The theory of Intersubjectivity may explain aspects of Specific Language Impairment

Panormitsa Papakalodouka and Christina Papaeliou[8]

Abstract

This study aims to highlight the role of intersubjective communication in the manifestation of Specific Language Impairment (SLI), which has been considered as a modular psychological disorder of cognitive functions for language. Participants in our investigation were 5 children (4 boys and 1 girl) diagnosed with Expressive SLI (SLI-E) and 5 typically developing (TD) children matched for age (range 4 to 6 years, mean age 5 years), gender, visuo-spatial abilities and receptive language. Play behaviours were assessed from video recordings of spontaneous mother-child interactions in a semi-structured situation taking place at home. Results demonstrated that, compared to TD children, children with SLI-E exhibited significantly more spontaneous functional play, as well as more solitary play. On the other hand, children in the clinical group showed significantly less cooperative play and less pretend play. Moreover, while in TD children aspects of pretend play are positively correlated with aspects of language production, no such associations were detected in the SLI group. Thus, it is concluded that children with SLI may exhibit deficiencies in age-appropriate play behaviors, which in turn reveal difficulties in shared intentionality. These findings are accounted for by the Theory of Intersubjectivity (ToI), which contrasts with the Theory of Mind (ToM) explanation, and suggests that the development of language is based on the direct mutual understanding of intentions, purposes and feelings, as explored in play, and then, as a secondary process, on the sharing of arbitrary purposes regarding actions on objects, and their representation in speech.

Keywords: Specific Language Impairment, nonverbal communication, play, language production.

[8] Panormitsa Papakalodouka**,** Head of Special School Unit, Rhodes, Dodecanese. E-mail: titapast@gmail.com. Christina Papailiou, Associate Professor of Developmental Psychopathology and Language Disorders, Department of Preschool Education and Educational Design, School of Humanities, University of the Aegean. E-mail: papailiou@rhodes.aegean.gr

Introduction

Specific Language Impairment (SLI) is generally defined as a developmental disorder of language in the absence of obvious neurological damage, hearing deficits, severe environmental deprivation, mental retardation or any other developmental disorder (Bishop, 1992; Leonard, 1998; Tomblin, Records, Buckwalter, Zhang, Smith, and O'Brien, 1997). Other terms have also been used to label such children, including *developmental dysphasia*, *language impairment*, *language learning disability*, *developmental language disorder*, *delayed speech* and *deviant language* (Leonard, 1998).

SLI is defined negatively or by exclusion, and thus is considered modular in nature (van der Lely and Battell, 2003; van der Lely and Ullmann, 2001). However, it is nowadays demonstrated that the disorder is clearly not limited to language. Rather, the linguistic impairments co-occur with a number of non-linguistic deficits, including non-verbal communication and play (Bartak, Rutter, and Cox, 1975; Bishop, Chan, Adams, Hartley, and Weir, 2000). Farmer (2000) showed that children with SLI had lower ratings on social cognition and social competence than age– and language–matched typical controls. Moreover, children with SLI seem to have more difficulty in processing social–affective information and inferring the appropriate emotion in a specific event, while they also use less non–verbal communication than children with no language difficulties (Bishop et al., 2000; Ford and Milosky, 2003). Social difficulties observed in children with SLI are in many cases continued during adolescence and adulthood (Mawhood, Howlin, and Rutter, 2000).

Two classification systems, published independently, describe a subtype of language impairment in which expressive language is intact, but the social aspects of

language are impaired (Rapin and Allen, 1983; Bishop and Rosenbloom, 1987). Children with this clinical profile tend to be verbose, to have problems in understanding and producing connected discourse, and to give conversational responses that are socially inappropriate, tangential or stereotyped. The term *semantic-pragmatic disorder* was used to describe such a profile, though more recently Conti-Ramsden and Botting (1999) as well as Bishop (2000) have proposed the term *pragmatic language impairment* (PLI). Pragmatics is defined as the use of language, prosody, and gesture for the creation of meanings in a social context. In other words, pragmatics occupies the interface between linguistic, cognitive and social development (Bates, Camaioni, and Volterra, 1975). Although pragmatics may be logically and conceptually separable from the structural aspects of language, it seems that all areas of language are interdependent.

Deficits in communicative abilities characterizing PLI constitute also a core symptom of autism. Thus, soon after the category of *semantic-pragmatic disorder* was described, several authors challenged its status, arguing that the children who receive this diagnosis exhibit many of the characteristics of autistic disorder (Gagnon, Schwartz, Martin, Dell, and Saffran, 1997). Bishop (1998, 2000) suggested that the profile of PLI is intermediate between SLI and core autism. Several studies now demonstrate that the clinical features of autism and SLI overlap considerably. The children with autism, and their family members, can have language impairments typical of SLI, while the children with SLI and their family members can have social impairments typical of autism (Bartak et al., 1975; Folstein, Santangelo, Gilman, Piven, and Landa, 1999). Kjelgaard and Tager-Flusberg, 2001; Paul and Cohen, 1984).

A reliable way of assessing the ability for intersubjective communication in children with SLI is to study play behaviours, and especially pretend play. Pretend play can be considered as one of the earliest forms of shared cooperative actions. In pretend

play the individual participants act intentionally with a mutual responsiveness and understanding of the other's intentional actions. Pretend play as well as other types of cooperative activity, rely on an innate capacity for intimate and efficient inter-mental coupling and expression of sympathy in affections (Trevarthen, 1994). In this vein, Rescorla and Goossens (1992) compared toddlers with SLI with an age–matched group of TD children and found that the clinical group is more likely to spend more time in solitary or functional play (i.e., relate two objects in a conventional manner) and less time in advanced pretend play than their peers. Similarly, Roth and Clark (1987) reported that children with SLI (mean age 6;7) performed significantly more poorly on a symbolic play test than the language–matched control group (mean age 2;9). That is, children with SLI did not sequence their pretend play behaviors (e.g., put a doll to bed and cover it with a blanket). Moreover, they were less able to structure and perform pretend play actions around a theme, as requested by the experimenter, than the TD children (e.g., *Show me how Mommy drives the car,* or *Let's make a birthday party for the doll*. *What do we need?*). Also, children with SLI spent significantly more time in non–play behaviors than TD children.

DeKroon, Kyte and Johnson (2002) compared three children with SLI when playing with familiar peers either with or without SLI. According to their findings, the quality and quantity of social pretend play varied with the different play partners. In SLI dyads children were often content to engage in solitary or parallel play. When they started to interact with each other, they showed a limited variety of play themes. Difficulties in initiating and maintaining role play sequences often resulted in abandoning the play ideas and engaging in solitary play. On the other hand, children with SLI engaged in more play themes when playing with TD children. However, these themes were most often initiated by the TD peers. Additionally, children with SLI relied

on the peers to structure, maintain and expand the play themes. Problems in initiating and maintaining social pretend play may be accounted for by deficient language skills. Nevertheless, language did not seem to be a strong predictor of social pretend play (DeKroon et al., 2002), which is consistent with previous studies (Leonard, 1998).

Method

Participants

In the present study participated 5 children with SLI (4 boys and 1 girl) and 5 TD toddlers (4 boys and 1 girl), aged between 4 and 6 years, who were matched for age, receptive language, and perceptual and motor skills. The children with SLI were recruited from speech-therapy centers and had been diagnosed clinically by experienced speech therapists. However, none of these children had received early intervention services for more than 3 months. Also, none of the participants had been hospitalized within the previous 6 months. All participants were free of severe sensory or motor deficits or behavioural problems as measured by the Child Behaviour Checklist (CBCL), and all attended mainstream public preschool.

All participants came from middle-class Greek-speaking families. Mothers' age in the SLI group ranged from 29–41 years (mean age 34.8 years) and mothers' age in the TD group ranged from 32–40 years (mean age 35.6 years). Four mothers in the SLI group have completed high school and 1 has a Technological Education degree. On the other hand, 2 mothers in the TD group have completed high school, 1 has a Technological Education degree and 2 have a University degree. Written parental permission was attained before the children's participation in the study.

Materials

Language abilities were assessed with the Diagnostic Verbal IQ Test (DVIQ) for Greek preschool and school age children (Stavrakaki and Tsimpli, 2000). The DVIQ Test is a standardized measure used to assess receptive and expressive language abilities in children and adolescents 3 to 15 years old. The VIQ uses black and white pictures and consists of the following subtests: (a) Vocabulary Production (VP): assesses the ability to name objects or actions presented in pictures, (b) Grammar-Comprehension (GC): assesses the ability to understand sentences by choosing which picture from three options represents a spoken sentence, (c) Grammar Production (GP): assesses the ability to complete a partially formed sentence by supplying a final word that has a proper morphological form, according to a previously presented paradigm, and (d) Recall of Syntactic Structures (RSS): assesses the ability to repeat complex sentences accurately.

Visuo-spatial abilities were assessed with the Criterion of Perceptual Functioning (CPF) (Stogiannidou, 2008). The CPF assesses perceptual and motor skills as well as executive and neurological functioning in children and adolescents 4 to 16 years.

Results demonstrated that children with SLI exhibited significantly lower scores in Grammar Production and in Recall of Syntactic Structures (*), while they did not seem to differ significantly from TD children in Vocabulary Production, Grammar Comprehension, Visuo-Spatial Coordination and Visual Discrimination (Table 1). Therefore, the two groups are considered to be well matched in terms of language comprehension, vocabulary production and visuo-spatial abilities. Play performance was assessed from video recordings of spontaneous mother-child interactions in a semi-structured situation taking place at home.

Table 1: Performance on CPF and DVIQ.

	Median			
	SLI	**TD**	**U**	**p**
Chronological age (months)	65.00	63.00	11.00	0.75
Visuospatial-coordination	16.00	18.00	9.50	0.52
Visual discrimination	52.00	34.00	12.50	1.00
Grammar comprehension	23.00	23.00	12.00	0.92
Vocabulary production	15.00	14.00	12.00	0.92
Grammar production*	10.00	14.00	1.00	0.02
Recall of syntactic structures*	44.00	51.00	0.00	0.01

Procedure

All children were visited at their home 4 times during the month. Home environment is considerate to be more appropriate for eliciting a representative sample of the child's spontaneous behaviors, compared to the laboratory setting. In the first two visits each child was administered the CPF and the DVIQ, while the mother completed a questionnaire on demographic information and the child's medical background, and the CBCL. In the last two visits children were video-recorded while playing with their mother in a semi-structured situation with toys provided by the researcher. The set of toys included two different-sized dolls, doll furniture, a tea set, a telephone, a brush and a mirror, a school bus with little people in it, blocks, toy animals, a book, and a wind-up mechanical toy.

Mothers were asked to play with their child as they would normally do, introducing all the toys provided. Each play session lasted approximately 30 minutes. This process yielded a total of 1 hour of video-recording for each child.

The coding scheme for play analysis was based on previous schemes (Pellegrini, 2001; Tizard et al., 1976) and was further expanded from an inductive analysis of the video-recordings.

Types of play: (a) *Solitary*: child plays alone, independently of mother, (b) *Parallel*: child plays close to mother and may use the same objects without trying to interact with her or to relate her activity with mother's activity, (c) *Associative*: mother and child create something together (e.g. building a town with blocks). There is no play scenario or role differentiation, (d) *Cooperative*: mother and child act according to a negotiated play scenario and differentiated roles.

Developmental stages of play: (a) *Functional play*: The child uses play materials in their conventional ways, (b) *Constructive play*: The child uses objects, such as toys, to build something no one has seen before. It encourages children to use their imagination and creativity, (c) *Pretend play*: The child creates an 'as if' situation and acts out a character in role play or a story that is logical and sequential.

Elements of pretend play: (a) self as agent, (b) other as agent, (c) real object, (d) substitute object, (e) imaginary object, (f) simple scene, (g) multiple scenes.

Results

As is frequently the case with atypical groups, the data showed large standard deviations. Therefore, group differences were calculated using the nonparametric test Mann-Whitney U. Tables 2, 3 and 4 present the median number of times each behavior was observed in each group and the level of significance in the Mann-Whitney U.

According to the findings, children with SLI displayed significantly more solitary play than TD children. Moreover, they showed significantly more associative play and less

cooperative play (*), compared to TD children. No group differences were found in parallel play (Table 2).

Table 2: Group performance in different types of play.

Types of play	**Median**			
	SLI	**TD**	**U**	**P**
Solitary play	10	0	0.00	<0.01
Parallel play	12	6	6.00	0.22
Associative*	122	68	2.00	0.03
Cooperative*	16	76	3.00	0.05

Results on developmental stages of play are presented in Table 3. It is found that children with SLI exhibit significantly more functional play than TD children, but significantly less pretend play, compared to the control group. No group differences were found in constructive play.

Table 3: Group performance in developmental stages of play.

Stages of play	**Median**			
	SLI	**TD**	**U**	**p**
Functional	103	42	0.00	0.01
Constructive	16	34	4.00	0.09
Pretend	44	96	3.00	0.05

As regards elements of pretend play, it is shown that children with SLI are involved less often in pretend play consisting of a single scene, than TD children, while, in contrast to TD children, they do not use imaginary objects at all (Table 4).

Table 4: Group performance in different elements of pretend play.

Elements of pretend play	**Median**			
	SLI	**TD**	**U**	**p**
Self as agent	19	37	4.00	0.09
Other as agent	20	38	6.50	0.22
Real object	34	67	4.00	0.09
Substitute object	1	10	4.00	0.09
Imaginary object*	0	5	0.00	0.01
Simple scene*	39	64	3.00	0.05
Multiple scene	10	17	6.50	0.22

Correlations between measures of different aspects of language production and elements of pretend play were also calculated for each group, using the Pearson *r* correlation coefficient. Among TD children production of morpho-syntax showed significant positive correlations with the ability to use substitute objects as well as the ability to create multiple scenes during pretend play. On the other hand, among children with SLI no positive correlations were observed between vocabulary or morpho-syntax production and elements of pretend play. However, it was found that in the clinical group vocabulary production was significantly negatively correlated with the ability to use substitute objects, while morpho-syntax production was significantly negatively correlated with the self as agent (Tables 5 and 6).

Table 5: Correlation between language production and different elements of pretend play in TD children**.**

	Vocabulary Production	Production morpho-syntax
Self as agent	0.171	- 0.482
Other as agent	- 0.542	0.729
Real object	- 0.560	0.225
Substitute object	0.167	0.957*
Imaginary object	- 0.455	- 0.371
Simple scene	- 0.750	0.127
Multiple scene	0.203	0.873*

Table 6: Correlation between language production and different elements of pretend play in children with SLI.

	Vocabulary Production	Production morpho-syntax
Self as agent	- 0.039	- 0.901*
Other as agent	0.044	0.407
Real object	0.344	- 0.267
Substitute object	- 0.927*	- 0.419
Imaginary object	----	----
Simple scene	- 0.348	- 0.518
Multiple scene	0.711	0.204

Discussion

We have investigated the type and quality of play in toddlers with SLI in comparison to TD toddlers matched for chronological age, visuo-spatial skills and receptive language, and we found significant differences. In particular, toddlers with SLI are more likely to manipulate objects during solitary play than their TD peers. Also, compared to TD children, children with SLI demonstrated more associative play but less cooperative play. In associative play the communicative partners are involved in the same task, but there is neither division of roles nor organization of the activity around a negotiated goal; also communicative partners do not subordinate their individual interests to that of the group. In cooperative play communicative partners have to be interested in a shared goal and organize their activity in order to achieve it, as they define and negotiate their roles. The SLI children showed less of this interest. In addition, children with SLI tend to spend more time in functional play and less time in sophisticated pretend play than their peers. These results are in accordance with the results of previous relevant studies (DeKroon et al., 2001; Fujiki et al., 2001; Leonard, 1998; Rescorla and Goossens, 1992; Roth and Clark, 1987).

Some authors suggest that language deficits of children with SLI may be primary, and that they limit the children's ability to express intentions in play (Casby, 1997). Most studies that investigated the relationship between play and language were conducted with young toddlers. Cross–sectional studies across the second year are more consistent with the alternative interpretation, that communication of intentions in play could be crucially important for the development of language (Lyytinen et al., 1999; McCune, 1995; Ungerer and Sigman, 1984). On the other hand, it seems more difficult to detect an association between pretend play and language in preschoolers (Astington and Jenkins, 1995; Youngblade and Dunn, 1995). Nevertheless, as children begin to

engage in role play with their peers language certainly becomes increasingly important (Andresen, 2005).

Studies in typical and atypical samples support the idea that repeated practice using symbols in pretend play may contribute to language development (Ervin-Trip, 1991; Miller and Almon, 2009). Intervention studies also show that training children in pretend play or exposing them to other meaningful actions may improve their language abilities (Christakis et al., 2007; Smilansky, 1968). Although in TD children aspects of pretend play and language develop in concert and may share a common ground, a different pattern of associations emerges in children with SLI. In this group language skills do not necessarily predict play performance; i.e., language scores can be relatively high and yet children with SLI may experience unsuccessful play interactions (DeKroon et al., 2002; Leonard, 1998). Moreover, the present study and the study carried out by Stitch (2010) found no associations between aspects of pretend play and certain language abilities in preschoolers with SLI.

In agreement with previous relevant studies, we have demonstrated that preschoolers with SLI, apart from their problems in language development, exhibit deficiencies in the ability for cooperative interaction without words (Bartak et al., 1975; Bishop, 1998, 2000; Folstein et al., 1999; Kjelgaard and Tager-Flusberg, 2001; Paul and Cohen, 1984). Some authors have attempted to account for this finding by applying the model of Theory of Mind (ToM) (Tager-Flusberg and Sullivan, 2000). According to this model, social intelligence comprises two components by which mental states are represented: a primary 'social-perceptual' component and a higher order 'social-cognitive' component. The social-perceptual component refers to the immediate intuitive representation of a person's changing mental state, based on information directly available in faces, voices, body posture and movement. This representation is

the result of the interaction between innately specified mechanisms for attending to human social stimuli and social information that is obtained through continued interactions with people.

By the end of the first year the social-perceptual component makes infants capable of interpreting more complex intentions and emotional states of other people and judging what another person is attending to or is planning to do. The social-cognitive component of the ToM builds on the earlier emerging social-perceptual component. This component is involved in making mental state inferences that depend on integrating information not only from perceptual cues but also from more complex sequences of events over time. The social-cognitive component is interpreted as being more closely linked to other cognitive or 'information-processing' systems, defined as 'working memory' and language intelligence. This leads to attribution of the deficiencies in pretend play and language development observed in SLI to impairments in the social-cognitive component of the ToM, since pretend play and language rely on the 'understanding' of others' intentions when they are acting on objects. Such an interpretation has also been proposed to explain the behavior of children with autism (Baron–Cohen, 1995; Firth, 1988).

However, the ToM model suggests that the development of the social-cognitive component requires and comes *after* the development of language, especially mastery of the use of communication verbs, and verbs referring to mental states, which begin to appear after the age of 3 years (Tager–Flusberg, 2005; Tager–Flusberg and Sullivan, 2000). Moreover, it is proposed that the relationship between ToM and pretend play is not unidirectional, but reciprocal. That is, in young preschoolers the imaginative cognition of pretend play promotes ToM development, whereas in older children ToM development promotes pretend play (Astington and Jenkins, 1995; Youngblade and

Dunn, 1995). In this theoretical framework, studies of the behavior of children with SLI focus on the effect of certain language abilities on the development of ToM (Farrant, Fletcher and Maybery, 2006; Farrar et al., 2009; Miller, 2001, 2004). No association between ToM and pretend play has been found in this group, in contrast to TD children (Stich, 2010). A widely accepted view is that language, ToM, and pretend play are all based on common cognitive abilities, such as information processing skills or representational abilities (Astington et al., 1988). Accordingly it is hypothesized that children with SLI experience a general representational deficit, which could explain the observed problems in both pretend play and language (Leonard, 1998).

It is now well documented that several forms of cognitive processes or intelligent behavior are based on a unique human ability for a creative shared intentionality. Shared intentionality is the ability to participate with others in collaborative activities and to form joint goals by negotiation, which can be achieved through joint attention, common assignment of roles in each individual, self-reflective inferences about others' and one's own intentional states as well as coordination of individual perspectives. This fundamental process of social coordination makes possible the creation of symbols and language (Tomasello, 2014; Tomasello and Carpenter, 2007). Thus, one may conclude that deficiencies in language and pretend play observed in children with SLI may be accounted for by a deficit in the ability for shared intentionality. Although Tomasello's idea of shared intentionality proposes grounds for the interpretation of the origins of language and other symbolic activities as well as the possible causes of any problems manifested in this domain, the nature and development of this ability are not adequately explained. Moreover, Tomasello's 'cognitivist theory' neglects abundant evidence of intention sharing, and of sensitive engagement with other's emotions, in infants under 9 months of age (Reddy, 2008).

Deficits exhibited by children with SLI in pretend play and language may be explained by the alternative Theory of Intersubjectivity (Trevarthen, 1982; 1994). In contrast to the ToM model, the Theory of Intersubjectivity (ToI) provides empirical support for the view that shared purposes regarding actions, as these are expressed, both in direct person-to-person engagements, and in conventional use of tools and imaginative use of toys in pretend play, constitute foundations for the development of language (Trevarthen, 1994; Reddy, 2008). Moreover, the ToI insists that the ability to share intentions and feelings about objects is part of a primary ability to perceive the motives that generate social stimuli in interpersonal communication. These abilities grow as a continuum, the development of the former depends on the development of the latter, and both are based on intrinsic motives for communication that are transformed as the infant grows older towards increasingly intricate, precise and selective attunement with the intentions, attentions and feelings of a responsive partner (Trevarthen and Aitken, 2001). The infant's ability to understand the other's emotionality changes from a simple interest in expression at birth, to a sensitivity to the reciprocity of emotions at 2 months, to a more complex management of affects at 6 months, and then, at 9 months, to a more pronounced interest in exploring specific emotional reactions and relating them to external targets (Trevarthen and Reddy, 2007). Similarly, an understanding of the other's communicative intentions is changing from a recognition of communicativeness and its absence or appropriateness at 2 months, to a recognition of invitations to join in provocative and imaginative games at 6 months, to a recognition of directives, commands and prohibitions at 9 months (Trevarthen, 1994; Reddy, 2008). At this age an infant exhibits a new initiative to tune in with the intentions and interests of a partner in joint exploration and use of objects with 'secondary intersubjectivity' in 'person-person-object awareness' (Hubley and Trevarthen, 1979; Trevarthen and

Hubley, 1978). This ability forms the basis for a creative imagination of roles, actions, and tools that become increasingly arbitrary or symbolic.

Conclusion

It is now well documented that apart from their problems in language development, children with SLI exhibit difficulties in domains related to cooperative communication such as pretend play. Following the Theory of Intersubjectivity these difficulties may be explained as a more general deficit in intrinsic motives and emotional intelligence (Panksepp, 2007) for cooperative communication. However, in order to support this hypothesis more studies are needed, which will need to focus on the associations between aspects of the purposeful and affective impulses for cooperative communication and language in larger samples, as well as in further detailed studies of single selected cases in rich, natural circumstances, without restrictive theoretical presuppositions, and through critical age-related changes.

References

Andresen, H. (2005). Role play and language development in the preschool years. *Culture and Psychology*, *11*, 387-414.

Astington, J. W., & Jenkins, J. M. (1995). Theory of mind development and social understanding. *Cognition and Emotion, 9,* 151-165.

Astington, J. W., Harris, P. L., & Olson, D. R. (Eds.). (1988). *Developing Theories of Mind.* Cambridge: University Press.

Baron-Cohen, S. (1995). *Mind Blindness: An Essay on Autism and Theory of Mind*. Cambridge, Mass.: MIT Press.

Bartak, L., Rutter, M., & Cox, A. (1975). A comparative study of infantile autism and specific development receptive language disorder. I. The children. *British Journal of Psychiatry*, *126*, 127–145.

Bates, E., Camaioni, L., & Volterra, V. (1975).The acquisition of performatives prior to speech. *Merrill Palmer Quarterly, 21*, 205-226.

Bishop, D.V. M., & Adams, C. (1992). Comprehension problems in children with specific language impairment: Literal and inferential meaning. *Journal of Speech and Hearing Research, 35*, 119-129.

Bishop, D. V. M. (2000). Pragmatic language impairment: A correlate of SLI, a distinct subgroup, or part of the autistic continuum? In D. V. M. Bishop & L. B. Leonard (Eds.), *Speech and Language Impairments in Children* (pp. 99-113). Hove: Psychology Press.

Bishop, D.V. M., Chan, J., Adams, C., Hartley, J., & Weir, F. (2000). Conversational responsiveness in specific language impairment: Evidence of disproportionate pragmatic difficulties in a subset of children. *Development and Psychopathology, 12*, 177-199.

Bishop, D. V. M., & Rosenbloom, L. (1987). Classification of childhood language disorders. In W. Yule & M. Rutter (Eds.), *Language Development and Disorders* (pp. 16-41). London: Mac Keith Press.

Christakis, D. A., Zimmerman, F. J., & Garrison, M. M. (2007). Effect of block play on language acquisition and attention in toddlers: A pilot randomized controlled trial. *Archives of Pediatrics and Adolescent Medicine*, *161*, 967–971.

Conti-Ramsden, G., & Botting, N. (1999). Classification of children with specific language impairment: Longitudinal considerations. *Journal of Speech, Language, and Hearing Research*, *42*, 1195–1204.

DeKroon, D. M. A., Kyte, C. S., & Johnson, C. J. (2002). Partner influences on the social pretend play of children with language impairments. *Language, Speech, and Hearing Services in Schools, 33*, 253-267.

Ervin-Tripp, S. E. (1991). Play in language development. In B. E. Scales, M. E. Almy, A. E. Nicolopoulou & S. E. Ervin-Tripp (Eds.), *Play and the Social Context of Development in Early Care and Education* (pp. 84-97). New York, NY: Teachers College Press.

Farrant, B. M., Fletcher, J., & Maybery, M. T. (2006). Specific language impairment, theory of mind, and visual perspective taking: Evidence for simulation theory and the developmental role of language. *Child Development*, *77*, 1842-1853.

Farrar, M. J., Johnson, B., Tompkins, V., Easters, M., Zilisi-Medus, A., & Benigno, J. P. (2009). Language and theory of mind in preschool children with specific language impairment. *Journal of Communication Disorders*, *42*, 428-441.

Farmer, M. (2000). Language and social cognition in children with specific language impairment. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *41*, 627–636.

Folstein, S. E., Santangelo, S. L., Gilman, S. E., Piven, J., & Landa, R. (1999). Predictors of cognitive test patterns in autism families. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *40*, 1117–1128.

Fujiki, M., Brinton, B., Isaacson, T., & Summers, C. (2001). Social behaviors of children with language impairment on the playground: A pilot study. *Language, Speech and Hearing Services in Schools, 32,* 101-113.

Gagnon, D.A., Schwartz, M. E, Martin, N., Dell, G. S., & Saffran, E. M. (1997). The origins of form-related paraphasias in aphasic naming. *Brain and Language*, *59*, 450-472.

Hubley, P. & Trevarthen C. (1979). Sharing a task in infancy. In I. Uzgiris (Ed.) *Social Interaction During Infancy, New Directions for Child Development* (pp. 57-80). San Francisco: Jossey-Bass.

Kjelgaard, M., & Tager-Flusberg, H. (2001). An investigation of language impairment in autism: Implications for genetic subgroups. *Language and Cognitive Processes*, 16, 287–308.

Leonard, L. B. (1998). *Children with Specific Language Impairment.* Cambridge, MA: MIT.

Lyytinen, P., Laakso, M. L., Poikkeus, A. M., & Rita, N. (1999). The development and predictive relations of play and language across the second year. *Scandinavian Journal of Psychology*, *40*, 177–186.

Mawhood, L., Howlin, P., & Rutter, M. (2000). Autism and developmental receptive language disorder – a comparative follow-up in early adult life. II. Social, behavioral and psychiatric outcomes. *Journal of Child Psychology and Psychiatry*, *41*, 561–578.

McCune, L. (1995). A normative study of representational play in the transition to language. *Developmental Psychology, 31,* 198–206.

Miller, E., & Almon, J. (2009). *Crisis in the Kindergarden*. College Park, MD: Alliance for Childhood.

Miller, C. A. (2001). False belief understanding in children with specific language impairment. *Journal of Communication Disorders*, *34*, 73-86.

Miller, C. A. (2004). False belief and sentence complement performance in children with specific language impairment. *International Journal of Language and Communication Disorders*, *39*, 191-213.

Panksepp, J. (2007). Affective consciousness. In M. Velman & S. Schneider (Eds.), *A Companion to Consciousness* (pp. 114-129). Oxford: Blackwells.

Paul, R., & Cohen, D. J. (1984). Outcomes of severe disorders of language acquisition. *Journal of Autism and Developmental Disorders*, *14*, 405–421.

Reddy, V. (2008). *How Infants Know Minds*. Cambridge MA: Harvard University Press.

Rescorla, L., & Goossens, M. (1992). Symbolic play development in toddlers with expressive specific language impairment (SLI-E). *Journal of Speech and Hearing Research*, *35*, 1290-1302.

Rapin, I., & Allen, D. (1983). Developmental language disorders: Nosologic considerations. In U. Kirk (Ed.), *Neuropsychology of Language, Reading and Spelling* (pp. 155-184). New York: Academic Press.

Roth, F. P., & Clark, D. M. (1987). Symbolic play and social participation abilities of language impaired and normally developing children. *Journal of Speech and Hearing Disorders*, *52*, 17-29.

Smilansky, S. (1968). *The Effects of Sociodramatic Play on Disadvantaged Preschool Children*. New York, NY: Wiley.

Tager-Flusberg, H. (2005). What neurodevelopmental disorders can reveal about cognitive architecture: The example of Theory of Mind. In P. Carruthers, S. Laurence & S. Stich (Eds.), *The Innate Mind: Structure and Contents* (pp. 272-288). New York, NY: Oxford University Press.

Tager-Flusberg, H., & Sullivan, K. (2000). A componential view of theory of mind: Evidence from Williams syndrome. *Cognition*, *76*, 59–89.

Tizard, B., Philips, J., & Plewis, J. (1976). Play in preschool centers: Play measures and their relation to age, sex and IQ. *Journal of Child Psychology and Psychiatry, 17,* 251-264.

Tomasello, M., & Carpenter, M. (2007). Shared intentionality. *Developmental Science, 10 (1)*, 121-125.

Tomblin, J. B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). Prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language, and Hearing Research*, *40*, 1245-1260.

Trevarthen, C. (1982).The primary motives for cooperative understanding. In G. Butterworth & P. Light (Eds.), *Social Cognition: Studies of the Development of Understanding* (pp. 77-109). Brighton: Harvester Press.

Trevarthen, C. (1994). Infant semiosis. In W. Nöth (Ed.), *Origins of Semiosis: Sign Evolution in Nature and Culture (Approaches to Semiotics)* (pp. 219-252). Berlin: Mouton de Gruyter.

Trevarthen, C., & Aitken, K.J. (2001). Infant intersubjectivity: Research, theory, and clinical applications. *Journal of Child Psychology and Psychiatry,* Vol. 42, No. 1, 3-48.

Trevarthen C., & Hubley, P. (1978). Secondary intersubjectivity: Confidence, confiding and acts of meaning in the first year. In A. Lock (Ed.), *Action, Gesture and Symbol: The Emergence of Language* (pp. 183-229). London: Academic Press.

Trevarthen, C., & Reddy, V. (2007). Consciousness in infants. In M. Velman & S. Schneider (Eds.), *A Companion to Consciousness* (pp. 41-57). Oxford: Blackwells.

Ungerer, J. A., & Sigman, M. (1981). Symbolic play and language comprehension in autisticchildren. *Journal of the American Academy of Child Psychiatry*, *20*, 318–337.

van der Lely, H., & Battell, J. (2003). Wh-movement in children with grammatical SLI: A test of the RDDR hypothesis. *Language, 79,* 153-181.

van der Lely, H. K. J., & Ullman, M. T. (2001). Past tense morphology in specifically language impaired and normally developing children. *Language and Cognitive Processes, 16*, 177-217.

Youngblade, L. M., & Dunn, J. (1995). Individual differences in young children's pretend play with mother and sibling: Links to relationships and understanding of other people's feelings and beliefs. *Child Development, 66,* 1472-1492.

Η θεωρία της Διυποκειμενικότητας πιθανόν να εξηγεί χαρακτηριστικά της Ειδικής Γλωσσικής Διαταραχής

Πανορμίτσα Παπακαλοδούκα και Χριστίνα Παπαηλιού

Περίληψη

Η παρούσα μελέτη στοχεύει στη διερεύνηση του ρόλου της διυποκειμενικής επικοινωνίας στην εκδήλωση της Ειδικής Γλωσσικής Διαταραχής (ΕΓΔ), η οποία παραδοσιακά θεωρείται ως μία διαταραχή των γνωστικών λειτουργιών που σχετίζονται αποκλειστικά και μόνον με τη γλώσσα. Στη μελέτη συμμετείχαν 5 παιδιά (4 αγόρια και 1 κορίτσι) με διάγνωση ΕΓΔ Έκφρασης (ΕΓΔ-Ε) και 5 Τυπικά Αναπτυσσόμενα (ΤΑ) παιδιά αντίστοιχης ηλικίας, φύλου, οπτικο-χωρικών ικανοτήτων και ικανοτήτων κατανόησης της γλώσσας. Οι συμπεριφορές παιχνιδιού αξιολογήθηκαν σε μαγνητοσκοπήσεις αυθόρμητων αλληλεπιδράσεων μητέρας – παιδιού σε ημι-δομημένη συνθήκη, η οποία έλαβε χώρα στο σπίτι. Σύμφωνα με τα αποτελέσματα, σε σύγκριση με τα ΤΑ παιδιά, τα παιδιά με ΕΓΔ-Ε εκδήλωσαν στατιστικά σημαντικά συχνότερα λειτουργικό παιχνίδι καθώς και μοναχικό παιχνίδι. Από την άλλη πλευρά, τα παιδιά της κλινικής ομάδας εκδήλωσαν στατιστικά σημαντικά λιγότερο συνεργατικό παιχνίδι και παιχνίδι προσποίησης. Επιπλέον, ενώ στα ΤΑ παιδιά ορισμένες διαστάσεις του παιχνιδιού προσποίησης παρουσιάζουν στατιστικά σημαντική θετική συσχέτιση με διαστάσεις της παραγωγής της γλώσσας, τέτοιου είδους συσχετίσεις δεν διαπιστώθηκαν στα παιδιά με ΕΓΔ-Ε. Συνεπώς, φαίνεται ότι τα παιδιά με ΕΓΔ εκδηλώνουν ελλείμματα σε συμπεριφορές παιχνιδιού που αντιστοιχούν στην ηλικία τους, τα οποία υποδηλώνουν δυσκολίες στο διυποκειμενικό μοίρασμα προθέσεων και συναισθημάτων. Τα ευρήματα αυτά ερμηνεύονται από τη Θεωρία της Διυποκειμενικότητας, σύμφωνα με την οποία η ανάπτυξη της γλώσσας βασίζεται στην άμεση αμοιβαία κατανόηση, προθέσεων, στόχων και συναισθημάτων, τα οποία αποκαλύπτονται στο παιχνίδι, και ακολούθως στο μοίρασμα αυθαίρετων στόχων οι οποίοι σχετίζονται με ενέργειες σε αντικείμενα. Πρόκειται για θέση που έρχεται σε αντίθεση με τη Θεωρία του Νου.

Λέξεις κλειδιά: Ειδική Γλωσσική Διαταραχή, μη λεκτική επικοινωνία, παιχνίδι, παραγωγή λόγου.