

# Children's Sociodramatic Play: The Imaginative Level and its Narrative Quality

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## Abstract:

The study examined children's sociodramatic play, hypothesizing that higher imaginal play object-use leads to higher level of play narratives' structure and communication. Two steps were performed to examine this hypothesis: (a) an intervention method in situations other than play; and (b) correlating the level of imaginative objects use in sociodramatic play, and the level of its narrative, measuring two aspects: (1) The quality of the play's narrative: Its structure, its complexity, and the level of its sophistication; and (2) the level of interactive communication used to construct the narrative. The research examined natural sociodramatic play situations in 16 kindergartens with children of different SES (socio-economic status) backgrounds. Four experimental and 4 control groups of each of two SES levels were sampled. The results indicated that the level of the imaginative object use performance over time, impressively improved in all experimental groups in comparison with the control groups, indicating that the imaginative level of object use was highly correlated with the level of the play narrative and communication. This was found in plays with more complex components and higher structure of the narratives, and more effective communication, in the experimental as compared to control groups, in both low- and medium-SES background. The latter's standard of play was superior as compared to the former, and the gap between groups expanded over time. The results of the study point to the important role of imagination in pretense play narratives and strengthens the potency of narrative theory approach in explaining children's fantasy in play.

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**Keywords:** Sociodramatic play, object-use, narrative structure, imagination, SES background.

## 1. Introduction

Two main approaches characterize the research of pretend play plots' structure. One approach explains pretend plots as real-life event representation scripts, the other as a narrative form based both on reality and imagination (Glaubman & Glaubman, 2022). The present work analyzes both approaches, and reports a study of sociodramatic play plots, pointing to their imaginative features, and their narrative form and structure.

## 2. Theoretical Lenses

### 2.1 Sociodramatic Play as a Negotiated Narrative

Theories of mind, or naive psychology, assume "that our theory of mind constitutes of a basic human knowledge system" (Butterworth, Harris, Leslie & Wellman, 1991:1; Leslie, Friedman & German, 2004). The mind is conceptualized as an interconnected network of thought, feelings, desires, ideas, and images. These are seen to be composed of sets of descriptions about how ours and other people's minds work, what can be expected from life situations and from social interactions. We conceptualize sets to explain behaviors we perform or observe, or to predict other people's actions by means of our understanding of their beliefs, thoughts, knowledge, wishes, expectations etc. (Astington, 1990; Astington & Gopnik, 1991; Perner, 1988). These understandings and explanations are dependent upon cultural contexts (Bruner, 1990; Leslie, Friedman & German, 2004).

Theories of mind relate to intimate connections between speech acts and mental acts. These connections are evidenced through communication utterances that target children's understanding of aspects of their mental and social functioning, and the relationship among messages, meanings, and thoughts (Butterworth et al., 1991). A child's psychological knowledge should be seen not as an abstract construction, but rather as something related to the child's coherence and organization of personal experience. The child, lacking theories' explanatory power defines self-experience based on rough empirical generalizations of introspective evidence (Astington & Gopnik, 1991). These restructured understandings of common events by children are explained by some theorists in forms of script-like generalizations (Bretherton, 1984, 1989; Nelson, 1981; Schank & Ableson, 1977; Farrar & Maag, 2002). Others explain it in terms of narratives (Bruner, 1986, 1990; Eckler & Weininger, 1989; Tompkins, Farrar & Montgomery, 2019; Westby, 1986).

According to the script theory, representations of socially organized events are shared scripts by children interacting in play. The scripts are sequences of actions and talks, composed of event-centered sequences that are related temporally and causally as a mutual topic of attention and communication (Duveen & Lloyd, 1988; Fromberg, 2001; Nelson & Seidman, 1984). The young children organize their knowledge of daily world events in terms of event schemes or scripts. These basic building blocks of representations serve as components that are socially reconstructed and manipulated to create shared sequences in pretense play (see e.g., Bretherton,

1989; Duveen & Lloyd, 1988; Eiser, 1989; French, Lucariello, Seidman & Nelson, 1984; Nelson & Gruendel, 1981; Pellegrini, 1985a; Schank, 1982). These shared representational event schemes of children's everyday life experiences (Bretherton, 1989), afford their mutual construction of play scripts if they share mutual knowledge of the sequence of events of the scripted topic. Nelson & Seidman (1984) suggest that children have specific scripts for play in different contexts.

According to this approach, children's pretense play protocols are seen to provide a valid way of determining the children's scriptal knowledge and understanding (Bretherton, 1989; Eiser, 1989; Pellegrini, 1985a). Thus, we may conclude that the script theory is an experiential one. It emphasizes real events and tries to explain how real events are organized in memory. This theory provides a sound conceptual frame for those who believe that children play what they have experienced, and therefore evaluation of the scripts in pretense play would be for level of complexity of the episodes (Pellegrini, 1985a; Wolf & Grollman, 1982), and the particular scripts as a play theme are dependent upon the presence of objects that serve to bring forth these play themes (Nelson & Seidman 1984). Thus, play objects are perceived at their literal meaning as represented in the child's memory. Bretherton (1989), based on Schank's (1982) revision of the script theory, and on Johnson-Laired (1983) work, explains the bizarre and fantastic elements in pretense play in the framework of a flexible event-based representational system. The building blocks of representation stem from reprocessed, partitioned, cross-indexed, summarized, and abstracted episodic or autobiographical memories. These "small building blocks" are organized into new schemas that may provide playful creation of counterfactual worlds, and novel sequences (Monighan, 2015; Nourot, 2015). It is therefore expected that according to the script theory play plots would involve the use of literal objects and will represent reality with little imaginative transformations in which the small elements of reality would be detectable.

Narrative theory claims that a narrative should conform to logical consistency, but it need not be true. It may violate reality and even use arbitrary behaviors or roles for the sake of drama. What typifies narrative is that it deals with human or human-like intention and action, their condition, and consequences (Bruner, 1986). The story is a condensation of life that can be interpreted only as a structural coherent whole unit. It is qualified by imaginative and affective responses to experience. A story is the human means for meaning making (Westby, 1986). Thus, the narrative does not represent a sequence of events as such, but rather the personal meaning of these events.

The narrative approach to pretense play is based upon the striking similarity between pretense play and the structural aspects of narratives (Bretherton, 1989; Eckler & Weininger, 1989; Galda, 1984; Gardner, 1980; Pellegrini, 1985a; Wolf & Grollman 1982; Wolf, Rygh & Altshuler, 1984). The narrative's basic components are clearly identified in pretense play, especially in highly scripted protocols of fantasy enactment (Pellegrini, 1985a, 1985b). These components are sequential structure and dramatic quality in a composite made up of an actor, an action, a goal, a scene, an instrument and a trouble or problem, all acting simultaneously in a dual landscape of reality and the inner mental world of the players (Bruner, 1990). This approach to the analysis of children's play protocols provides a method for identifying the form and structure of their narrative mode of thinking (Nicolopoulou et al., 2014, 2015).

Thus, according to the narrative theory the child experience is edited and revised to preserve dramatic tensions. Narratives give shape and meaning to events well beyond literal sequences (Nicolopoulou et al., 2015). Narrative preserve and highlights the social and emotional meaning of events (Malloy, 2021). The child will assign a role to the object in line with the plot, not necessarily being led by its literal value. The play narrative will evolve with the negotiations for meaning by the actors (Bruner, 1990; Malloy, 2021), whom each arrives at the play scene with his/her own inner meanings. And it is these joint meanings that find their way into pretend episodes. It is expected therefore, that imagination would be salient in pretense play, and the play objects will serve the players' intentions as expressed in their collaborative evolving narrative (Glaubman, Kashi & Koresh, 2001; Grindheim, 2020; Malloy, 2021; Winther-Lindqvist, 2009).

The structural view of pretense play posited by the script theory approach has been criticized for its limitations. Eckler & Weininger (1989) specified that it was not found amenable to developmental analysis; its validity is dependent on social pretense, thus lacking applicability to describe the organization of solitary play; its narrow specificity makes it applicable only to particular situations; and - the main point from our point of view - it ignores the overriding coherent whole observed in pretense play (Pinto, Tarci & Bigozzi, 2016). Fein (1987) adds the claim that script instantiation per se cannot account for the richness of representations encountered so frequently in pretense play, especially the creation of the fantastic, the emotionally charged, and the personal themes.

These arguments raise a doubt whether script theory can satisfactorily describe the full range of traits of pretense play. Bruner (1990) furthers this doubt, suggesting another view that emphasizes the full qualification of the narrative. This view will be referred to later. In his debate, Bruner argues against some of the explanations mentioned above for describing the script. He argues that one cannot accept the explanation of narrative as "being determined by the order of events in life" (p. 46). He also rejects claims that narrative represents "life in action - an elaboration and amelioration of what happened" (p.46), or that narrative is "the suspension of the referential claim of ordinary language - that is, without obligation to 'match' a world of extralinguistic reality" (p. 46).

Script theory explains the emerging of the knowledge components upon which the child builds his/her ideas. This is the knowledge base that draws upon mundane personal experiences. But before this knowledge base can be manipulated and enacted upon in pretense play, it must be decontextualized from the immediate practical affairs, uncoupling the pretend signifiers from the representational system (Fein, 1987). Fein claims that the symbolic structures that "define the content and sequences of play" (p.299), can explain the origin of the bizarre and fantastic ideas in play and the effect upon the affective domain (Fein, 1987, 1989). It seems that script theory is not sufficient for analyzing the full richness of pretense play. Fein's explanation can take us further

along this course of thought. Yet, a more comprehensive view of the principles upon which pretense play components are organized in the child's mind need a further step of elaboration. The narrative approach may offer us a frame of reference to satisfy this need.

## 2.2 Sociodramatic Play as Narrative

After criticizing the script approach, Bruner posts an alternative approach, referring to narration as an interpretation - "a symbolic schema for mediation between the sign and the world - an interpretant that exists at some higher level than the word or the sentence, in the realm of the discourse itself" (pp. 46-7). Fein (1987) uses the same wording to describe pretense play: "pretense reflects an interpretive-expressive system designed to manipulate representations of emotionally consequential aspects of living" (p. 302).

Narratives, according to child psychologists, reflect the nature of young children's minds (Chafe, 1990), as regards cognition, memory, and affection. The notion posited is that the mind is governed by the nature of the narrative that the child forms in order to create meaning (Westby, 1986), based upon his/her personal experience, rather than by a logical or categorical ability to organize thoughts, as psychologists like Piaget or Vygotsky had claimed (Astington & Gopnik, 1991; Bruner, 1986, 1990; de Haan, 2007; Olson, 1990;

Sutton-Smith, 1986; Winther-Lindqvist, 2009). Bruner claims that "Narrative structure is even inherent in the praxis of social interaction before it achieves linguistic expression". Moreover, narrative "determines the order of priority in which grammatical forms are mastered by the young child" (1990:77).

Play plots have been used in research studies of play. Pellegrini (1985) analyzed pretense play plots using Wolf & Grollman's (1982) tool (Johnson, Christie & Yawkey, 1987). Their analysis is based upon the script theory approach, dealing mainly with the organizational form of the plot components in their taxonomic hierarchy, i.e., each level contains simple and complex organizations, from simple scheme level through event level to complex-contoured episodes. This structure is based upon the assumption that the complexity level of episodes in children's play plots represent their mind's script organization adequate to their development.

Eckler & Weininger (1989), relating also to the narrative aspects of pretense play, analyzed the structure of play plots as narratives of solitary players in laboratory conditions. They used the story grammar tool (Mandler & Johnson, 1977; Rumelhart, 1977) to afford a deeper analysis of the form of narratives. However, as Westby (1986) claims, story grammars "cannot explain the totality of narrative development because they only focus on the cognitive ability to abstract narrative structure and ignore the functional and aesthetic aspects of narratives" (p. v). They also neglect the emotive (Fein, 1989), and the interpretive aspects of narratives (Bruner, 1990).

It seems, therefore, that in order to analyze pretense play plots as narratives we need to use several measures, each covering a different aspect of narrative features, so as to afford a wider coverage of the narrative various aspects (Pinto, Tarci & Bigozzi, 2016).

## 2.3 Pretense Play Narratives and Imagination

Narratives are differentiated as to those being simply of a narrative mode of thinking and the "good stories, gripping drama" which are "the imaginative application of the narrative mode" (Bruner, 1986, p. 13). According to this view, imagination is the critical virtue of narratives. It forms the capability necessary for making narrative production possible and is the basis for explaining its quality.

Sociodramatic play reflects a common understanding of the world by the members of the playing group (Malloy, 2021; Nicolopoulou et al., 2014). The product is a joint narrative in the form of a screenplay, produced by continual communicative negotiations during the play. The narrative quality is analyzed by its form and complexity of structure (Applebee, 1978; Glaubman, 1992; Kroll & Anson, 1984; Mandler, 1984; Mandler & Johnson, 1977).

When playing, each of the players delivers a personal message of meaning expressed in symbols that are unique to this individual. Yet the situation and circumstances for transmitting the messages are of the actual realistic surrounding, which limits and may constrain the possibilities of communicating meaning. As mentioned above, however, the action responses of the players can overcome these limits, by using mental processes that generate playful symbolic representations that depart from their immediate reality, and even prior experience (Fein, 1987, 1989; Frijda, 1988; Nicolopoulou et al., 2014). The action responses of the players in sociodramatic play may be considered to consist of components ranging between two main poles: The domain of realistic play, and the domain of the nonreal-imaginative-"what if" sphere. The domain of the realistic play consists of imitation and of make-believe – i.e., simulated nonliterate behavior. In the realistic domain the child creates conditions that are "like" or "as if" the reality of life, while the domain of the nonreal-imaginative-"what if" sphere of play affords the child an opportunity to overcome the constraints of time and locale reality and allows for the enrichment of real daily life events. Noting the connection between reality and imagination (Glaubman & Glaubman, 2022) explains how the complexity of the play narrative depends upon the children's imaginative power (Johnson, Christie & Yawkey, 1987; Roskos, 1988; Weininger, 1986), and reflects the range of their play content (Fine, 1989; Garvey, 1977; Winther-Lindqvist, 2009). However, a joint narrative will not evolve without a mutual understanding of the messages delivered through interactive communication.

Fein (1989), claims that mentally, the movement from reality to the imaginative, is explained through the properties of acting within two levels of the mind. One that serves the child's developing empirical knowledge base, by representations of the immediate reality and experience, and the second is the mind that serves to detach these representations from the objective reality onto the level of meta-representations (Leslie, 1987), permitting the child to understand pretense and similar mental phenomena. This makes possible the modification or neutralization of emotions and the development of their mastery (Ariel, 1984; Fein, 1989). The parallel narrative

property used for this end is Bruner's (1990), "dual landscape" feature, where "events and actions in a putative "real world" occur concurrently with mental events in the consciousness of the protagonists... for stories have to do with how protagonists interpret things, what things mean to them" (Bruner, 1990, p. 51). However, Bretherton (1989) rejects this dual perception of the symbol system and insists that it is a difference "in the manner in which the representational system is used" (p. 390), where in the play mode there will be fewer editing restrictions.

Observing pretense play in daily kindergarten situations reveals that children differ in their play involvement and narrative production. Some are super players (Fein, 1987, 1989), some play ordinarily, and others' play is rather dull, or hardly exists. The latter come mostly - but not always - from lower socio-economic status groups. Their play is lacking in quality and in quantity of basic sociodramatic play categories (Ageliki et al., 2014; Caitlin, 2020; Smilansky, 1968; Shefatya, 1990; Smilansky & Shefatya, 1990).

Children can act symbolically on a fantastic level of play, only when they are free from the associative connotations of the toys and props of the immediate environment, and of their physical features (Almy, Monighan, Scales & Van Hoorn, 1984; Christie & Johnson, 1983; Piaget, 1962; Smith, Gore & Vollstedt, 1986). The study of the mode of use of props and objects has been found to be central in child's play, especially when dealing with children of different socio-economic status background (Glaubman, Kashi & Koresh, 2001; Johnson et al., 1987; Malloy, 2021; Smilansky, 1968; Shefatya, 1990; Smilansky & Shefatya, 1990; Tompkins, Farrar & Montgomery, 2019). Object use was found at its lowest level as realistic, mostly by children of lower SES (socio-economic-status) level, and highest, as make-believe, by children of medium-high SES levels.

Following El'Konin (2005), and Malloy (2021) recommendations, the present study was designed to focus intervention efforts on elevating imaginative power of children, in the usage of objects. In choosing intervention context we referred to Christie who claimed that intervention should take place out of actual play contexts (Christie, 1991), in order to let children have freedom and control over their play; and also to Westby (1986) that asserted that "narrative research should assist teachers in moving students... to an understanding of their world - to make them meaning makers" (1986, p. vi). Respecting these essential needs of children, and Bruner's (1990), assertion that meaning is achieved through negotiation, teachers were instructed to leave children's play natural and untouched and use other kindergarten contexts for intervention.

The purpose of this study was twofold – to examine the connections between imaginative level of object use and narrative quality of sociodramatic play plots, testing the hypothesis that improving the imaginative power of objects use by children in social interactions, will produce a better narrative quality and higher communicative competencies of their sociodramatic play; and to examine the efficiency of an intervention method that was devised to achieve this end by elevating the imaginative level of play object use. Testing these from various, cognitive, emotive, and communicative aspects, as reflected in measures of structure and complexity of sociodramatic play narratives.

It was hypothesized, therefore, that intervening - outside the frame of play - to enhance the imaginative power of children of low- and of medium-socio-economic status background, will improve their sociodramatic play narratives in quantity and quality, as measured by the various measures of narrative. To control for possible relevant personal variables, measures were taken to control for the level of creativity, (based on Fein's, 1987, allegation of the connection between creativity and the affective symbolic system), socio-economic status and intelligence of the participants (based on Smilansky's, 1968, 1990 findings).

Three relevant dimensions of sociodramatic play were examined:

- (1) imagination - the level of imaginative object-use.
- (2) narrative - its structure, organization, complexity, and content.
- (3) communication - levels of metaplay, of emotive grammar within play, and of language usage.

### 3. Method

#### 3.1 Sample

Sixteen Kindergartens of children from medium- and lower- socio-economic status backgrounds took part in the study. Four experimental and 4 control groups of each socio-economic status type were sampled. The total of 349 children participated in small playing groups, ranging from 3 to 6 participants in one group at a time. Of these, 174 were of low-SES and 175 of medium-SES background. Each of the 16 Kindergartens was observed 3 times in the pre- and 3 times in the post-intervention, each observation included one plot. Altogether 96 observations, of which 48 were performed in the pre- and 48 in the post-intervention. Observations in each Kindergarten included only children aged between 4.8 and 5.8 years old, involved in spontaneous play in play corners of the Kindergarten. Note that since observations were taken of plots produced by playing groups, all reference to sample numbers in the study are of sociodramatic play plots played by groups.

Thus, all analyses are by plots, not by subjects, and are calculated as 48 in the Repeated Measures ANOVAs.

The kindergarten classes were randomly sampled from two education zones, but the actual participation in experimental or control group depended on the teacher's willingness to learn and perform the intervention method.

All play plots had to pass two basic pre-set threshold standards in order to enter the analysis: The Smilansky's (Smilansky & Shefatya, 1990), definition of sociodramatic play, including all 6 components, and Howes's (Howes, 1980) highest 2 features defining social play interaction.

### 3.2 Measures<sup>2</sup>

Imagination - the Level of Imaginative Object-Use (LIOU) (Glaubman, 1992; Johnson et al., 1987; Smilansky & Shefatyah, 1990). The range of imaginative level was from lowest - real-concrete use of objects, (i.e., where a cup and saucer were enacted as containers to drink from); to substitution level of use (where a cup could be used to represent anything, i.e., a container, a hat or even a driving wheel); to the imaginative level, where non-existing "objects" were imagined, (i.e., an "as-if object" of no substance, was used in the plot as any object needed for use) (Johnson et al., 1987; Smilansky & Shefatyah, 1990). Other considerations were - whether the usage was pre-planned or associative, and how attached were the play ideas to the actual objects in the play area (Glaubman, 1992). These yielded 3 separate sub-scales of 5 points each.

1. Narrative analysis, using three measures, of which the first two were designed initially to analyze written literary compositions:
  - 1) Cognitive Structure (CoS) of the narrative as measured by the Story Grammar (Eckler & Weininger, 1989; Mandler & Johnson, 1977; Rumelhart, 1977). This consists of 6 sub-scales: the setting, simple reactions, complex reactions, types of ending, number of episodes, and types of connections between episodes.
  - 2) Organization of Form (OoF) - a six point scale of organization and complexity of the narrative (Applebee, 1978), from low - collection of disconnected events, to high - well organized narrative.
  - 3) Complexity of Pretense Play Plot (CoPPP) (Glaubman, 1992). A measure specifically designed to measure the complexity of script features of pretense play, consisting of 14 sub-scales, in 4 dimensions:
    - a) Organization and level of ideas (5 sub-scales)
    - b) Flexibility and complexity (4 sub-scales)
    - c) Originality and innovativeness (3 sub-scales)
    - d) Fluency (2 sub-scales).

Each of the first three dimensions (Organization, Flexibility, and Originality), yielded a score between 1-lowest and 5-highest, for each of the sub-scales. Adding these scores of the 12 sub-scales, together, yielded a total score ranging from 12 to 60. The final last dimension yields accumulating score number of fluency of words and T-units (the smallest meaningful unit of speech). Thus the final score is generated by adding all scores. Because of the difference of score range in the various sub-scales, statistical analysis was done using Z scores.

2. Ordinarity-Exceptional-Fantasy Scale (OEFS) (Fein, 1989), a 5-point scale measure of level of content, from mundane to the fantastic.
  3. Communication level, comprised of three scales:
    - 1) Metaplay (Williamson & Silvern, 1991), comprised of 6 sub-scales of interaction the players use without the play to direct the ongoing play.
    - 2) Emotive Grammar, the interaction within play (Fein, 1989). Analyses cycles of interaction within the play, each cycle comprised of 3 main components: initiation, reaction, and result.
    - 3) Language Usage - a measure of the fluency of language used in the narrative (Smilansky & Shefatya, 1990; Torrance, 1966; Varble, 1990), including number of words, number of T-units used, vocabulary level, verbs, adjectives and pronouns.
- The purpose of measuring the level of language usage was to find out whether intervention of imaginative quality, which may cause children to play longer in time and to produce longer episodes, might also affect the richness of their language.
4. Covariant control measures - Four variables were controlled statistically by co-variance:
    - 1) Socio-Economic Status (SES), as measured by Rand (1975)
    - 2) Intelligence, as measured by the Peabody Picture Vocabulary Test - Revised (PPVT-R) (Dunn & Dunn, 1981)
    - 3) Creativity, as measured by the Alternative Uses Test (Guilford, 1959)
    - 4) Number of years of teacher's experience as kindergarten teacher.

### 3.3 Reliability

All play scripts were analyzed double-blinded. Reliability of scoring between two pairs of scorers was measured twice for each measure. These are reported as inter-scorer reliability:

1. For LIOU - Level of Imaginative Object-Use: Inter-scorer reliability:  $r = .88$ , range:  $r = .70$  to  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .89$ , for posttest:  $\alpha = .95$ .
2. Narrative analysis:
  - 1) For CoS - Cognitive Structure: Inter-scorer reliability:  $r = .92$ , range:  $r = .89$  to  $r = .94$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .89$ , for posttest:  $\alpha = .94$ .
  - 2) For OoF - Organization of Form: Inter-scorer reliability  $r = .88$ , range:  $r = .83$  to  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .88$ , for posttest:  $\alpha = .95$ .
  - 3) For CoPPP - Complexity of Pretense Play Plot: Inter-scorer reliability  $r = .93$ , range:  $r = .91$  to  $r = .95$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .88$ , for posttest:  $\alpha = .94$ .
3. For OEFS- Ordinarity- Exceptional-Fantasy Scale: Inter-scorer reliability  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .90$ , for posttest:  $\alpha = .96$ .

4. For Metaplay: Inter-scorer reliability  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .92$ , for posttest:  $\alpha = .94$ .
5. For Emotive Grammar: Inter-scorer reliability  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .92$ , for posttest:  $\alpha = .94$ .
6. For Language Usage: Inter-scorer reliability  $r = .91$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .89$ , for posttest:  $\alpha = .93$ .
7. For Creativity: Inter-scorer reliability  $r = .94$ , range:  $r = .83$  to  $r = 1.00$ . Cronbach Coefficient Alpha for Standard Variables - for pretest:  $\alpha = .84$ , for posttest:  $\alpha = .82$ .

### 3.4 Procedure

The intervention plan consisted of four stages (see appendix 1), integrated into the teaching activities of regular class sessions, in small groups and with the whole class. Teachers were instructed to strictly avoid any adult intervention in the natural course of play, in play corners or during play time (unless children's safety was at stake).

Structured intervention continued for 3 months, including 8 sessions per group and 8 sessions with the whole class. The researchers met with the teachers in six general meetings, 3 joint meetings of experimental and control teachers, discussing general knowledge about play and play interventions, especially emphasizing the importance of sociodramatic play. Three more meetings were held separately with each group of teachers, aimed at the experimental group for mutual learning and clarifying of the specific intervention guidelines, and for the control for general play enrichment. In between meetings the researchers visited the schools to collect data, to observe the teacher's interventions and to demonstrate or give extra guidance when needed.

Observations of sociodramatic play, for both experimental and control groups, and individual creativity measures were taken before intervention - as a base line - and after three months of intervention. Three observations in each kindergarten before- and three observations after-intervention. Observations were taken by tape-recording and by writing full reports of everything that was going on, speech and actions of children playing, through a whole play session, including descriptions of play objects and their exact ways of usage. The length of play sessions was varied, following the natural course of the play set by the children. No time limit was set. Each session was then transcribed, combining data from both sources.

### 4. Results

Each play transcription was divided into separate small units of speech and actions. Each unit written on separate sequentially numbered lines. All further analyses were referenced to these numbers. (See Appendix 2 for an example).

All measures were analyzed by the SAS statistical package. All means and standard deviations were compared by Z-score, because of differences in the actual range of scales. MANOVA (Multivariate Analysis of Variance) of all measures are reported: pretest  $F(6,35)=6.51$ ,  $p<.001$  for SES, and  $F(6,35)=5.58$ ,  $p<.001$  for Groups; posttest  $F(6,35)=4.11$ ,  $p<.01$  for SES, and  $F(6,35)=26.63$ ,  $p<.001$  for Groups; in addition, an interaction of  $F(6,35)=3.44$ ,  $p<.01$  was found for SES\*Groups. Meaning that the groups were significantly different before and after the intervention, before – based on their SES background that matched their significantly different play level, and after – based on SES and play level, that did not match, as prevailed in the interaction between these variables. The results for all narrative measures of play observations are presented in the following two sequential tables, 1a and 1b. The first table, 1a, presents means and standard deviations for the specified measures, in a factorial design ( $2 * 2 * 2$ ): low- and medium-SES, by intervention (control and experimental), by time (pre- and post-intervention), followed by the second table, 1b, presenting the results of a 3 way analyses of covariance where time (for pre- and post-intervention) was analyzed by repeated measures. Covariance was computed to control for SES, IQ (PPVT-R), Creativity and teacher's experience, in both pre- and posttests.

TABLE 1A: Means and Standard Deviations (in Z-scores) \* for Pretense Play Measures N (of Plots) = 121

Measures		Low - SES				Medium - SES			
		Control		Experimental		Control		Experimental	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
Imaginative	M	<b>-0.89</b>	<b>-0.67</b>	<b>-0.67</b>	<b>1.90</b>	<b>.95</b>	<b>.61</b>	<b>1.12</b>	<b>3.24</b>
Object Use	sd	.38	.45	.67	1.0	.78	.53	1.17	1.0
Cognitive	M	<b>-0.64</b>	<b>-0.69</b>	<b>-1.02</b>	<b>1.14</b>	<b>.88</b>	<b>1.21</b>	<b>.79</b>	<b>6.44</b>
Structure	sd	.37	.33	.36	1.02	.80	1.13	.54	.98
Organization	M	<b>-0.78</b>	<b>-0.91</b>	<b>-0.90</b>	<b>1.57</b>	<b>.79</b>	<b>.79</b>	<b>.92</b>	<b>4.04</b>
of Form	sd	.45	.00	.00	1.41	.45	1.56	.90	1.46
Complexity of	M	<b>-0.60</b>	<b>-0.71</b>	<b>-0.88</b>	<b>.31</b>	<b>.24</b>	<b>.12</b>	<b>-0.20</b>	<b>2.21</b>
Pretense Plots	sd	.17	.16	.18	.76	.34	.47	.29	.60
Ordinariness -	M	<b>-0.40</b>	<b>-0.52</b>	<b>-1.00</b>	<b>.78</b>	<b>.79</b>	<b>.79</b>	<b>.79</b>	<b>2.10</b>
Exceptional	sd	.74	.70	.00	.65	.89	1.24	.89	.82
Metaplay	M	<b>-0.93</b>	<b>-1.18</b>	<b>-0.93</b>	<b>.13</b>	<b>.14</b>	<b>.99</b>	<b>.11</b>	<b>2.20</b>
	sd	.20	.36	.21	.38	.18	.32	.24	.44
Emotive	M	<b>-0.62</b>	<b>-0.77</b>	<b>-0.80</b>	<b>.11</b>	<b>-0.06</b>	<b>.37</b>	<b>-0.10</b>	<b>2.28</b>
Grammar	sd	.11	.30	.11	.32	.10	.27	.13	.37
Language	M	<b>-0.08</b>	<b>-0.29</b>	<b>-0.60</b>	<b>1.26</b>	<b>1.22</b>	<b>.93</b>	<b>1.06</b>	<b>4.37</b>
Usage	sd	.30	.21	.29	1.13	.56	.71	1.70	1.34

\* The analyses are in Z-scores because of different ranges of the various measures.

Table 1b: Analyses of Variance and Repeated Measures for Pretense Play Measures Controlled for IQ, SES, Creativity and Teacher Experience\*

Measures	Pretest		Posttest		Interactions		Repeated Measures over Time	
	Var	F (7,47)	Var	F (7,47)	Vars	F (7,47)	Vars	F (3,40)
Imaginative	SES	8.4**	SES	4.9*			T*Grp	65.5***
Object Use			IQ	4.2*			T*SES	4.1*
			Grp	69.1***				
			Cre	5.2*				
Cognitive	SES	19.1***	SES	17.1***	SES*Grp	20.7***	T*Grp	46.2***
Structure			Grp	131.3***			T*SES*Grp	20.7***
Organization	SES	14.1***	SES	4.4*			T*Grp	38.1***
of Form			Grp	43.5***				
Complexity of	SES	17.3***	SES	11.1**			T*Grp	27.3***
Play Plot	Grp	19.0***	Grp	77.6***			T*SES*Grp	9.8**
Ordinariness -	SES	5.5*	SES	11.6**			T	4.6*
Exceptional	Grp	3.0*	Grp	10.6***			T*Grp	8.8***
							T*SES	7.1**
Metaplay	Grp	3.8*	Grp	11.9***			T*Grp	9.1***
Emotive	Grp	5.6**	Grp	16.8***			T	4.5*
Grammar	Cre	4.0*					T*Grp	18.4***
	TExp	9.3**					T*Cre	5.3*
							T*TExp	5.8*
Language	SES	7.0*	Grp	63.2***	SES*Grp	7.1*	T	6.4*
Usage							T*Grp	40.7***
							T*SES*Grp	4.1*

\*=p<.05 \*\*=p<.01 \*\*\*=p<.001

\* Total N of plots observed was 121. Only 96 of those were analyzed in the repeated measures ANOVA, where the same children were observed in pre- and post-intervention. These were analyzed as 48 in the repeated measures ANOVA.

Cre = Creativity

TExp = Teacher's Experience

Grp = Intervention Groups

IQ = PPVT-R Test

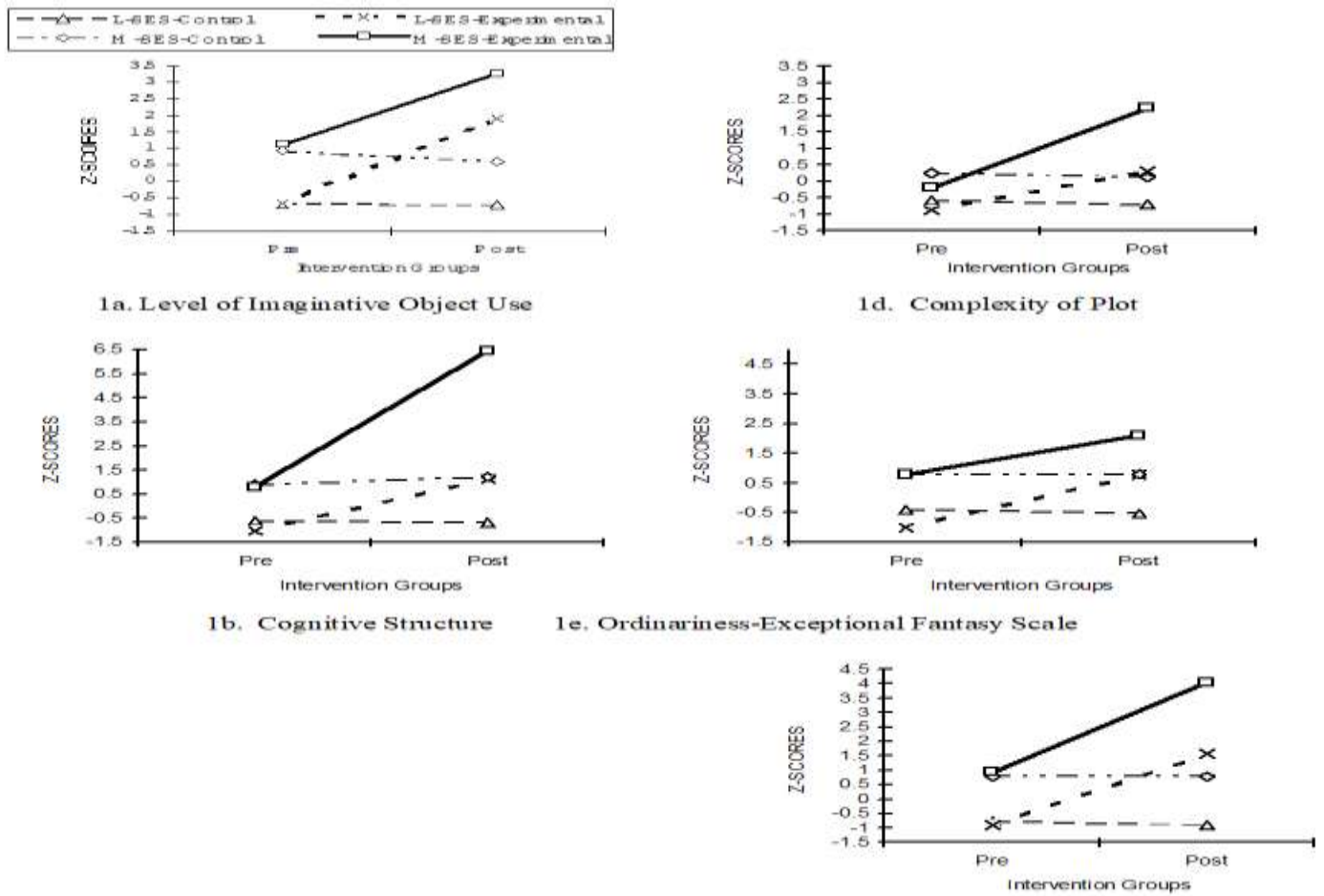
SES = Socio Economic Status

T = Time

Var = Variable

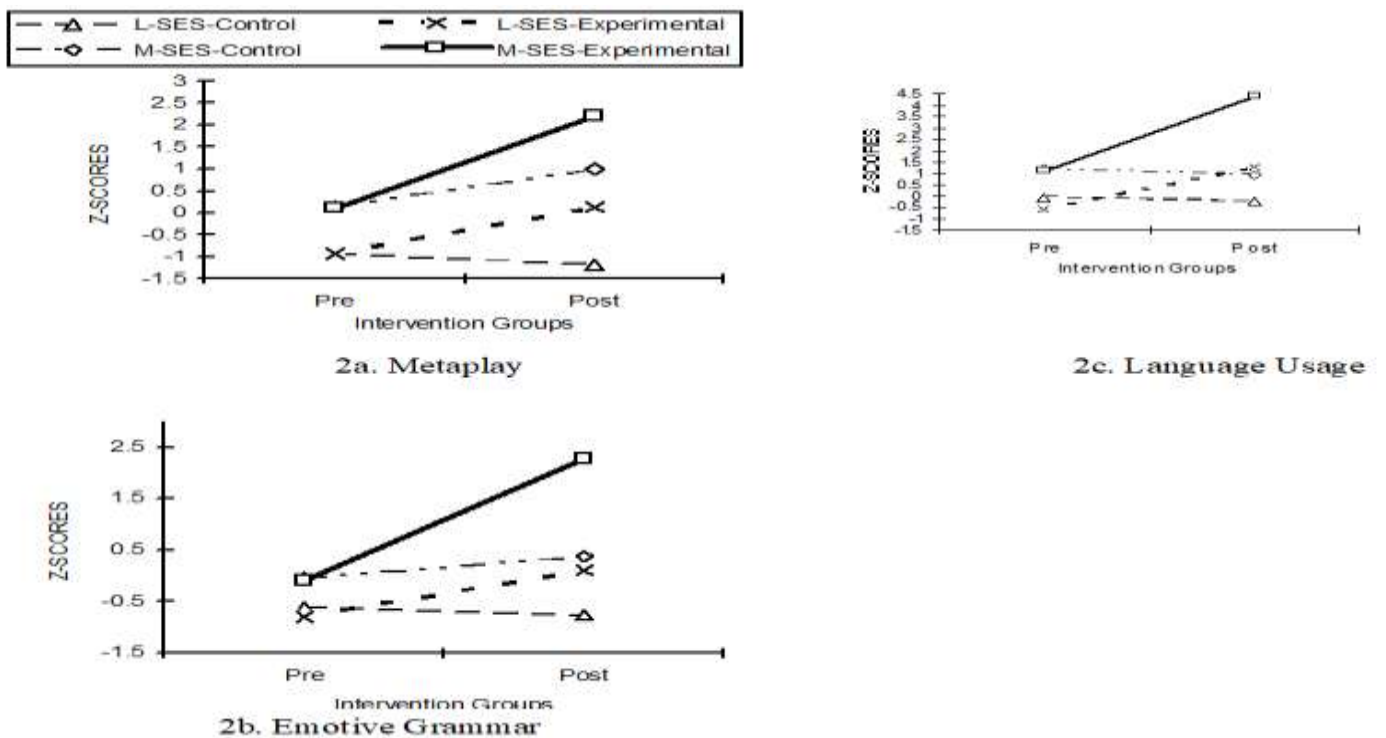
The interactions are also presented in figure 1 a b c d e, and figure 2 a b c for each of the measures as follows: 1. Narrative measures: (a) Level of Imaginative Object Use; (b) Cognitive Structure; (c) Organization of Form; (d) Complexity of Pretense Play Plots; (e) Ordinariness-Exceptional-Fantasy Scale; and 2. Communicative measures: (a) Metaplay; (b) Emotive Grammar; and (c) Language Usage in the plot.

Figure 1: Pre and Post Mean Scores for Narrative Measures N (of Plots) = 96



1c. Organization of Form

Figure 2: Pre and Post Mean Scores for Communicative Measures N (of Plots) = 96





The tables and figures point clearly to the fact that intervention was proven effective in the Level of Imaginative Object Use and consequently in all measures. Experimental groups, of both SES levels, have significantly progressed while control groups have not changed during the school year, in any of the narrative or communicative play measures.

Results for Level of Imaginative Object Use show that although at the post-intervention differences were found also between children based on their PPVT-R and their creativity scores, repeated measures ANOVA pointed that differences over time were highly significant for the interaction intervention \* time, and less for SES \* time. Meaning that the intervention caused significant change in the children's level of imagination when they used objects in their play. Children of higher SES level were more imaginative in both groups, experimental and control, but at the posttest observation lower SES experimental group scored significantly higher than medium SES subjects of the control group (Duncan Post-Hoc Test for significant differences of group means).

Results show the same trends for all measures. On baseline, in all narrative and language measures, differences between groups were found mainly on the basis of their SES background, where lower SES scored lower. For Complexity of Pretense Play Plot, and Ordinarity-Exceptional Fantasy Scale, base-line differences were found in addition also between experimental and control groups. On baseline of communication measures, of Metalplay and Emotive-Grammar, differences were found only between experimental and control groups. In most of these, the control groups scored higher than the experimental in the pre-intervention observations.

Table 1a shows us also that the higher the play scores - the larger are the standard deviations (sd) of within groups differences. Lower SES scores are characterized by smaller sd's of the narrative measures as compared to medium SES groups. Also, experimental groups, particularly that of Lower SES, show larger sd's on their posttest scores. This can be interpreted because of the fact that only part of the playing groups of children improved their play capabilities.

In the repeated measures ANOVAs, time, as expressed in growing older of age, and in accumulated kindergarten experience, had some effect on three of the scales, the Ordinarity-Exceptional-Fantasy Scale, the Emotive-Grammar, and the Language Usage scale. However, in all measures, narrative as well as communicative, there appear significant interaction effects of time by intervention, pointing to the effect of intervention over time on these scores as compared with baseline and posttest scores alone.

On three of these measures: Cognitive Structure of narrative, Complexity of Pretense Play Plot, and Language Usage, we can see a triple interaction, of time \* intervention \* SES. The mean scores, as seen in table 1a and in figures 1 b, d and h - show that the effects of intervention on scores by time, are different for the different SES groups. The medium-SES group benefited more than the lower-SES on these particular measures. On other measures, however, progress of both SES groups was parallel in time.

Only Ordinarity- Exceptional-Fantasy Scale showed an additional interaction between time and SES, as may be seen for Level of Imaginative Object-Use. Meaning that differences in time on these measures are based not only on the fact of participating in an intervention group, but also based on the children affiliation to a particular SES group. We saw that in Level of Imaginative Object Use, the experimental lower-SES group scored higher than medium SES group, and here, in Ordinarity Exceptional Fantasy Scale the experimental lower SES group matched its score with that of control medium SES group.

As pointed out above, in all narrative and language measures, the medium SES group scored significantly higher than lower SES group on baseline, and gaps remained, or even expanded, between experimental groups on posttest scores. Yet, scores on all measures show that lower SES experimental group tend to close the initial base-line gaps with medium SES control group.

None of the covariant variables – verbal IQ, creativity, or teacher's experience -- was found to interact with any of the narrative or communicative measures over time, except for Emotive-Grammar, where time interacted with both creativity and teacher experience. Only for this measure were these variables found as significant also on baseline.

It is interesting to note that intervention and SES background were the only variables found to have any effect on children's scores in the narrative and language measures. However, SES had no effect on communicative scores, neither on pre- nor on post-observations.

Inter-correlations were calculated to find relations among all variables: Level of Imaginative Object Use, narrative, and communicative measures. Table 2 presents Pearson inter- correlations for all measures.

**Table 2: Pearson Inter-correlations for all Play Plot Measures** N of Plots = 121

Measures	Cognitive Structure	Organization of Form	Complexity of Plots	Ordinariness - Exceptional	Metaplay	Emotive Grammar	Language Usage
Imaginative Object Use	.61	.73	.72	.69	.68	.65	.55
Cognitive Structure		.76	.81	.63	.43	.61	.65
Organization of Form			.71	.70	.63	.62	.68
Complexity of Pretense Plots				.60	.65	.69	.64
Ordinariness - Exceptional					.59	.55	.48
Metaplay						.57	.58
Emotive Grammar							.53

All correlations are at the level of  $p > .001$

It is rather obvious that all play plot measures are quite inter-connected, as all inter-correlations are significant, positive, and relatively high. Specifically, Level of Imaginative Object Use show significant, positive, and high correlations with all play plot measures, narrative and communicative, but somewhat lower only with Language Usage. Inter-correlations between all measures, show higher level of inter-correlations between narrative measures, and relatively lower between communicative measures; narrative and communicative measures are inter-correlated at a medium-high level. Exceptions relate to the Cognitive Structure measure, that correlates relatively lower with Metalplay ( $r = .43$ ), and higher with Complexity of Pretense Play Plot ( $r = .81$ ). To find the predictive relations between all measures, narrative and communicative, and Level of Imaginative Object Use, a stepwise regression procedure was analyzed with the latter as the dependent variable. Calculations were done separately for pre- and for post-intervention scores. Results are presented in table 3.

**Table 3: Summary of Regression Stepwise Procedure for Dependent Variable Imaginative Object Use**

Variable	PartialR <sup>2</sup>	ModelR <sup>2</sup>	B	F
<b>For Pre-Intervention:</b>				
Intercept	.68			21.8***
Cognitive Structure	.60	.60	.32	68.4***
Complexity	.09	.68	.30	12.3***
Ordinariness	.04	.66	.30	5.2*
Teacher's Experience	.02	.68	.03	2.9
<b>For Post-Intervention:</b>				
Intercept		.68	.45	6.8**
Cognitive Structure	.63	.63	.09	78.3***
Metaplay	.05	.68	.15	7.4**

\*= $p < .05$  \*\*= $p < .01$  \*\*\*= $p < .001$

Results for stepwise regression analysis for the dependent variable of Level of Imaginative Object Use in the pre-intervention phase, found the predictive value of  $R^2 = .68$  ( $F(5,42) = 21.8$   $p < .001$ ), for three significant predicting scales: Cognitive Structure, Complexity of Pretense Play Plot, and Ordinariness-Exceptional Fantasy Scale. Teacher's Experience was found at a 3%, very low and non-significant level. Scores on these three scales, in this sequence, predict the Level of Imaginative Object Use children make of objects in their play.

Results for stepwise regression analysis for the dependent variable of Level of Imaginative Object Use in the post-intervention phase, found the same predictive value of  $R^2 = .68$ , ( $F(5,42) = 6.8$ ,  $p < .01$ ), with only two scales providing significant contributions: One is same as the above, Cognitive Structure, and the other, the Metaplay scale. Only scores on these two scales, in this order, predict the level of Level of Imaginative Object Use children make of objects in their play, after intervention. These analyses point to the weight Cognitive Structure of narrative plays in the imaginative level of object use.

Another analysis is worth noting. As described above, initially, kindergartens participated in the study based on their teachers' willingness to take part in it. On pretest, the children in each kindergarten were randomly chosen for observations. On posttests, the same children were observed again to follow possible changes. There were no reasons to expect any significant difference in scores on the covariant variables. Yet scores on the variable of PPVT-R are interesting, as presented in table 4.

**Table 4: Means, Standard Deviations and F Values of ANOVA on PPVT-R by Treatment and SES Groups N (of Plots) = 96**

SES		Control	Experimental
Low-SES	M	49.5	50.7
	sd	4.0	4.5
Med-SES	M	72.2	65.4
	sd	4.8	3.6
F(1,42)=45.7***		F(3,42)=5.1*	

F for SES\*IQ (5,42) = 10.6\*\* \*\*= $p < .01$  \*= $p < .05$

Comparing scores on PPVT-R, taken as a verbal IQ covariant, as presented in table 4 show that groups differed on this variable.

Children of medium SES control group were found to be of highest IQ, and those of lower SES were lowest in IQ. Interaction found between SES and IQ shows that level of scores was not determined based on the children belonging to experimental or control groups. And again, despite of these initial differences - this variable did not interact with any of the narrative scores when measured for effect of intervention in time.

## 5. Discussion

The present study was aimed at examining the plots of sociodramatic play of kindergarten children for the level of their imaginative power in object use, and study the connections of this power with the plots' narratives form, structure and complexity, and the communication processes used in negotiating for these narratives. To examine these, we tested the hypothesis that intervention designed to improve the imaginative power of children in play object use will produce better quality narratives and improve the communicative channels to enable better negotiation for sociodramatic play, as compared to intervention aimed at general enrichment of play activities and objects.

Overall results showed that the hypothesis of the study was substantiated. Analysis of variance between experimental and control groups in all measures, show the same trend of arrangement of scores. Intervention aimed at improving the Level of Imaginative Object Use, incorporated into the kindergarten activities outside the framework of play, improved the sociodramatic play narrative and communicative abilities. This effect was shown in children of both low and medium SES background, although children of lower SES started from a lower baseline and ended lower too. Children in intervention groups surpassed their peers in the control groups on all measures. Some significant differences were found, implying the differential qualities of the measures. The various measures of narrative and communication in sociodramatic play were found to be closely connected but not identical.

### 5.1 Intervention and Imagination

Intervention methods for improving imagination as a source of promoting the level of pretense play had been used before (Christie, 1986; Freyberg, 1973; Grindheim, 2020; Singer & Singer, 1990; Udwin, 1983; Winther-Lindqvist, 2009), mostly within the framework of play, or around thematic-story enactment (Nicolopoulou et al., 2014). The present intervention focused mainly on empowering the imaginative use of objects in social contexts, systematically increasing the level of imagination while using objects as the source of play. The children, with their peers, were encouraged to interact and create their own ideas while interacting with the objects. The results substantiated the claim of Shoben (1980) Egan (1988) Grindheim (2020) Singer & Singer (1990) Udwin (1983) and Winther-Lindqvist, (2009), about "imagination as a means of growth" (Shoben, 1980:21). Training conducted outside the classroom play setting was proven again to produce increments in classroom play setting (see review by Fein, 1981), as a result of an increased capability for spontaneous play (Fein, 1981; Grindheim, 2020).

The positive change in the ordinariness-exceptional-fantasy scale (Fein, 1989), sustained Fein's argument (1987), that the content and sequences of play reflect the independence of the mind's system from the immediate environment, and from the need to cast one's experiencing of life or self into a tidy story, as claimed by script advocates (Bretherton, 1989; Fromberg, 2001; Schank & Ableson, 1977). The more able the child is with his\her imaginative power, the freer he\she is to enact his\her ideas on the fantasy level of content. The development of decontextualized behavior uncoupled from real-world events, is reflected in the orientation of pretense towards substitutional and imaginative objects (Fine, 1987; Johnson et al., 1987; Smilansky & Shefatya, 1990). Yet, what characterizes narrative, is the capability of acting concurrently on both levels of the mind -- the daily reality, and the interpretative imaginary (Bruner, 1990; de Haan, 2007; Fein, 1989; Winther-Lindqvist, 2009). Results substantiated Flannery & Watson's (1987) and Bretherton's (1989) claim only partially. They claimed that competency to enact themes with fantasy content grows with age. Our results show that this competency was not dependent on mere passage of time, it rather showed an interaction between time and intervention, proving that it can be enhanced with all children, including those of lower SES background, independent of time per se (Malloy, 2021; Nicolopoulou et al., 2015).

### 5.2 Sociodramatic Play as a Negotiated Narrative

We postulated that in order to analyze pretense play plots as negotiated narratives it is necessary to use several measures, each covering a different aspect of narrative and communicative features. Measures specially designed to test the structure of stories, were proven by Eckler & Weininger (1989), and Roskos (1988), to be useful for measuring also sociodramatic play plots of preschool children. The various narrative and communicative measures of sociodramatic play used in the present study provided a wide knowledge about the elements of play. Moreover, uniting the elements into a coherent whole provided a picture that was, as Westby (1986) pointed out, more than the sum of its parts.

According to the convergent and discriminant validation procedures suggested by Campbell & Fiske (1959), the pattern of inter-correlations of the scales (see table 4), supports the construct validity of the scales measuring narrative, and the connection between imagination, narrative and communication. Inter-correlations showed higher association among scores belonging to the dimension of narrative, and relatively weaker associations with the scales that represented the different dimensions of communication and language usage.

These results support the claim that imagination plays a crucial part in determining the quality level of narrative (Bruner, 1986; Roskos, 1988; Weininger, 1986), and reflects the range of play content (Fine, 1987, 1989; Garvey, 1977; Singer & Singer, 1990).

### 5.3 Narrative Theory or Script Theory

Ordinariness-Exceptional Fantasy Scale (Fein, 1989), indicate the level of fantasy the play plots portrayed, in distancing the plot from the scriptal reality of mundane contents. The higher the level of the plot is on this scale, the more it refers "to imaginable situations ranging from the mundane to the fantastic" (Fine, 1989, p. 359). To be able to reach a higher level on this scale, the players need to leave the safe and well familiar content of daily mundane occasions, likely to be familiar to most children, make use of their imagination to visualize scenes that are "experiences that children may never have experienced directly but nevertheless are able to imagine" (ibid), and negotiate those with other children that did not share these experiences with them. Each child arrives at the play scene with his/her own personal meaning, negotiating this meaning with peers within the actual realistic play objects and props. They can communicate through common knowledge of an emotive grammar that permits ambiguity and provides for idiosyncratic associations, "because ambiguity permits a variety of personal public or private interpretations" (ibid, p. 354).

We found an impressive elevation in the play plots' level on this scale, of both experimental groups following intervention, distancing from the mundane towards fantasy, as contrasted with the fixated level of both control groups. The latter were attached to the mundane or other daily events, while the former, whose imaginal level of object use was raised, could act more freely, through the improvement of their emotive grammar, on the dual landscape of fantasy levels (Bruner, 1990). Thus, we may see these results as supporting the narrative theory and less compatible with the script theory as postulated by its proponents (Bretherton, 1989; Fromberg, 2001).

However, one cannot ignore the fact that in children's play contents and roles of daily mundane experiences are very common. That is even more so in play of the younger ones.

Few children can create a fantastic quality play without intervention. The number of such plays increased after the intervention elevated the imagination competency of play object use. This may imply that initially, script theory explains the emergence of pretense, but the child needs to develop imagination competencies to be able to negotiate successfully for a narrative quality meaningful plot (Glaubman & Glaubman, 2022).

### 5.4 Intervention and Social Class

Socio-economic status background of children has been much studied, especially in training studies, and has been found to be a major source of effect on the level of pretense play (Fein, 1981; Malloy, 2021; Nicolopoulou et al., 2015; Smilansky, 1968; Smilansky & Shefatyah, 1990; Shefatyah, 1990). Fein (1981) claims that in a heterogeneous setting of social class, play differences may be obscured. As the present study settings were chosen of children of homogeneous background, most differences on base-line data were explainable on the basis of socio-economic status background. As in other studies of children of such background, improvement of sociodramatic play has been proven possible through intervention (see the reviews in Rubin, Fein & Vandenberg, 1983; Johnson et al., 1987; Malloy, 2021; Nicolopoulou et al., 2015; Smilansky & Shefatyah, 1990; and Shefatyah, 1990).

Observing variances within social class groups showed that higher quality plots are associated with higher standard deviations within groups. Language improvement scores, for instance, show that increased quality of play narrative roles was characterized by growing ratio of vocabulary used (nouns, pronouns, connective words, etc.), a finding similar to Wolf et al., (1985). Those results also show an increase of within group variance. Fein remarked (1981) that within-social class groups differences may be inordinately high, and it may be as important a quality as between-group differences. The present study points out that variance is not social class based but is dependent on level of play. As children have improved their capabilities, within group variances grow larger. This means that with higher quality plots, some narratives are much better than others, contrary to low ability playing groups, where most children perform with duller narrative plots.

The present study is unique in that it involved the same method of intervention for both medium and low socio-economic level kindergartens. Both experimental groups have significantly improved their scores, and positive effects were obtained as readily with lower class as with middle class children (Fein, 1981). The most surprising result was that in all measures the experimental low socio-economic group reached similar scores to those of control medium socio-economic level children. As the results show, this achievement cannot be explained based on the children's background of IQ.

The socio-economic status groups were found significantly different on IQ (PPVT-R), with the medium SES control group significantly scoring highest on this test. Yet, following intervention, gaps were closed on narrative and communicative measures, irrespective of the initial IQ scores of the children. This corresponds with Smilansky's (1968, 1990) results. Smilansky was expecting a close relationship between IQ and sociodramatic play achievement. Intervention methods in her research study did bring the scores closer, but did not close the initial gaps between the experimental lower and control medium socio-economic groups. But she found, as we did too, that less intelligent children profited from the intervention as much as the more intelligent children.

Smilansky & Shefatya (1990) offered three possible explanations for these results. First, they claimed that "the method of evaluation dealt only with the minimal inclusion of play elements" (Smilansky & Shefatyah, 1990:180). As they articulate, the study did not measure elements such as elaboration of form and content of play of longer duration in a lively interaction with a whole group of children, "creating verbally and actively successions of imaginative make-believe events and situations" (ibid:180). Such measures were operative in the present study. Smilansky, and others that followed her, used methods of intervention in the actual play, aiming specifically to strengthen weak competencies of sociodramatic play the child revealed, and measured the level of competency the child reached on these criteria after intervention. Whereas the present study analyzed only such episodes that fully reached the

Smilansky's criteria at the pre-intervention stage, intervention was focused on the imagination of object use outside of actual play, and measured narrative and communicative competencies. A study comparing these two intervention methods, using the elaborated evaluations offered in the present study may present us with an answer to the question of the connection between types of intervention and sociodramatic play plot quality.

A second explanation by Smilansky & Shefatya (1990) was the possibility that intervening adults might have tended to spend more time with children lacking play elements, and perhaps those were the children with the lowest IQ's (p. 180). Our findings do not seem to substantiate this reasoning. Medium-SES control group scored highest on IQ, and both lower-SES groups scored low on this measure. The study was designed so that all groups received the same amount of training and used the same method, yet none of the results was explained by IQ, nor interacted with the pattern of means in the PPVT-R scores.

Smilansky & Shefatya's (1990) third argument is in accord with the findings of the present study. They claim that intelligence does not play a role in deciding the level of sociodramatic play. This claim fits also our results that did not interact nor showed any correlation between intelligence and sociodramatic play level.

## 6. Conclusion

The results of this work support our claim, that narrative theory may be preferred as an explanation of the evolving of pretend play plots, and that imagination plays a major part in this process. This, as contrasted to the script theory that postulates to explain the evolving of play plots on the basis of real-life event representation scripts. Intervention that took place outside of natural play contexts, aimed at raising the level of imaginative objects use by kindergarten children, was found to be effective in elevating the imaginative level of their object use in play, and consequently, improved the children's abilities to negotiate and produce better collaborated play narratives, as was presented in their improved scores on all measures. Narratives of experimental groups, from both SES levels, were higher in quality as regards structure, organization, complexity, communication, and language usage, as was shown by their higher and more sophisticated level of function in all play scores. The varied measuring tools used to analyze the play-plots revealed the variety of the structure and complexity of the play negotiation and narrative.

These results have significance for educators and researchers. Educators should know that mere affording for free play is not sufficient for children's development. Westby (1986) and Glaubman, Kashi, & Koresh, (2001), claimed that improving the level of narrative needs deliberate training of teachers in intervention methods. The present study has substantiated the claim that raising the level of imagination in play object use is a crucial component in improving the quality of narrative and communication in pretense play and has offered a specific strategy of intervention. It emphasized that play intervention need not take place during actual play situations, and that systematically improving children's imagination with object training, is an effective means for improving the quality of sociodramatic play.

Researchers may make use of the various instruments offered in the study, to measure the quality of pretense play in natural play situations. Yet, the present study did not relate fully to all narrative properties, as presented by Bruner (1990) or those presented by Glaubman & Glaubman (2022). These need to be further studied in pretense play contexts. The function of negotiated narrative is claimed as part of the process of meaning making (Bruner, 1990; Westby, 1986). This function in pretense plays needs also to be further studied. The improvement of narrative and negotiation properties in pretense play needs to be measured for the long-term correlates of similar or related school functions, especially since such impressive changes were observed following intervention in both socio-economic-status groups.

## Notes

<sup>2</sup> Full details of the measures may be obtained from the first author.

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