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Characteristics of Symbolic Play in Language Disordered Children

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Abstract

This longitudinal study describes the characteristics of symbolic play during the period of 22-31 months in two language disordered children. Videotaped free play samples were obtained monthly over a six-month period. Samples were analyzed to describe developmental level, and flexibility and diversity characteristics of symbolic play. Results revealed that development of symbolic play during the 22-31 month period progressed in a normal sequence, but at a protracted rate. Symbolic play during this period is characterized by restricted repertoires of play schemes, play schemes which were brief and repetitive in nature, and play sequences which were limited in organization. The findings are discussed in relation to the subjects' common script knowledge. The effect of limited script knowledge upon communicative competence, and conversely, delayed or disordered communicative competence upon symbolic play development is addressed. Clinical implications of these data are also discussed.

Prominent theories of symbol development in infancy have proposed a relationship between symbolic play and language. Classic theories suggest the basis of the relationship is a broad underlying process or "symbolic functioning," which manifests itself across numerous behavioral domains (Piaget, 1962; Werner & Kaplan, 1963). Contemporary versions of these theories maintain that it is a more localized connection between specific domains (Bates, Benigni, Bretherton, Camaioni, & Volterra, 1979; Fisher, 1980).

Research has attempted to document the proposed relationship (Bates et al., 1979; Fenson, Kagan, Kearsley, & Zelazo, 1976; McCune-Nicolich, 1981a; McCune-Nicolich & Bruskin, 1982; Nicolich, 1977, 1978). Results have generally supported the sequence of symbolic play development delineated by Piaget and consistently indicated a relationship between domains of symbolic play and language through temporal co-occurrence (McCune-Nicolich, 1981a; McCune-Nicolich & Bruskin 1982; Shore, O'Connell, & Bates, 1984) and correlation (Bates et al., 1979).

Similar work has been conducted with language disordered children indicating a delayed onset but corresponding sequence of development to normal children (Lovell, Hoyle, & Sidall, 1968; Skarakis, 1982; Williams, 1980). However, other studies have indicated that the nature of the relationship between symbolic play and language may not be as symmetrical in language disordered children as has been found for normal children (Bloom, 1974; Skarakis, 1982; Terrell, Schwartz, Prelock, & Messick, 1984).

Since these initial investigations were conducted, another perspective on the relationship between language and symbolic play has emerged. This position, put forth by Nelson (1981) and Bretherton (1984), modifies the original Piagetian view of symbolic play in the following way. For Piaget, the very essence of development in symbolic play is the distancing of the symbol from that which is symbolized. The child accomplishes this by moving from play which is self-directed (e.g., pretending to be asleep) to play which incorporates other recipients of action, activities and roles borrowed from other sources (e.g., pretending to drive the car like mommy), transformed objects (e.g., a block becomes a car) and the creation of imaginary objects and actors. This distancing process is also central to Nelson's and Bretherton's perspective, however, they view it as evidence of the child's developing social knowledge (i.e., knowledge of who does what, when and in what circumstances). According to Bretherton, the child engaged in symbolic play is developing basic mental representations of the roles, objects and the sequence of actions called for in a familiar situation. These event representations are often referred to as "scripts" and are descriptions of the common knowledge we all have about familiar events (Nelson, 1981).

Since the formation of scripts for common routines contributes to the child's development of social relationships, it also contributes to the development of communicative competence. Thus, the relationship proposed is between symbolic play and communicative competence, rather than solely with structural properties of language. For example, the shared scriptal knowledge represented in symbolic play activities facilitates cohesive conversation, as young children are more likely to sustain a successful conversation if the topic is a familiar script (Nelson & Gruendel, 1979). Conversely, both structural and pragmatic aspects of communicative competence assume a role in advancing the development of symbolic or pretend play. Language comes to be used to represent absent objects, assign roles (e.g., "me mommy"), create actions (e.g., the baby's crying) and with preschoolers, to negotiate the course of events to take place during play. Such uses promote the distancing of symbol from symbolized, as well as the effective interaction between play partners.

The traditional Piagetian and event representation perspectives are not totally incompatible. In fact, the structural correspondences reported by McCune-Nicolich (1981a) and Bates et al. (1979) may be considered as part of emerging communicative competence. However, the emphasis in studying symbolic play

does shift with the contemporary perspective. Rather than attempting to establish correspondences between domains, symbolic play is interpreted as a manifestation of the child's ability to represent events. Hence, characteristics of that play become important variables to investigate. These include not only parameters such as number of roles incorporated, the concrete versus abstract use of objects, and the combination of events and planning of events (Nicolich 1977; Fenson et al., 1976) which have been studied in earlier investigations but other variables as well. Duration of play episodes (Cole & LaVoie, 1985; Matthews, 1978; Power, Chapieski, & McGrath, 1985), length of play sequences (Bretherton & Bates, 1984; Shore, et al., 1984) and diversity of play schemes (Bretherton, O'Connell, Shore, & Bates, 1984; Shore et al., 1984) all have been investigated in normal children 12 months to 6 years of age.

Unlike the issue of the relationship between symbolic play and language, little attention has been directed toward investigating characteristics of symbolic play in children with language disorders. Generally, it has been found that a group of preschool language disordered children engage in less symbolic play, less cooperative play and less well integrated play (Lovell et al., 1968). Anecdotally, it has been reported that language disordered children's play tends to be repetitive without variation (Luria & Yudovich, 1979) and that these children seem to have fewer ideas for symbolic play acts (Williams, 1980). These observations suggest that it would be beneficial to pursue documenting the language disordered child's ability to represent events through symbolic play.

The few available studies have resulted in very broad descriptions of groups of children at one point in time. Longitudinal investigations which can provide indepth descriptions and reveal aspects of change have yet to be conducted. Such data are needed to enhance our understanding of language disordered children's representational abilities. Consequently, the purpose of this study was to provide a comprehensive description of the characteristics of two young language disordered children's symbolic play over a longitudinal period.

Method

Subjects

The design of this study followed the quasi-longitudinal procedures described by Slobin (1967) which advocates the use of two children staggered in age to form a continuous record of development. Thus, two language disordered children, one female and one male, age 22 and 26 months respectively, served as subjects during the six-month experimental period. Current research has indicated no gender effect on the characteristics under investigation (Bretherton, et al., 1984). Both children lived in a suburban Southern California community and were from middle class, English-speaking families in which both parents worked at least part-time. These children were chosen for participation in this study because they demonstrated the following behavior pattern:

(1)A limited productive language repertoire, atypical for a child in the 18 to 21 month age range; as measured by a spontaneous language sample and compared to data reported in the child language literature for normal children in the same age range (Nelson, 1973);

(2)Lexical comprehension within normal age range as measured by test items from the *Bayley Scales of Infant Development: Mental Scale* (Bayley, 1969);

(3) Hearing thresholds within normal limits at the time of this study as determined by audiological evaluation (sound field and pure tone testing);

(4) Normal cognitive ability as measured by the *Bayley Scales of Infant Development: Mental Scale* (Bayley, 1969);

(5)English as primary language of the home;

(6) Developmental and/or medical history indicating delayed or unusual course of language development, but no other developmental delays as reported by the subject's parents.

At the onset of the study, Subject I, 22 months of age, had a language production repertoire of approximately 10 intelligible words, but she predominantly used an idiosyncratic form [deI do] to serve several communicative functions. This had been the level of her language development since age 19 months. Monthly language samples collected during the period of the investigation revealed very little change in this child's linguistic development. She remained at linguistic level I (deVilliers & deVilliers, 1973) during the entire six-month period. Subject II, at a similar age, had a language production repertoire of two intelligible words. However, by the onset of the study 3 months later, his repertoire had increased to 22 words with the aid of language intervention. His monthly language samples also revealed slow gains in linguistic development during the investigation. He remained at linguistic level I for the first four months and finally advanced one level in the fifth and sixth months (deVilliers & deVilliers, 1973).

The children were identified as meeting the above criteria by a certified speech-language pathologist, and both were enrolled in language remediation programs at a university speech and hearing center. Remediation programs consisted of language modeling and expansions in the context of play activities. However, the child's play behavior was not treated as a therapy goal.

Data Collection

The data were collected during 12, 30 minute videotaped free play sessions. Equipment included a videocassette recorder (Sony V02610), a standard videotape camera (Sony DXC 1610) and an audiotape recording microphone (Electravoice 642). Data for each child were collected approximately once every 4 weeks during the six month period.

Each child was presented with the standard set of toys used in the Nicolich (1977) study, which included both concrete and abstract materials. The child was instructed to play with toys in any way s/he wished. The experimenter (a familiar adult) and/or mother did not direct the child, but rather, responded to the child's overtures to engage in play. When the child indicated a desire to

leave the room or when play became aimless (e.g., throwing toys, etc.), the experimenter directed the child's attention back to the toy basket (e.g., "Look what else is here.")

Transcription

Play samples were transcribed from the videotapes by the experimenter and four trained assistants. These samples were segmented into episodes as delineated by McCune-Nicolich (1980) for purposes of scoring play level. An episode began when the empty-handed child initiated an action with a toy and ended when he/she was once again empty-handed. Other toys could be picked up or incorporated into the child's ongoing play without ending an episode. However, the episode was terminated when the child either discarded the original object or clearly shifted his or her focus of attention away from it.

Analysis

Several analyses were performed on the play data. First, a symbolic play maturity level was assigned to each monthly play sample, following an adaptation of the assessment system developed by Nicolich (1975). In measuring the maturity of symbolic play this tool considers variables such as the number of roles incorporated into the play (e.g., the difference between Level 3 and 4.1) and the realistic use of objects versus the use of object substitutions (physical or verbal) as a move toward greater abstraction (e.g., levels 3 and 4 vs. 5). The adapted protocol can be found in Appendix A.

In adapting Nicolich's system for use with language disordered children, Skarakis (1979) added two nonsymbolic play categories to precede Nicolich's first level. The most basic level accounted for sensorimotor exploration of object properties or indiscriminant banging, throwing, or mouthing of objects. The second addition accounted for combinatorial or relational play (i.e., child combines toys by stacking, nesting, or grouping). With these additions a more complete description of the language disordered child's play behavior could be obtained.

The procedure of assigning a play level began by scoring every episode in each monthly sample for level of play demonstrated. If several play schemes (nonsymbolic or symbolic) occurred within an episode, the level assigned was based on the most advanced activity observed. This was done to determine the child's optimal level of performance. Each monthly sample was then assigned a symbolic maturity level according to the procedures described by Nicolich (1975) to provide a perspective from which to view the results. They were then compared to Nicolich's longitudinal data on normal children (Nicolich, 1975, 1977) since the procedures used to obtain and analyze the data were similar.

Once the developmental level of the subject's symbol play for each monthly sample was determined, analyses for diversity and flexibility characteristics were conducted. These were intended as measures of action complexity and were carried out for episodes assigned level 3 or higher (i.e., those episodes reflecting true symbolic or pretend play). Each episode's constituent action schemes were identified and analyzed for the following: (1) length of time or duration of individual symbolic play schemes and sequences; (2) mean number of play schemes/episode and mean length of play sequence (the latter was the average number of schemes in a sequence and was employed as a measure of the child's ability to combine and integrate play schemes); and (3) proportion of symbolic play schemes in each of three categories. The first category, "newly introduced acts," were those schemes observed for the first time in the child's repertoire. The second category, "repeated acts," included exact copies of a previously demonstrated scheme in number of actions and objects involved. Within class substitutions for types of actions (e.g., different feeding acts) or objects (e.g., doll for teddy bear) were also included in this category. The final category, "elaborated schemes," included those schemes in which a new object, person, or action was introduced or a verbal announcement was added. Such additions created or embellished a play sequence. Again, in order to establish a perspective from which to view the results reference is made to the available literature on normal children, (Nicolich, 1975, 1977; Bretherton et al., 1984; Shore et al., 1984). However, given procedural differences, the present subjects' performances were viewed in light of general normal developmental trends only.

Reliability

Reliability of transcription and analysis was determined for play measures by calculating the percent of agreements (i.e., dividing the number of agreements by the total number of items analyzed.) A research assistant independently segmented 2, 30 minute play sessions into episodes with 98% agreement. Ten percent of all play episodes were then scored for play level with 85% interjudge agreement.

Table 1: Symbolic Play Levels Over Six Month Period For Two Language Disordered Children

SESSION	SUBJECT I	SUBJECT II
1	4.1	4.2
2	4.1	4.1
3	4.2	4.2
4	4.2	4.2
5	5.1	4.2
6	5.1	5.1

TABLE 2: The Average Length (in seconds) of Symbolic Play Schemes at Three Symbolic Play Levels

Subject	Monthly Sessions	Age in Months	Total Session Time	Level 3 Mean Time	Range	Level 4 Mean Time	Range	Level 5 Mean Time	Range
I	1	23	—	—	—	—	—	—	—
	2	24	25:48	:23	(:02-:96)	:21	(:19-:28)	0	0
	3	25	23:31	:13	(:01-:37)	:49	(:08-:179)	0	0
	4	26	39:57	:18	(:02-:72)	:31	(:13-:50)	0	0
	5	27	39:1	:27	(:06-:103)	:106	(:29-:201)	:63	(:14-:106)
	6	28	23:48	:18	(:13-:23)	:84	(:18-:156)	:57	(-)
Average Mean Time and Range				**:20**	**(13-:27)**	**:58**	**(:21-:106)**	**:50**	**(:37-:63)**
II	1	26	—	—	—	—	—	—	—
	2	27	34:29	:22	(:06-:59)	:31	(:29-:33)	0	0
	3	28	37:53	:40	(:07-:172)	:34	(:25-:44)	:87	(:35-:141)
	4	29	26:31	:33	(:07-:200)	:41	(:21-:53)	:113	(:26-:200)
	5	30	—	—	—	—	—	—	—
	6	31	48:56	:33	(:02-:58)	:71	(:17-:198)	:120	(:36-:251)
Average Mean Time and Range				**:30**	**(:22-:40)**	**:44**	**(:31-:71)**	**:106**	**(:87-:120)**

Results

Analysis of Play Level

Results of the analysis of the symbolic play maturity level are depicted in Table 1 and reflect the developmental period between 22 and 31 months across the two children. The assigned play level for any session reflected the highest level of performance at that time. Both children progressed through the same levels of symbolic play in the sequence delineated by Nicolich (1975, 1977) for normal children. During the developmental period under investigation, there was little difference between the children in the assigned level and rate of development, even though Subject II was four months older. These individual rate differences were also similar to Nicolich's findings for normal subjects.

The difference between the children in this study and Nicolich's normal subjects was the age at which the levels of symbolic play were achieved. All of Nicolich's (1975, 1977) subjects reached the most advanced level by 26 months of age and 4 of 5 subjects had by at least 21 months. The children of this study were 27 and 31 months of age at the final observation period in this study and had not yet reached level 5.2 This finding of delayed progress through a similar sequence of development is consistent with other studies on symbolic play in language disordered children (Brown, Redmond, Bass, Liebergott, & Swope, 1975; Lovell et al., 1968; Williams, 1980).

Additionally, results revealed evidence of these children's common event knowledge. Between 22 and 31 months these language disordered children demonstrated knowledge of parallel roles (e.g., child combs own hair, then experimenters, then dolls) in their level 4.1 play. Additionally, their level 4.2 play behavior suggested understanding of a routine temporal order of actions (e.g., child rolls truck briefly, turns it over, "repairs" wheel with wrench, turns it over and continues rolling it). Finally, both knowledge of realistic use of objects and the beginning of more abstract object use (i.e., object substitution) was demonstrated in level 4.1 and 5.1 play, respectively.

Analyses of Play Characteristics

Diversity Index I: Duration of Symbolic Play Schemes and Sequences

Table 2 depicts the mean length of time of the subjects' symbolic play schemes at levels 3, 4, and 5 at each session. Between the developmental longitudinal period of 22 to 31 months of age, a gradual increase in duration of play schemes was revealed. This was also the case within any one play level across the period with the exception of level 4.

The duration of level 4 schemes and sequences slightly decreased. The dip at level 4 may be related to differences within each child. Subject I showed a marked increase in duration from level 3 to level 4, but plateaued on this measure during the few sessions she demonstrated level 5 play. Subject II demonstrated a different pattern. He showed a gradual increase in duration from level 3 to 4 but a marked increase to level 5.

The data from studies on normal children consistently report a steady significant increase in the duration of symbolic or pretend play with age during the period between 12 months and 6 years of age (Cole & LaVoie, 1985; Matthews, 1978; Nicolich, 1975; Power et al., 1985). In this general sense, the language disordered children of this study were consistent with the normal

Table 3: The Average Number of Play Schemes Occurring per Episode and Mean Length of Play Sequences

Subject	Monthly Sessions	Number of Symbolic Episodes	Total Single Schemes/ Episode	Mean & Range Of Single Schemes per Episode	Mean Length of Play Sequences Based on # of Schemes Combined
I	1	14	37	2.6 (1 - 6)	3.2
	2	11	17	1.5 (1 - 5)	2.0
	3	12	38	3.2 (1 - 16)	2.6
	4	13	28	2.3 (1 - 5)	2.4
	5	10	30	3.0 (1 - 9)	2.4
	6	6	16	2.6 (1 - 11)	3.2
Average Mean and Range				**2.9 (1.5-3.2)**	**2.6**
II	1	10	24	2.4 (1 - 8)	2.6
	2	12	16	1.3 (1 - 2)	2.5
	3	13	30	2.3 (1 - 6)	1.7
	4	8	23	2.6 (1 - 5)	1.7
	5	11	19	1.7 (1 - 4)	2.0
	6	9	42	4.2 (1 - 20)	2.0
Average Mean and Range				**2.4 (1.3-4.2)**	**2.1**

trend. However, they appeared to depart form the pattern of normal children when the magnitude of the increase is considered. Although duration gradually increased, even level 5 schemes were brief with the minimum average time being close to one minute and the maximum, just over two minutes. Further, in describing normal children, Nicolich (1978) has stated that as symbolic play becomes more advanced, one sequence could last up to 15 minutes. During the investigation period, the children of this study demonstrated symbolic maturity levels where advanced symbolic play such as Nicolich described, would be expected. Thus, play sequences of greater duration than revealed in this data would also be expected.

Diversity Index II: Mean Number of Play Schemes.

These analyses of diversity consisted of calculations of the mean number of play schemes in an episode and the mean length of play sequence (MLS). These means were calculated for each session, and then an average over all six sessions was determined. They are shown in Table 3.

The mean number of single schemes per episode did not systematically increase during the period under investigation. The average mean and range as shown in Table 3, reveal that both children were similar in the number of single schemes demonstrated in an episode.

The results of the mean length of play sequence (MLS) analysis also indicated no systematic increase across the 22-31 month age period for these language disordered children. Interestingly, the longest MLS was demonstrated by the youngest subject. Similar to the results on individual symbolic play schemes per episode, these language disordered children did not notably increase the length of their symbolic play sequences within the age range of 22 to 31 months.

General trends reported by Bretherton et al. (1984), indicate that a significant increase occurs between the ages of 20 and 28 months in the length of meaningfully sequenced play schemes. No such trend was evident in the present data. Nicolich's (1978) report of the behavior of normal children offers an additional perspective. She states that advances in symbolic play beyond the second year of life are characterized by play sequences lasting extended periods of time. This could only occur as a result of incorporating more schemes into the sequence, and hence, elaborating it. Whether considering individual schemes in an episode or MLS, which entails integration of schemes, these children did not increase the number of play schemes demonstrated during the experimental period. Specific examples of the language disordered children's restricted sequencing in play are presented in Appendix B.

Diversity Index III: Proportion of Self Repetition.

Table 4 shows the proportion of repeated, elaborated and newly introduced schemes for each subject in each session.

During the developmental period under investigation, these language disordered children engaged in high proportions of repetitive play. Concurrently, they demonstrated comparatively

Table 4: The Percentage of Repetition, Elaboration and Addition of New Symbolic Play Schemes

Subject	Session Monthly	Total Number Symbolic Schemes	Percent Repetitions	Percent Elaboration	Percent Addition of New Schemes
I	1	16	(6) 37.5%	(2) 12.5%	(8) 50%
	2	14	(12) 86%	(1) 7%	(1) 7%
	3	21	(16) 76%	(4) 19%	(1) 4%
	4	21	(16) 76%	(3) 14%	(2) 9.5%
	5	24	(20) 79%	(3) 18.5%	(1) 4%
	6	10	(9) 90%	(1) 10%	0
Average Percentage			**74%**	**12.5%**	**12%**
II	1	20	(10) 50%	(4) 20%	(6) 30%
	2	12	(5) 42%	(4) 33%	(9) 25%
	3	23	(17) 77%	(4) 18%	(2) 4.5%
	4	19	(15) 79%	(2) 10.5%	(2) 10.5%
	5	15	(13) 86%	0	(2) 7%
	6	26	(23) 88%	(2) 13%	(1) 4%
Average Percentage			**70.3%**	**15.7%**	**13.5%**

Combinations of schemes are counted as whole, not as individual schemes. Further, the number of schemes the percentage was based on is noted in the parenthesis.

little elaboration and introduction of new schemes into their repertoires. The percentage of new play schemes was highest during the initial session, as that was the first opportunity for any play scheme to be demonstrated. Considering only sessions two through six, the proportion of repetition of play schemes appeared consistent for Subjects I and II. That is, there was no apparent decrease in scheme repetition across the 22 to 31 month period represented by these language disordered children. Concurrently, there was a very slight increase in the elaboration and addition of schemes during the period. However, comparing these three proportions subsequent to the initial session, it is clear that repetition of familiar schemes greatly exceeded either of the other categories at all points during this period.

McCune-Nicolich (1981b) has stated that normal children through the second year of life do replay schemes from month-to-month. However, normal children elaborate those schemes as they replay them. The language disordered children in this study tended to replay the same schemes exactly, with very little elaboration. Examples of this behavior can also be found in Appendix B.

Discussion

The present study has provided a description of the development and character of symbolic play over the developmental period of 22 to 31 months for two language disordered children. The sequence of symbolic play development was found to be the same as that described for young normal children. However, during this period the language disordered children in this study progressed through the various levels at markedly later ages than reported for normal children. Further, the top of the play scale also was not reached during the period under investigation as has been reported for normal children. Thus, other studies (Brown et al., 1975; Lovell et al., 1968; Terrell et al., 1984) which found the language disordered child's level of symbolic play to be below age expectancy are supported.

Beyond this initial issue of sequence and rate of development, the language disordered child's knowledge of social relationships, that is, the knowledge of roles, objects, actions, and their relationships as part of communicative competence was investigated. From the levels of symbolic play achieved it was

determined that these children: (1) were able to represent at least two different roles (Levels 3, 4.1); (2) primarily required realistic use of objects in their pretend sequences, although rare occasions of object substitutions were noted (Levels 4.1, 5.1); and (3) were able to represent the routine temporal order of the actions constituting a common event (Level 4.2). Additional anlyses were conducted on these action schemes and sequences to examine particular characteristics. First, results revealed a slight increase in the duration of play schemes and sequences occurred across the developmental period. The upward trend is consistent with available normal data, however, the magnitude of the increase displayed by these language disordered children is less. The average symbolic play scheme lasted only a brief time, between one and two minutes. Even level 5 play schemes and sequences were brief at the most advanced age level. During the period between 22 and 31 months brevity of action in play appears characteristic of these language disordered children.

Second, results further revealed the average number of schemes demonstrated singularly within an episode or integrated in a sequence is limited, and this did not change appreciably during the period under investigation. The restrictions in number of schemes incorporated into a sequence is a marked departure from reported trends on normal children in this period (Bretherton et al., 1984). Such a restricted repertoire may reflect limitations in organization of symbolic play. Although these data were derived in a somewhat different manner, they do support the findings of Lovell et al. (1968), that the symbolic play of a group of language disordered children is less integrated, and hence less well organized.

One final measure of diversity further elucidates the character of symbolic play during the period of development represented by these language disordered children. The combined results of high proportions of repetition of familiar schemes and concurrent low proportions of elaborated and new schemes suggest that these children have limited symbolic play scheme repertoires. These data provide empirical support for the observation of Luria and Yudovich (1979) that "play of a creative character was rare and extremely monotonous, being repeated without variation" (p. 41). Further, these data support William's (1980) observation that her language disordered subjects did not appear to have many ideas to enact in symbolic play. In brief, between the ages of 22 and 31 months the language disordered children of this study demonstrated delayed symbolic play development. The quality of that symbolic play was diminished by restricted repertoires of symbolic play schemes, play schemes which were brief in nature, and by limited organization in play sequences.

What does symbolic play of this nature suggest about the language disordered child at this early point in development? The brevity, repetitiveness, and limited organization of their play may reflect limited nonlinguistic knowledge about roles, actions and objects, as well as limited ability to integrate and organize that knowledge. Stated otherwise, their repertoire of available common scripts may be restricted. Kagan (1974) in a discussion of normal infants suggested that a child might satiate and therefore terminate play because he/she had exhausted their available repertoire of responses. This could indeed be true for these language disordered children. The presence of nonlinguistic cognitive deficits in language disordered children of normal intellectual functioning is becoming well documented (Johnston & Ellis-Weismer, 1983; Johnston & Ramstad, 1983; Kahmi 1981).

Further, what may be the impact of restricted repertoire of scripts upon emerging developing communicative competence? As stated previously, a child's repertoire of common scripts form the bases for some types of successful peer interaction. To reiterate Nelson's and Gruendel's (1979) findings, preschool children are more likely and more easily able to maintain conversation if the topic is based on a common script. Thus, the potential for successful peer communication may be affected by a limited repertoire of scripts. Sachs, Goldman, & Chaille (1985) have also suggested that script knowledge contributes to later developing narrative abilities, an area of communicative competence with potential academic impact. Consequently, successful development of several aspects of communicative competence may be influenced by the restricted scriptal knowledge demonstrated in these children's symbolic play.

A discussion of symbolic play, the script knowledge it represents, and communicative competence would be incomplete without posing the reciprocal of the previous question. That is, what is the impact of the deficient communication abilities these children by definition demonstrate upon the development of symbolic play, and hence scriptal knowledge and social cognition. Language abilities assume an increasingly important role in the development of play. For example, level 5.2 on the play scale employed in this study entails such behaviors as verbal announcement of play plans, verbal creation of absent object (e.g., "milk", child drinking from empty cup), and animating objects (i.e., talking for a doll). Thus, verbal skill is necessary for this level of play to be achieved. At best, the language disordered children of this study will also develop this skill at a later point in time. However, given their linguistic limitations, this type of play may also be restricted. Further, when considering later developing cooperative play, children between two and five years of age actively construct play situations through verbal negotiation (Sachs, 1984). Language disordered children would be at a distinct disadvantage in such pretend play situations and, subsequently would not receive full developmental benefit from participating in cooperative play.

Given the potential dual impact of both nonlinguistic limitation and linguistic delays and deficits upon emerging communi-

cative competence, it is clinically important for us to look closely at the symbolic play of these children. We are justified in including an assessment of symbolic play in the diagnostic evaluation of language disordered children. By doing so, both linguistic and related nonlinguistic factors contributing to diminished communicative competence may be identified. Additionally, establishing a symbolic play level will assist in planning developmentally appropriate play contexts for intervention.

Finally, in considering the treatment implication of this work, is seems wise to assume that dual influences may affect aspects of communicative competence. Nonlinguistic restrictions in representation may effect both language and the creation of common scripts as revealed in symbolic play, delaying the development of both. Thus, if indicated by the outcome of the symbolic play assessment, we may include nonlinguistic goals of expanding the child's scripts in a comprehensive language treatment program. By developing a child's script repertoire we may be developing the shared knowledge base necessary for cooperative conversation. Additionally, structural linguistic deficits may affect the development of play and the scripts it reveals, by restricting the potential for elaboration, planning, and negotiation. Thus, developing the use of language to elaborate common event scripts in play may also be targeted as a goal to improve communicative competence.

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Appendix A

Play Observational Protocol (Adapted by Skararkis from Nicolich, 1975)

Symbolic Play	Piagetian Cognitive	Play Level & Description	Child's Behavior
Sensorimotor Stage IV	0	*Single or Combination of Toys* *Indiscriminate* - each toy is used in same way regardless of its characteristics *Investigative* - response which examines or explains characteristic of toy	
Stage IV	1	*Systematic Combination of Toys* Combinatorial play such as: nesting, stacking, carting or container play	
Stage V	2	*Gestural Naming* - shows understanding of object by recognitory action *Autosymbolic Scheme* - appropriate representation of self related activity	
Stage VI	3	*Representational Play*: A. Extends activity to other actors or receivers of action	
Pre-operational	3	B. Pretends at the activities of others (object or person)	
Pre-operational	4	1) Combination of Symbolic Games One game combining several actors or receivers of action	
		2) Several action patterns are combined in a sequence	
Pre-operational	5	1. *Planned Single Schemas, Symbolic Acts* Activities from levels 2 and 3 that are planned, i.e., verbally announced or particular toy is sought for inclusion in play a) Symbolic identification of one object with another b) Symbolic identification of the child's body with some other person or object	
Pre-operational		2. *Combinations with Planned Events* these are constructed of activities from levels 2-5 Play is elaborated and complex	

Appendix B

Examples of Restricted Sequencing and Repetition in the Play Behaviors of Two Language Disordered Children

SUBJECT I	SUBJECT II
Session 3	**Session 3**
Child picks up "tool box" takes out hammer pounds on basket and floor	Takes necklace out of basket, puts it around neck
Picks up pliers opens them tries to grab floor, puts it down	Takes glasses out of basket
Picks up wrench, puts it down	Necklace off
Picks up screwdriver rubs it on floor	Picks up toy iron drops it
Session 4	**Session 4**
Child grabs "tool box"	Takes necklace out puts it around neck
Takes out pliers sets them down	Puts glasses on
Takes hammer out pounds floor	Puts hat on
Takes out wrench pounds floors, sets it down	Takes coffee pot out of basket sets it down
Session 5	**Session 5**
Child picks up hammer, pounds table	Picks up necklace, puts it on
Picks up wrench pounds and turns it	Picks up toy plate, drops it
Picks up pliers opens and closes it pinches finger and my noise in it	
(Repeat several times)	
Picks up screwdriver pounds with it and turns it on table	