244 children, she observed how sets of miniature objects (e.g., miniature dolls, truck, tea set) were manipulated during 30 minutes of structured play.

Results indicated that at 12 months, the children reacted appropriately to some or all of the feeding utensils. Self-brushing or combing appeared at 15 months, as did pushing a toy truck back and forth. The peak of self-related activity was observed at 18 months, followed by a transitional period, with self-related and doll-related activity being equal in frequency. By 24 months, doll-related activities were predominant. The children made meaningful use of all of the miniature objects by 30 months. During this period, the children began searching for needed absent objects. By 36 months, the children had exhausted most of the possibilities inherent in the materials.

Development of Language and Symbolic Play in Normal Children

Several investigators have examined the development of language and symbolic play in normal children. McCune-Nicolich (1981b) proposed the following correspondence between language and symbolic play: During the presymbolic scheme level (Level 1), meanings are fused with action. The child uses presymbolic vocal and gestural behaviors to signal wants and needs. In terms of language comprehension, the child responds to "bye-bye" and "peek-a-boo" at this level. During Level 2 of play, the child demonstrates that words are meaningful and can be used for communication. Early single words are expected to appear at this time, and are used consistently to refer to a category of objects (e.g., "Kitty" could refer to a pet, a picture in a book, a stuffed toy, or any four-legged animal).

The quality of decentration is reflected in both language and play at Level 3. Words produced at this level refer more

specifically to changing aspects of a situation (e.g., "all gone"), and vocabulary words are more differential in nature. Although the child at this level has the vocabulary that potentially can be combined into two-word utterances, McCune-Nicolich speculated that he/she lacks either the general symbolic functioning or the linguistic strategies necessary for doing so. Two forms of early language combinations are expected to appear at Level 4: a presyntactic period followed by a period of rule-based utterances. Level 5, which appears towards the end of the second year, corresponds with the early syntactic language described by Bloom and Lahey (1978) and Bloom (1973). At this time, the child forms hierarchical symbolic combinations which are demonstrated in his play. These combinations are also expected to appear in the child's language performance through the use of two-word productions. McCune-Nicolich proposed that symbolic play and language are related as reflected by temporal similarities in development across domains.

In an effort to provide support for these proposed correspondences, McCune-Nicolich (1982) conducted a study to examine the development of symbolic play and language in 24 subjects between 19 and 24 months of age. Of the 24 subjects, only one exhibited single scheme symbolic acts (Level 3), 18 exhibited symbolic play combinations (Level 4), and five exhibited both combinatorial symbolic schemes (Level 4) and planning of symbolic schemes (Level 5). The child who demonstrated Level 3 play used only one-word utterances. The majority (12 of 18) of the children who showed play combinations also exhibited word combinations. All of the children

demonstrating Level 5 play combinations used word combinations, and four of the five used predominantly multiword utterances. These results supported the hypothesized relationship between symbolic play and language. For those six children who exhibited combinations in play but not in language, McCune-Nicolich proceeded to test a multidimensional model of development in an attempt to account for the lag or decalage (Piaget, 1962) between language and nonlanguage behaviors. Results indicated that the decalage group exhibited a significantly greater incidence of unintelligible speech, and more negative characteristics of mother-child interaction than the group showing correspondences in play and language. There were no significant differences found between the two groups in terms of hemispheric specialization as measured by bimanual hand preference (Ramsay, 1980). The investigator cautioned against suggesting that the poor mother-child interaction was justified as a cause of language disorders in the decalage group. The poor mother-child interaction may have been a result of, and not a cause of, the pattern exhibited by this group. Results were in accordance with findings reported by Nelson (1981), which suggested that poor intelligibility, negative characteristics of mother-child interaction, and slow language development are three of many possible variables that might characterize the style of language acquisition demonstrated by a small group of language disordered children.

In order to describe the relationship between language development and the development of nonverbal representation,

Veneziano (1981) studied six children longitudinally from 10 to 19 months. The children were visited twice monthly. One visit consisted of a naturalistic observation; the other was spent in testing the child on a set of nonverbal cognitive tasks. Each observation ranged from 1½ to 2 hours. The testing session consisted of a 15-minute free play period with toys chosen according to their likelihood to stimulate symbolic activity (e.g., blocks, teddy bear, doll, brush, dust pan, comb, toy stove, tea set). Following the free play, a structured task designed to elicit two specific activities was employed. The first activity involved eating and feeding another person. The second activity involved brushing one's own or another's hair. Both activities were credited only if the child completed the entire sequence (e.g., child put spoon in dish and then mouth), due to the fact that it required mental representation of the absent food. Object substitution was also considered symbolic (e.g., child substituted a stick for a spoon). Finally, the Uzgiris and Hunt Scales (1976) for object permanence and gestural imitation were administered. Results indicated that, in all cases, activities on self appeared before those on others. Vocal interaction increased with age, and an increase in language development corresponded to an increase in symbolic activity. Veneziano suggested a reciprocal interaction between the two.

Largo and Howard (1979) examined the development of language as well as play in 16 children between 9 and 30 months of age in a structured play setting. Expressive language measures recorded involved the amount and variety of

vocalizations, words and sentences produced. The child's responses to verbal requests to identify objects, engage in functional and representational play, and demonstrate comprehension of prepositions through manipulation of objects constituted receptive language measures. Results indicated that children demonstrated babbling at one year, jargon during the second year, and speech intelligible to the mother (but not others) during the early part of the third year. Sentences were absent before 21 months, but present in all of the children by 30 months. No correlation was found between the total number of words or vocalizations, and the types of play exhibited at different ages. The presence or absence of words did not correlate with the presence or absence of functional or representational play. In terms of language comprehension, no correlation between identification of objects and any type of play was found. None of the children responded to requests for functional play before nine months. Beyond 18 months, the children were less interested in functional play and less responsive to verbal requests. Most of the children did not respond to requests for representational play before 15 months, but all did respond after 18 months. At nine, 12 and 15 months, a positive relationship was observed between the amount of spontaneous functional play and responsiveness to verbal requests for functional play. A positive correlation between the amount of representational play and the child's responsiveness to verbal requests was also noted. Expressive language was preceded by receptive language, which was at least

as well-developed as play, and perhaps more so. An especially interesting observation was the fact that children who displayed only functional play did not respond to verbal requests for representational play. A child could feed himself with the spoon, but was unable to feed the doll upon request.

One of the most comprehensive longitudinal studies of symbolic play and language in normal children was undertaken by Bates, Benigni, Bretherton, Camaioni, and Volterra (1979). These investigators studied 25 infants between the ages of 9½ and 12½ months. Each child was observed in his/her home four times over a three-month period for a total of two hours per observation. Each session included cognitive testing, behavior observation and maternal interview. For the cognitive testing, the following Uzgiris and Hunt Scales (1975) were administered: object permanence, spatial relations, means-end, imitation, operational causality and schemes for relating to objects. The investigators correlated these measures to frequency and differentiation of symbolic and combinatorial play schemes as well as single words produced and comprehended. Results indicated that certain cognitive measures were highly predictive of developments in language production; specifically, means-end, imitation and symbolic play. Spatial relations and object permanence were found to be poor predictors of language development. Bates et al. suggested that this finding was due to the fact these measures were more object than symbol oriented. Results also indicated that developments in language comprehension were best predicted solely by play. These investigators stated that this study provided evidence for the

homologue model.

Symbolic Play and Language Development in Various Clinical Populations

In addition to the research focusing on the development of symbolic play and language in normal children, several investigators have examined developments in these two domains for disordered populations. The following review will examine studies involving autistic, mentally retarded, and language disordered children.

Autistic Children. The process of language acquisition for the autistic child is very different from the normal child. Ricks and Wing (1975) suggested that the mechanism for scanning and classifying experiences was either absent or very limited in the autistic child. Words were learned, if at all, by operant conditioning, not active processing. Some severely autistic children showed no differentiation among the people or objects they related to and could not perform even the simplest classification tasks. Most autistic children did have some ability to form concepts, although they were usually very limited. These investigators noted that the difficulties of autistic children were at the level of concept formation where manipulation rather than simple storing of symbols was required.

Ricks and Wing also stated that most young autistic children handled toys as if seeking sensory simulation, due to a poverty of development of inner language. Puzzles and constructional toys could be completed so long as the child did not need to rely on imaginative understanding. Very few autistic children

ever reached the stage of imitative play, but of those who did, play interactions appeared to be exact repetitions of their own experiences and did not contain invention of any kind. In summary, absence of symbolic play was a result of this underlying lack of symbol formation ability.

Wing, Gould, Yeates, and Brierley (1976) linked both repetitive speech and the autistic syndrome to abnormalities of symbolic play. Autistic children with stereotyped play in this study had language comprehension abilities above the 19-month level. These children were found to successfully follow set patterns of play, but were unable to meaningfully create new play behaviors. These investigators suggested that the children with stereotyped play had not advanced beyond the level of following set patterns. The prognosis for developing independence to any degree was better for a child with stereotyped play than no symbolic play at all. For those children living in an institutional environment, it would seem logical that the development of symbolic play could be retarded by lack of social interaction, stimulation or appropriate material. However, Wing et al. noted that approximately one-half of the children diagnosed as autistic in a study by Tizard (1960a, 1960b) lived in homes with environments providing ample opportunity for the development of symbolic play.

Mentally Retarded Children. Mentally retarded children appear to have delays in their symbolic play rather than disorders, just as their language is reported to be delayed, not different. Casby and Ruder (1982) found no quantitative

differences in the symbolic play of normal and mentally retarded children when matched by their mean length of utterance (MLU) in morphemes. Both groups were likely to substitute one object for another, especially if the substituted object closely resembled the standard object. A strong positive correlation was found between symbolic play and MLU rather than symbolic play and chronological age in the retarded subjects. In normal children, both MLU and chronological age were related to symbolic play. The investigators agreed with Miller (1980) and Chapman and Miller (1980) that the presence of a language delay was related to a child's cognitive level rather than chronological age level, and that a child's language abilities were limited by his/her current cognitive status. Results supported the previously discussed local homologue theory proposed by Bates et al. (1977).

Wing, Gould, Yeates and Brierly (1977) studied the symbolic play of 108 mentally retarded and autistic children. In regard to the retarded subjects, results indicated that children with Downs' Syndrome were especially likely to exhibit symbolic play. Many of the children with no symbolic play or those with stereotyped play had histories of encephalitis, infantile spasms or maternal rubella. The investigators suggested the importance of further examination of the pathological processes that differentiated cognitive behaviors in retarded individuals. Wing et al. also noted that the children with no symbolic play were severely limited in their ability to learn.

Although these studies have been beneficial in terms of

understanding the relationship between symbolic play and language in autistic and mentally retarded children, the majority were found to be lacking in sufficient subject description. The cognitive levels of the subjects were in many cases omitted. Also, specific procedural limitations were present in some studies. For instance, it was not clear in examining some procedures as to whether the children were prompted in their play by suggestions from the investigators, or simply allowed to pursue their own choices.

Language Disordered Children. Currently there is a controversy in the literature regarding the definition of a language disorder (Kirchner and Skarakis-Doyle, 1983). Investigators agree that the language disordered population excludes those children who are autistic or mentally retarded, although a consensus regarding the exact nature of the language and cognitive characteristics of this population has not been reached. This controversy should be considered, however, in reviewing those studies regarding the relationship between symbolic play and language in subjects referred to as language disordered/delayed/handicapped.

Rather than matching groups by age in order to observe language and symbolic play in normal and language disordered children, Terrell, Schwartz, Prelock, and Messick (1981) compared the two groups on the basis of language abilities. Fifteen normal and 15 language disordered children who demonstrated single word use, but not yet word combinations, were observed. The Symbolic Play Test (Lowe and Costello, 1976)

was administered and spontaneous behaviors during free play with toys were recorded. Results indicated that the language disordered children scored higher on the Symbolic Play Test overall, but were less likely to make scoreable responses on the higher level situations. These children lagged behind what was expected for their chronological age. The investigators suggested that the lag resulted from a ceiling imposed on their underlying knowledge base. If performance in play and language was related to a more basic general capacity for symbolization, then the impaired language functioning would have appeared to be related to the absence of certain language-specific skills, and not deficits in basic symbolic capacity. The language disordered children in this study did not have a generalized symbolic deficit manifested equally in all domains; they were more impaired in their language than play. Because applying symbolic knowledge to intangibles appeared to be more difficult than to tangibles, play preceded language in early development. In the language disordered, this gap was even larger.

In order to understand more about underlying cognitive development, Bloom (1974) summarized findings from two longitudinal studies in which she observed children's language in relation to their play with objects. In the first study, she observed a group of four normally developing children matched by age from the time they were 20 to 36 months of age. In the second study, she observed a group of four language deviant/delayed children from the time of single words until their MLU was 2.50. For all of the children, manipulative play predominated the early data. Symbolic play increased

developmentally, and began to evolve when an object took on a function other than what could be perceptually determined. Early presymbolic play was object-specific, but symbolic play was characterized by objects assuming an altogether different identity (e.g., a paper cup became a toy bathtub). There was no instance of the development in language preceding development in play; on the contrary, three of four of the language deviant/delayed children developed complex play with very limited linguistic development.

The hypothesis that the play of speech delayed children would be less advanced than that of normal children was proposed by Lovell, Hoyle and Siddall (1968). In addition, these investigators suggested that comprehension was advanced over imitation and production in the language delayed. Their 20 subjects were observed over 14 weeks for a total of four hours each. At the younger ages, there were no significant differences in the amount of time spent on various forms of play. Differences did appear, however, with age. The older normal children spent more time in symbolic play than the older language delayed children. A positive correlation between the mean number of morphemes per utterance and the amount of time spent in symbolic play was noted. Although comprehension scores were not significantly different between the two groups, imitation lagged behind comprehension for the language delayed and the opposite was true for the normal children. These findings were consistent with both of the hypotheses proposed.

The theory that language handicapped children deal with

symbolic events less easily than normal children was also suggested by Williams (1980). Rather than delayed, she described the play of language handicapped children as deficient. She observed normal and language handicapped preschool toddlers in free play in order to identify the progression of their play. The play of normal developing toddlers was seen to progress from simple relational acts to more complex sequences of symbolic play. Although the frequency of relational acts was similar between the two groups, the normal children engaged in approximately twice the amount of symbolic play per session as the language handicapped children. The language handicapped children appeared to have smaller repertoires for symbolic acts, and their play often consisted of repetitive sensory actions.

Skarakis (1982) described the developmental course of symbolic play in relation to language in three language disordered children over a six month period. At the onset of the study, each of the subjects (22, 26, and 31 months of age) exhibited normal cognitive abilities, delayed or unusual courses of language development, and normal hearing sensitivity. The children were videotaped monthly during a one-hour free play session. The tapes were analyzed according to: symbolic maturity level (as described by Nicolich, 1975, 1977), diversity and flexibility of play, and comprehension abilities (according to procedures developed by Miller, Chapman, Branston and Reichle, 1980). Spontaneous language samples collected during the six one-hour sessions were analyzed for mean length of utterance, utterance type, mean number of major grammatical

categories per syntactic construction, and percentage of verbal self-repetition.

Results indicated that these language disordered subjects followed the same course of symbolic play development as normal subjects (Nicolich, 1975, 1977), but did so at later ages. Diversity and flexibility of play was limited. Relatively few new schemes were observed, in contrast to the high proportion of repetitive schemes, which suggested limited symbolic repertoires. Comprehension development was stable across the six month period. In terms of language production, the limited linguistic repertoires reflected the same strategy of repetition observed in symbolic play. Skarakis noted that self-repetition allowed the child to continue participation in play or conversation after his/her available repertoire had been exhausted.

Skarakis described two patterns in the temporal relationship between play and language in the language disordered population. The first was characterized by similar timing in terms of development in the two domains. The second pattern indicated that developments in language production were preceded by developments in play. Both domains, however, were restricted in terms of symbol repertoires and repetition was a common compensatory strategy. Skarakis concluded that, although a relationship between symbolic play and language production was found, there was not enough evidence to clearly support the local homologue theory proposed by Bates et al. (1979). Rather, the data indicated the possibility of common task constraints in

the development of symbolic play and language reflecting the analogue theory (Bates et al., 1977). Deficits in both domains could be related, although not necessarily equivalent, due to the nature of the tasks involved.

Skarakis stressed the importance of assessing and using symbolic play as a means of remediation to determine the extent of symbol deficits across domains, because it is the primary modality in which a child learns, and because it provides an appropriate cognitive and social context.

In summary, several theories/models regarding the relationship between symbolic play and language have been proposed. For normal language learning children, a homologue model has been proposed (Bates et al., 1979); whereas for language disordered children, an analogue model has been suggested (Skarakis, 1982). A multidimensional model has been offered as a possible explanation for the decalage observed between the domains of symbolic play and language in a limited number of children (McCune-Nicolich, 1982). Further examination of this relationship in language disordered children is needed in order to provide additional information for considering the models proposed thus far. Segments of this population that have not been considered previously (e.g., those individuals functioning below the cognitive and language levels described by Skarakis, 1982) warrant investigation.

Statement of Problem

The purpose of this study was twofold: first to describe the development of communicative intent in a young language disordered child enrolled in a clinical program; and second to

describe the development of the emergence of language and symbolic play in the same child over a longitudinal period of five months. Specifically, for a language disordered child enrolled in a clinical program, the following questions were examined:

1. What is the course of development of communicative intent?
2. What is the course of development of symbolic play?
3. What is the developmental pattern of symbolic play in relation to language development?

CHAPTER II
Methodology

Subject Description

The subject was a female child, 27 months of age. She was the only child from a monolingual, English-speaking home. Information from a parent interview revealed there had been minimal interaction with the child during her first year of life. Both the mother's pregnancy and the subject's medical history were unremarkable. There was no indication of neurological impairment. Motor development was reported to be within normal limits. At 24 months of age, she was enrolled in a preschool facility which she attended five days per week from late morning to late afternoon. The subject was selected for participation in this study based on her delayed cognitive abilities, failure to demonstrate lexical comprehension and production of single word utterances, limited communicative intent, and normal hearing acuity.

Results of a cognitive and language evaluation were as follows:

In terms of her cognitive level of development, the subject was functioning in: sensorimotor stage III (4 to 8 months) for verbal imitation; stage IV (8 to 12 months) for object permanence; stage V (12 to 18 months) for means-end and gestural imitation; and in transition between stages V (12 to 18 months) and VI (18 to 24 months) for operational causality (Miller, Chapman, Branston, & Reichle, 1981; Lipschultz, 1982). Specific cognitive subscales and corresponding descriptions of

performance of the subject are found in Table 1. (See Appendix 1 for specific sensorimotor assessment procedures.)

Skarakis' (1982) modification of Nicolich's (1975, 1977) protocol for determining levels of symbolic play was used to analyze the subject's play behaviors (see Appendix 2). The subject's play consisted of mouthing, sucking, throwing and banging objects. These play schemes were characteristic of Skarakis' most basic nonsymbolic level, sensorimotor manipulation of toys.

The subject's communication acts were characteristic of a 9 to 12 month-old child (Halliday, 1975). She requested objects from the investigator by taking them when possible, but would not pursue objects not immediately attainable. She rejected objects by dropping them, pushing them away or retreating from them. No occurrences of commenting (Chapman, 1981), the protoimperative (the subject's use of the investigator to obtain a desired object or action) or protodeclarative (the subject's effort to direct the investigator's attention to some object in the room) were observed (Bates, 1976).

The subject's vocal productions consisted only of the nasal consonant /m/ and the diphthong /aI/. Her parents reported these productions were also exhibited at home. No word usage or babbling in terms of consonant-vowel productions was observed.

In terms of language comprehension, the subject did not engage in any routine communicative games, such as "patty cake," "peek-a-boo," or "bye-bye," when verbally and gesturally initiated by the investigator (Chapman, 1978). The comprehension strategies typically employed by children 8 to 12

TABLE 1
 COGNITIVE ASSESSMENT SUBSCALES AND DESCRIPTIONS
 OF PERFORMANCE OF THE SUBJECT

<u>Subscale</u>	<u>Stage</u>	<u>Description Of Performance</u>
Verbal Imitation	III	Imitates sounds in repertoire
Object Permanence	IV	Finds object visibly hidden under one screen
Means-end	V	Pulls string to get desired object
Gestural Imitation	V	Imitates novel invisible gesture
Operational Causality	V	Puts object in position to roll down incline
	VI	Discovers how to activate mechanical toy

months of age were not exhibited (Chapman, 1978). She did not demonstrate comprehension of familiar objects brought from her home when the referent was present (Miller, et al., 1981). These results indicated that the subject was functioning below the 12 to 18 month level of comprehension.

At the time of this study, the subject was enrolled in a language stimulation program at a university speech and hearing clinic. The intervention program also focused on facilitating the development of the protoimperative and protodeclarative communication functions based on the research of Leonard (1981) who reported that these functions were appropriate intervention goals for an individual demonstrating sensorimotor stage V (12 to 18 months) schemes for means-ends. The program did not involve any direct training of symbolic play, although this type of play was occasionally modeled by the clinician/investigator.

Materials

Materials used initially in this study consisted of the toys and objects listed in Table 2. After the tenth collection of data, additional materials were included to maintain the subject's interest (see Table 3). All materials were chosen according to their properties which allowed for relational as well as symbolic play. In addition, some of the materials promoted communicative interaction. For example, in order to remove a token from the film canister or unscrew the octopus' legs, the subject needed to request the investigator's assistance.

TABLE 2
TOYS AND OBJECTS INITIALLY USED

Quantity	Toy/Object
1	metal teaspoon
1	plastic 35mmfilm container
1	plastic toy telephone
1	plastic ring-toss octopus (2 feet x 1.5 feet; 4 removeable legs)
1	plastic pocket comb
1	5-inch foam (Nurf) ball
10	1-inch wooden blocks (assorted colors)
1	plastic cup from child's tea set
2	plastic plates from child's tea set
1	12-inch beach ball
1	18-inch cloth doll with yarn hair

TABLE 3
TOYS AND OBJECTS ADDED AFTER 10TH DATA COLLECTION

Quantity	Toy/Object
1	4-inch x 3 inch metal tea canister with lid
1	1-cup glass jar with screw-on lid
1	2-inch rubber kitty
1	toothbrush
1	petrie dish with twist-on cover
1	yellow plastic token
1	yellow plastic hosiery egg (2 parts)
1	2-inch red rubber ball
1	metal teapot from child's tea set

Data Collection and Analysis

Data were collected in five-minute sessions over a period of five months. Frequency of data collection was three times per week for the first five weeks, and five times per week thereafter.

Once the subject and investigator entered the clinic room, the five-minute data collection period began. The investigator took on-line recordings during this time. An audiotape recorder was used on less than ten occasions due to its distractable effect on the subject, who spent the majority of the five-minute period exploring the device or the electrical outlet into which it was plugged.

A trained observer, a professor in speech-language pathology, was located in an adjoining room with a two-way mirror and speaker during the data collections. The observer held a stopwatch for the timings and alerted the investigator to end her recording by tapping on the mirror, which the investigator acknowledged by saying "thank you." This procedure assured identical time periods of data collection between recorders. During those sessions when the observer was not present, the investigator held a stopwatch and recorded the data concurrently.

Communicative Intent. The frequency of the following pragmatic behaviors was recorded: comment, request for object, and rejection. Also noted was the frequency of the protoimperative and protodeclarative communicative functions. (See Appendix 3 for specific definitions of pragmatic behaviors.)

Symbolic Play. The toys and objects used in data collection were kept in a plastic bin located on top of a child-sized table. The subject could reach the bin without the aid of the investigator. The investigator did not instruct the subject to play with the materials in any way, but participated in a play episode if initiated by the child. An episode was defined as: 1) a single object contact; or 2) continuous involvement with a group of objects, which together formed a 'theme' for the child (Nicolich, 1977). An episode began when the child had nothing in hand, continued as she contacted an object, and ended when the child was again empty-handed. The episode continued as long as the original object remained in hand, or a theme of action related to the original object continued (Nicolich, 1980). The investigator did not engage in any symbolic play during the data collection except that which was initiated by the subject. When the subject lost interest in a toy, the investigator did not make any attempt to prolong the episode.

The investigator recorded a brief description of each of the subject's different play episodes (e.g., 'drank from cup,' 'threw ball') during the data collection period. A symbolic maturity level was then assigned at the end of each five-minute period (see Appendix 2). This maturity level was defined as the highest demonstrated level of symbolic play (Nicolich 1977). The criteria for determining "pretend" or symbolic play were as follows: 1) inanimate objects treated as animate; 2) everyday activities performed in the absence of necessary materials; 3) one object was substituted for another; 4) child performed

actions usually done by someone else; 5) activities were not carried out to their usual outcome; or 6) the child demonstrated an attitude and awareness that she was playing pretend (Nicolich, 1975, 1978).

Language Production. All verbal productions, the context in which they were produced, and the corresponding semantic functions were recorded (see Appendix 4).

Language Comprehension. Comprehension of five present objects (ball, block, cup, phone, baby) was assessed during each five-minute session (Miller, et al., 1981). In each session following the thirty-first, comprehension of "light" (as evidenced by the subject indicating a light fixture in the room) was also assessed. The investigator obtained the child's attention and then asked "Where is the (name of object)?", or gave a command "Get the (name of object).". The subject was not looking at or touching the object prior to the investigator's request. The investigator did not look at the object mentioned and did not otherwise label any of the objects as the subject picked them up. If the subject looked at or acted upon the object named, she was credited with comprehension of that referent. If comprehension of an object was not demonstrated, the investigator attempted to probe that referent a minimum of two more times. All materials employed in the symbolic play assessment were also present during comprehension testing.

As previously described, a twenty-five minute language intervention program followed each five-minute session of data collection.

Reliability

Prior to initiating this study, the investigator trained the previously mentioned observer in the procedures for recording and analyzing communicative intent, symbolic play, language production and comprehension. During each five-minute session, the observer took independent on-line recordings and then independently analyzed the data. Reliability of data collection and analysis was determined for 88% of the data. Interrater reliability is reported in Table 4.

TABLE 4

INTERRATER RELIABILITY FOR DATA COLLECTION AND ANALYSIS

Behavior	Interrater reliability
Comment	75 percent
Request for object	88 percent
Rejection	81 percent
Protoimperative	89 percent
Prodeclarative	90 percent
Highest level of play	90 percent
One-word utterances	93 percent
Present referents comprehended	93 percent

CHAPTER 3 Results

This study examined the development of communicative intent and symbolic play in a young language disordered child enrolled in a clinical program. The developmental course of symbolic play in relation to the child's language development was also investigated. Results were as follows:

Development of Communicative Intent

Results of the development of commenting, request for object, and rejecting are plotted in Figure 1. Specifically, during the first session, the subject exhibited one occurrence of commenting. The majority of sessions were characterized by either no occurrences of commenting, or only one to two occurrences of this communication behavior. Five initiations of commenting, however, were exhibited on the 45th session. In comparison to commenting, more frequent occurrences of request for object were exhibited. In 29 of the sessions, the subject initiated two to six occurrences of requesting. In terms of rejecting, a relatively low frequency of occurrence was exhibited prior to the 40th session.

Results of the development of the protoimperative and protodeclarative communication functions are plotted in Figure 2. No occurrences of the protoimperative, and only one occurrence of the protodeclarative were exhibited prior to the 16th data session. Following this session, more frequent occurrences of each function were exhibited. Specifically, the subject exhibited seven initiations of the protoimperative on the 44th session, and six initiations of the protodeclarative on

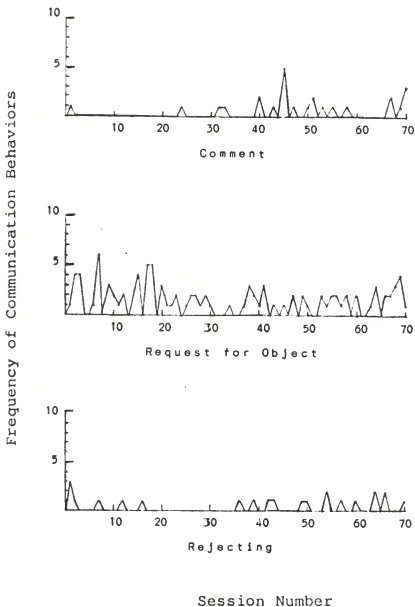


Figure 1. Frequency of commenting, request for object, and rejecting for the subject.

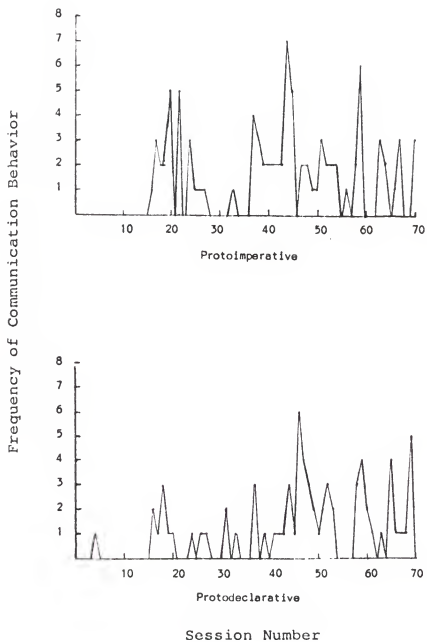


Figure 2. Frequency of the protoimperative and protodeclarative for the subject.

the 46th session.

Development of Symbolic Play

The development of symbolic play is illustrated in Figure 3, which shows the highest level of play exhibited during each session. Results indicated that at the onset of the study, the subject exhibited presymbolic schemes only. The first level of true symbolic play, Level 2, occurred on the ninth session, and preceded Level 1 play, which was first exhibited on the 10th session. Levels 3 and 4 were first exhibited on sessions 26 and 31, respectively. No instances of Levels 0 or 5 were exhibited during data collection. The most consistent frequency of symbolic play schemes (Levels 2, 3, and 4) occurred between sessions 29 and 58, inclusive. During this time, only two occurrences of presymbolic play schemes were exhibited as the highest level of play. Levels 4 and -1 play predominated as the highest levels of play exhibited for the final 10 sessions.

The highest level of play demonstrated in relation to the subject's chronological age in months is illustrated in Figure 4. Results indicated that the subject exhibited the first true level of symbolic play by 27 months of age. Levels 3 and 4 were demonstrated by 28 and 29 months of age, respectively.

Relationship Between Symbolic Play and Language

Results of the development of language production and comprehension will be presented prior to describing the relationship between symbolic play and language.

Language Production. The development of the subject's language production is illustrated in Figure 5. The subject exhibited spontaneous one-word utterance(s) on sessions 33, 34,

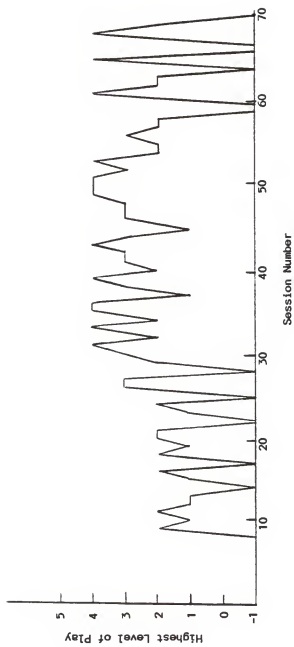


Figure 3. The development of symbolic play in the subject.

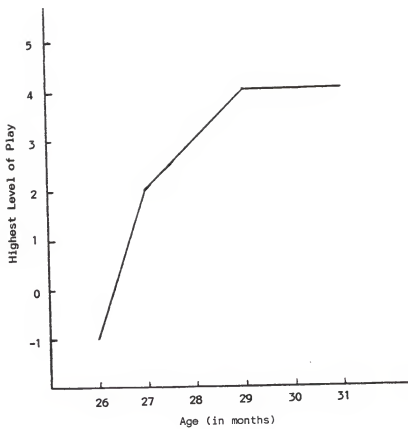


Figure 4. Highest levels of play demonstrated in relation to the subject's chronological age in months.

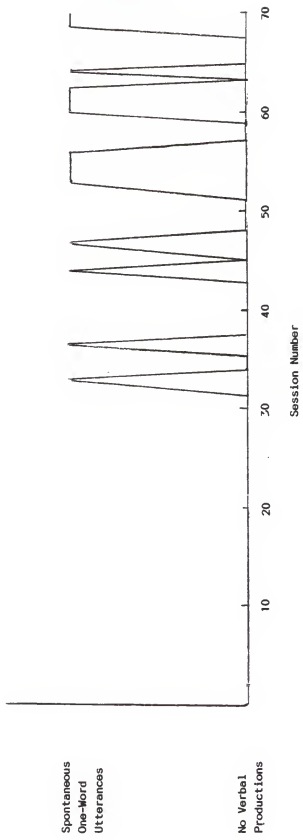


Figure 5. The development of one-word utterances in the subject.

45, and 60 through 62. The majority of sessions, therefore, were characterized by no verbal productions. Specific verbal productions and their corresponding semantic functions are shown in Table 5. Results indicated that the primary semantic function expressed was that of existence.

Language Comprehension. The subject's development of language comprehension is illustrated in Figure 6. The first occurrence of lexical comprehension was exhibited on session 33. At this time, comprehension of one present referent was demonstrated. Comprehension of two present referents was first exhibited on the 42nd session. The first and only demonstration of comprehension of three present referents occurred on session 52. There were no occurrences of more than three different referents comprehended within a session, although a total of five of six referents was comprehended over the course of the study. Each referent and the session in which that referent was comprehended is reported in Table 6.

Relationship Between Symbolic Play and Language Production. The relationship between the development of symbolic play and language production is illustrated in Figure 7. Results indicated that the subject exhibited single word productions corresponding to Level 4 play.

Relationship Between Symbolic Play and Language Comprehension. The relationship between the development of symbolic play and language comprehension is illustrated in Figure 8. Results indicated that comprehension of present referents corresponded to Level 4 play.

TABLE 5

SUBJECT'S ONE-WORD UTTERANCES AND
CORRESPONDING SEMANTIC FUNCTIONS EXPRESSED

Session Number	One-Word Utterance(s) Produced	Semantic Function
33	/laɪ/ = light	existence
36	/aɪ/ = light	existence
44	/aɪ/ = light	existence
47	/a haɪ/	greeting
53	/ba/ = ball	existence
54	/aba/ = open	recurrence
	/ba/ = ball	existence
55	/ʊ o/ = uh oh	existence
56	/ba/ = ball	existence
60	/haɪ/ = hi	greeting
61	/dæ/ = doll	existence
62	/ada/ = all gone	disappearance
	/laɪ/ = light	existence
64	/aba/ = open	recurrence
69	/haɪ/ = hi	greeting
70	/dæ/ = block	existence

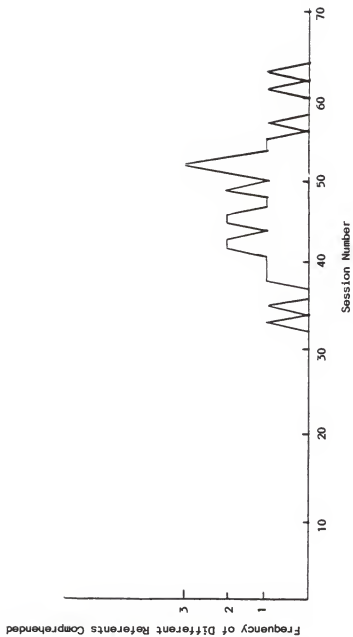


Figure 6. The frequency of different present referents comprehended by the subject.

TABLE 6
SESSION NUMBER ON WHICH COMPREHENSION OF
EACH REFERENT WAS DEMONSTRATED

Session Number	Referent(s) Comprehended
33	phone
35	baby
38	baby
39	phone
40	phone
41	ball
42	ball, baby
43	baby, phone
44	baby
45	light, ball
46	ball, baby
47	ball
48	phone
49	baby, ball
50	ball
51	phone, baby
52	block, ball, baby
54	baby
55	ball
57	blocks
61	phone
63	baby

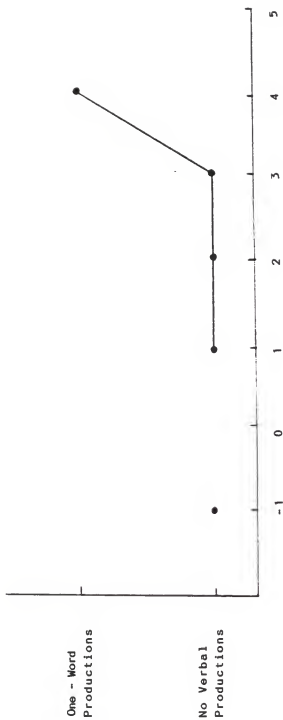


Figure 7. The development of symbolic play in relation to language production in the subject.

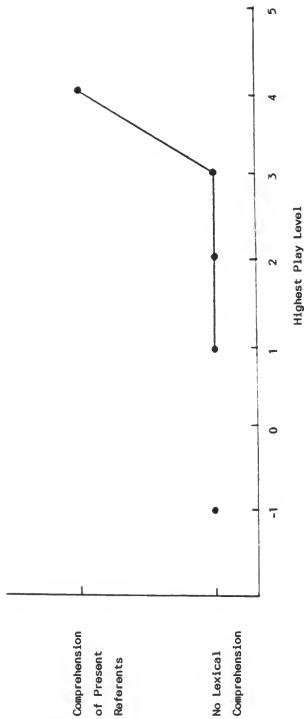


Figure 8. The development of symbolic play in relation to language comprehension in the subject.

Final Cognitive Testing

Final cognitive assessments were conducted from April 22, 1983 to May 3, 1983. Results indicated that the subject was functioning in: sensorimotor stage V (12 to 18 months) for verbal imitation and object permanence; sensorimotor stage VI (18 to 24 months) for means-ends and gestural imitation; and remained in transition between sensorimotor stages V (12 to 18 months) and VI (18 to 24 months) for operational causality (Miller et al., 1981). Specific cognitive subscales and corresponding descriptions of performance of the subject are found in Table 7.

TABLE 7
RESULTS OF FINAL COGNITIVE TESTING:
COGNITIVE ASSESSMENT SUBSCALES AND DESCRIPTIONS OF
PERFORMANCE OF THE SUBJECT

Subscale	Stage	Description of Performance
Verbal Imitation	V	Approximates novel sounds or words.
Object Permanence	V	Finds object invisibly displaced under three screens.
Means-Ends	VI	Climbs on stool to get toy.
Gestural Imitation	VI	Reproduces actions she observed previously.
Operational Causality	V	Puts object in position to roll down incline.
	VI	Discovers how to activate mechanical toy.

CHAPTER IV

Discussion

The purpose of this study was twofold: first to describe the development of communicative intent in a young language disordered child enrolled in a clinical program; and second to describe the development of the emergence of symbolic play and language in the same child over a longitudinal period of five months. Results of the analyses applied to the data will be discussed in this chapter. Comparisons between the findings of this study and those of others regarding the relationship between symbolic play and language in normal and language disordered children will also be discussed.

The Development of Communicative Intent

The results of this study provided information regarding the development of communicative intent in a language disordered child enrolled in a clinical program. At the onset of this study, the subject exhibited limited communicative intent in terms of the frequency and variety of communicative functions expressed. Communicative intent was reflected only through the use of requesting for objects and rejecting. As the study progressed, the subject exhibited, in order of appearance, the following additional communicative functions: commenting, the protodeclarative and protoimperative. Through these functions, the subject was able to exert control over her environment by directly involving the adult in her communicative initiations (Bates, 1976). Continued research regarding the order of appearance of communicative functions in language disordered

children is warranted.

As reported in a study by Owings, Price, Dayhuff, and Workman (1983), the training of specific communicative intents in a language delayed child resulted in the development of other gestural communicative acts not directly trained. The subject of the present study participated in a management program focusing on the development of the protoimperative and protodeclarative communicative functions. Although this study was not designed to examine the effects of intervention on communicative performance, results indicated that the subject did exhibit the communicative functions emphasized in the management program, in addition to another communicative act (i.e., commenting) that was not emphasized. This finding was consistent with that reported by Owings et al. in that the learning of specific communicative functions may generalize to other functions. Continued research in this area is needed.

Finally, in terms of communicative intent, results indicated that more frequent occurrences of rejecting were exhibited following the 40th session of data collection. Rejecting was a communicative function requiring direct elicitation by the investigator. In order to elicit rejecting, the investigator was required to take an object away from the subject. This procedure, however, was not used consistently throughout the study. The more frequent occurrences of rejecting observed after the 40th session, therefore, may have been a result of more frequent elicitation procedures used by the investigator. A more systematic method for eliciting

rejecting is suggested for future research.

The Development of Symbolic Play

Results indicated that the subject followed the same course of development of symbolic play as described for normal children (Nicolich, 1975, 1977), with the exception of Level 5 play, which was not exhibited upon completion of the study. Furthermore, the demonstrated age levels of symbolic play were not attained within the age range observed by Nicolich. These findings supported those reported by Skarakis (1982) in that the language disordered children studied thus far follow approximately the same sequence of symbolic play as do normal children (Nicolich, 1975, 1977), but at a slower rate of development.

Although the subject exhibited Level 0 play during the management program in which she was enrolled, no instance of this level of play occurred during data collection. Results may have reflected an insufficient number of appropriate materials (e.g., nesting cups/blocks) for eliciting this level of play. A consideration of the nature and variety of materials employed for future studies is suggested.

Another limitation of this study involved the use of on-line transcription for recording all communication behaviors and levels of symbolic play exhibited. Because the investigator did not have access to appropriate video recording equipment, it was difficult to obtain reliable quantitative data regarding the frequency of symbolic play episodes exhibited at each level. For future investigations, the use of video equipment is recommended. Nevertheless, an informal assessment of the qualitative

data that was obtained indicated that the subject exhibited repetitive play, with little elaboration or introduction of new play schemes. This finding was consistent with that reported by Skarakis (1982), who suggested that language disordered children have restricted symbolic repertoires for play; and that reported by Williams (1980), who suggested that language disordered children appear to have few ideas for symbolic play. The subject also appeared to become bored with the toys and objects available. Skarakis (1982) reported a similar finding in regard to her three subjects, and suggested the possibility that language disordered children exhaust their available repertoires, resulting in large amounts of repetition and relatively few new play schemes introduced.

The Development of Symbolic Play and Language

The third question addressed in this study pertained to the development of symbolic play in relation to language. Results indicated a temporal relationship between the developments in symbolic play and language in that developments in both language production and comprehension were preceded by developments in play. This finding was similar to one of the temporal relationships described by Skarakis (1982). Specifically, in terms of language production, results indicated that the subject's first production of one-word utterance(s) corresponded to Level 4 play. In contrast, Nicolich (1982) reported that for normal children, Level 4 play corresponded to the first production of two-word combinations. The decalage group in her study, however, was found to exhibit only one-word productions at Level 4. The subject's performance was, therefore, similar to that

exhibited by the decalage group in that language production lagged behind developments in play. The subjects one-word productions were, however, similar to the early vocabularies exhibited by normal infants (Nelson, 1973b), and were characteristic of the early semantic functions typically expressed in the 12 to 18 month level of language development (Bloom, 1970).

In terms of language comprehension, results indicated that the subject at 29 months of age exhibited comprehension of present referents, indicative of a 12 to 18 month level of development (Miller et al., 1981). However, the comprehension criterion specified by Miller et al. was not adhered to strictly in the present study, possibly affecting the results reported. Also, comprehension testing beyond this level of development was not conducted. Nevertheless, the subject's first demonstration of comprehending present referents corresponded to Level 4 play. The results reported by Skarakis (1982) indicated that the comprehension levels of her subjects remained relatively stable, and developments in comprehension were not synchronous with developments in play or language production. Further interpretation of the comprehension findings of the present study in relation to play cannot be provided until research regarding the developmental relationship between these two domains is conducted in normal children.

In terms of the models presented in the current literature regarding developments in symbolic play and language, the results of this study were inconsistent with the homologue model

(Bates et al., 1979) proposed for normal language learning children because developments in one domain were not equal to developments in the other. The analogue model (Bates et al., 1979) discussed in Skarakis' (1982) findings more accurately reflected the different temporal developments reported in this study. This model suggests that differences in timing between domains were a result of the different task constraints imposed on the development within each domain. Skarakis-Doyle (personal communication, 1984) hypothesized that the task constraints for language involve aspects of speech motor planning. Without further examination of the specific task constraints relative to symbolic play and language development, however, this model cannot be verified. Finally, the multidimensional model proposed by McCune-Nicolich (1982) could also account for the differences in temporal development exhibited in the play and language performance of the subject in this study. This model interprets the decalage, or lag between domains, in view of other possible variables, such as negative characteristics of mother-child interaction. Although mother-child interaction was not examined in this study, it may have been a factor influencing the temporal differences in light of the minimal interaction with the child reported by the parents. Future investigations might include longitudinal assessments of mother-child interaction. Other factors that may have affected the results involved: extended illnesses of the subject and resulting medications; temporary hospitalization of the subject's mother, and family arrangements for relocating to another city.

In summary, the results of this study suggested either an analogous model of symbolic play and language development for this language disordered subject, with task constraints accounting for the temporal differences displayed; or a multi-dimensional model in which the decalage was due to environmental influences. Further investigation of these models in regard to the language disordered population is warranted.

In terms of clinical implications for language assessment and intervention, inclusion of measures of symbolic play and the relationship between symbolic play and language is warranted. The use of symbolic play in assessment and intervention provides a natural context for the child, allows for observation of the child's ability to symbolize across domains, and is an appropriate cognitive and social context for training language (Skarakis, 1982).

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APPENDIX 1

SENSORIMOTOR ASSESSMENT PROCEDURES
(ADAPTED FROM MILLER, CHAPMAN, BRANSTON, &
REICHLER, 1981; LIPSCHULTZ, 1982)Verbal Imitation:

Stage II (1 to 4 months):

1. Subject vocalizes if others nearby are vocalizing.
2. When subject vocalizes, investigator pauses and then repeats sound exactly. Subject repeats sound he/she originally made.

Stage III (4 to 8 months):

1. Subject imitates familiar sounds already in his/her repertoire when investigator initiates production.

Stage IV (8 to 12 months):

1. Investigator models sound pattern that is novel, but similar to those in subject's repertoire. Subject imitates.
2. Investigator models novel sound pattern not in subject's repertoire. Subject responds by producing familiar sound patterns.

Stage V (12 to 18 months):

1. As subject plays, investigator attaches a novel sound to an action or labels an object not in subject's verbal repertoire. Subject approximates sounds or words.

Stage VI (18 to 24 months):

1. Investigator models simple new words, not in subject's expressive repertoire. Subject imitates correctly in first attempt.

APPENDIX 1 - ContinuedObject Permanence:

Stage IV (8 to 12 months):

1. Subject pushes away, knocks down, or moves hand around or over a vertical screen to get an object.

Stage V (12 to 18 months):

1. Investigator hides an object under one of two cloths (object is partially visible), and then varies the placement of the object. Subject finds object and attends to it, not the cloths.

Stage VI (18 to 24 months):

1. Investigator uses a small object and three cloths. With subject watching, investigator puts object in her hand, then moves hand successively from under one screen to another. Investigator leaves object under one of the screens. Subject searches and finds object.

Means-End:

Stage V (12 to 18 months):

1. Investigator ties string to an object desired by subject, placing string within reach, but placing object out of reach on a horizontal surface. Subject pulls string and retrieves object without demonstration.
2. Same as above, but object is suspended vertically. Subject pulls string up to get object.

Stage VI (18 to 24 months):

1. Investigator uses an object desired by subject. The object is placed on a shelf or table, out of the subject's reach, with a chair or stool nearby. The investigator encourages

APPENDIX 1 - Continued

the subject to get the object. Subject moves stool or chair over and attempts to get object. Use of stool or chair must be subject's idea.

Gestural Imitation:

Stage V (12 to 18 months):

1. Investigator models a novel, invisible gesture that subject has not performed (e.g., puts block on head). Subject imitates gesture.

Stage VI (18 to 24 months):

1. Subject imitates complex, novel motor movements.
2. Subject demonstrates deferred imitations (i.e., reproduces actions observed previously).

Operational Causality:

Stage V (12 to 18 months):

1. Investigator releases a ball or marble at the top of an incline while subject is not watching, then calls subject's attention to it. Subject puts the ball or marble on incline and releases it.
2. Investigator winds up a mechanical toy out of sight of the subject, then presents toy in action. When toy stops, subject tries but fails to activate it. Subject puts investigator's hand on toy, gives toy to investigator, or activates it by him/herself after a demonstration.

Stage VI (18 to 24 months):

1. Same procedure as #2 above. Subject discovers how to activate toy with minimal groping.
2. Investigator stands behind subject and throws bean bag so

APPENDIX 1 - Continued

that it lands approximately three feet in front of subject.
Subject shows surprise and looks for cause.

APPENDIX 2

SYMBOLIC PLAY PROTOCOL
(ADAPTED BY SKARAKIS, 1982, FROM NICOLICH, 1975)

<u>Level</u>	<u>Description of Behavior</u>
-1	<u>Sensorimotor manipulation of toys:</u> Visual or tactile exploration of object properties or indiscriminant banging, throwing or mouthing of objects.
0	<u>Combinatorial or relational play:</u> Child combines toys by stacking, nesting or grouping.
1	<u>Presymbolic schemes:</u> Brief recognitory gestures involving enactive rather than mental representation. No pretense is involved (e.g., child puts phone receiver to shoulder briefly).
2	<u>Autosymbolic schemes:</u> "Pretending" at self-related everyday activities (e.g., child pretends to drink from empty cup).
3	<u>Single scheme symbolic games:</u> Child extends action to another receiver of action or pretends at another's activities. This is the first "true" evidence of symbolization in play (e.g., child combs doll's hair).
4	<u>Combinations of symbolic play:</u> One pretend scheme is repeated among

APPENDIX 2 - Continued

several receivers of action or two or more different Level 2 or 3 schemes are combined to form a sequence (e.g., child feeds doll and investigator).

5

Planned symbolic acts and combinations:

Activities from Levels 2 and 3 that are planned, or sequences of planned acts constructed from Level 2 through 5 activities. Evidence for planning includes verbal announcement and purposeful searches for toys needed in the play act (e.g., child puts play foods in pot, stirs them, says "soup" before feeding adult. She waits, say's "more?" and offers spoon to adult.)

APPENDIX 3

COMMUNICATIVE INTENTIONS AND DESCRIPTIONS

<u>Communicative Intent</u>	<u>Description of Behavior</u>
Comment	The subject pointed to and looked at an object or the investigator, with or without vocalizations and/or verbalization(e.g., the subject pointed to ball and said "ba").
Request for Object	The subject took an object/toy from the investigator's hand or lap (e.g., took a cup lying in the investigator's lap). This definition excluded the subject's use of the investigator to obtain a desired object (e.g., took the investigator's hand and pushed it towards cup).
Rejection	Subsequent to any initiation by the investigator involving physical contact with or handing an object to the child, the subject moved/pushed away from the investigator/object, or vocalized in protest of an

APPENDIX 3 - Continued

object being removed from her (e.g., investigator took away doll from subject, who began crying). This definition excluded communication games, such as "I'm gonna get you."

Protoimperative

The subject's use of the investigator to obtain a desired object or action (Bates, 1976). For example, the subject took the investigator's hand and led her to the door and placed the hand on the door knob, or handed the investigator a toy octopus after attempting but failing to remove its legs unassisted.

Protodeclarative

The subject's use of means to direct the investigator's attention to some object or event in the room (Bates, 1976). For example, the subject handed a toy to the investigator, or pulled up her shirt to show the investigator her navel.

APPENDIX 4

SEMANTIC FUNCTIONS EXPRESSED AT SINGLE WORD UTTERANCE LEVEL
(ADAPTED FROM MILLER & YODER, 1974)

<u>Semantic Function</u>	<u>Definition</u>	<u>Example</u>
Recurrence	First to request and later to comment on the recurrence of an activity or object.	More
Nonexistence	To comment on existence where existence had been expected.	No
Disappearance	To comment on the disappearance of an object which had existed in context.	Away A gone
Rejection	To protest undesired action or comment on forbidden object: deny existence of something present.	No
Cessation	Ongoing event ceased.	Stop
Existence	Objects or people pointed out, noticed or found; events that were sudden or startling.	There Uh oh
Comment, Greeting	Attaching linguistic sign or label to a perceived event.	Mama Dada
Vocatives	Calling for someone.	Mama
Agent	Agent of immediate or intended action.	Mama Dada
Object	Object or recipient of an action.	Mama

APPENDIX 4 - Continued

Action	Marking of action or event states.	Back Catch
Possession	Objects associated with or belonging to someone or something.	Mommy Daddy

THE DEVELOPMENT OF SYMBOLIC PLAY
AND LANGUAGE IN A LANGUAGE DISORDERED CHILD
IN A CLINICAL PROGRAM

by

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B.S., Kansas State University, 1981

AN ABSTRACT OF A MASTER'S THESIS
submitted in partial fulfillment of the
requirements for the degree

MASTER OF ARTS

Department of Speech

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

THE EMERGENCE OF SYMBOLIC PLAY AND LANGUAGE IN A
A LANGUAGE DISORDERED CHILD IN A CLINICAL PROGRAM

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Under the supervision of Assistant Professor Jan L. Bedrosian

This study examined the development of communicative intent in a young language disordered child enrolled in a clinical program over a longitudinal period of five months. The developmental course of symbolic play in relation to the child's language development was also investigated. The subject, a 27 month-old female, was selected for participation in the study based on her delayed cognitive abilities, failure to demonstrate lexical comprehension and production of single word utterances, limited communicative intent, and normal hearing acuity. Data were collected in five minute sessions three to five times weekly. The frequency of the following communicative behaviors was recorded: commenting, request for objects, rejecting, and the protoimperative and protodeclarative (Bates, 1976; Chapman, 1981). The highest level of symbolic play demonstrated (Nicolich, 1975, 1977), comprehension of present referents (Miller, Chapman, Branston & Reichle, 1981), and any verbal productions were also recorded.

Results indicated that the subject exhibited a greater variety and frequency of communicative functions as the study progressed. In terms of symbolic play, results indicated that the subject followed the same course of development as described for normal children (Nicolich, 1975, 1977), with the exception of Level 5 play, which was not exhibited upon completion of the study. Furthermore, the demonstrated age levels of symbolic

play were not attained within the age range observed by Nicolich. A temporal relationship between the developments in speech and language was found: developments in both language production and comprehension were preceded by developments in play. Specifically, results indicated that the subject's first production of one-word utterances and first lexical comprehension corresponded to Level 4 play. In normal language learning children, Level 4 play corresponded to the first production of two-word utterances (Nicolich, 1981b). Thus, qualitative developments in language lagged behind developments in play.

In terms of models presented in the current literature regarding the relationship between symbolic play and language, the results of this study suggested either an analogous or multidimensional model. The analogue model (Bates, Benigni, Bretherton, Camaioni, & Volterra, 1979) indicates that developments in the two domains may or may not occur simultaneously because of the task constraints involved. The multidimensional model, proposed by McCune-Nicolich (1982) may also account for the decalage or lag in the developments between the two domains. This model interprets the decalage in view of other possible variables, such as poor intelligibility and negative characteristics of mother-child interaction. Further investigation of these models in regard to symbolic play and language development in the language disordered population is suggested.