Insights into student skills, peer networks, and sociodramatic play in Head Start:

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INSIGHTS INTO STUDENT SKILLS, PEER NETWORKS, AND SOCIODRAMATIC PLAY IN HEAD START

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Abstract

Insights into student skills, peer networks, and sociodramatic play in Head Start

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Across preschool classrooms in the United States, free play comprises the largest percentage of children's daily activity time (Chien et al., 2010; Fuligini et al., 2012). During free play, preschoolers may frequently engage in sociodramatic play (SDP), or pretend play where groups of children take on assigned roles with implicit rules (Smilansky & Shefatya, 1990). Research has demonstrated the academic and social benefits of SDP engagement (e.g., Diamond et al., 2007); however, much of this work has addressed SDP in curricular and intervention contexts, in which teachers play a large role in facilitating the play. Fewer studies have explored SDP in free play contexts with minimal teacher scaffolding, and even fewer have studied this play in classrooms comprised of cognitively, culturally, and linguistically diverse students, such as those participating in Head Start programs.

This study investigated individual and peer factors that relate to SDP occurring in the context of free play among children (n=50) in five diverse mixed-age Head Start classrooms. A mixed methods approach was used to examine relations between children's individual characteristics and abilities, classroom peer networks, and SDP outcomes. Sources of data included: 1) naturalistic observations of children's free play, 2) assessments and demographic surveys of individual children, and 3) sociometric and

semi-structured interviews with child participants. Results from multiple regression and hierarchical cluster analyses were merged with case studies of children who engage in exemplary amounts of SDP to enhance the understanding of individual and peer factors related to sociodramatic play. Findings indicated that narrative skills, home language background, gender, membership in a cohesive peer subgroup, and teacher presence were related to high amounts of SDP engagement. Implications for future research and for preschool practitioners are discussed.

To little ones everywhere –

May your childhoods be rich with pals and pretend.

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It takes a village to raise a dissertation...

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Chapter 1: Introduction

Child-directed play has been touted as an important, developmentally appropriate part of preschool education (Copple & Bredekamp, 2009). Child-directed play, often termed 'free play', is an activity time in which children are free to select the materials they want to use and the playmates with whom they want to engage, often without the direct presence of adults. Free play comprises the largest portion of a preschool daily schedule (Chien et al., 2010; Early et. al., 2005, Early et al., 2010). Fuligini and colleagues (2012) found that, on average, preschoolers spent 40% of their time at school engaging in free play, ranging from 31-62% across the 125 classrooms in a variety of programs sampled in the study. Thus, while there is wide variety in the amount of free play that occurs across preschool classrooms in the United States, this type of play is the most substantial activity time in preschool settings.

Children's play can have enormous benefits for numerous outcomes, including academic skills, social competence, and physical and mental health (Bredekamp, 2005; Singer, Golinkoff, & Hirsh-Pasek, 2006). Although it has become increasingly established that child-directed free play is highly beneficial for children's development and learning (Hirsh-Pasek et al, 2008; Weisberg, Kittredge, Hirsh-Pasek, Golinkoff, & Klahr, 2015), there are ongoing debates regarding the role of the teacher during children's free play (e.g., Singer, 2015; Trawick-Smith, 2012). During free play, teachers must make important decisions regarding when and how to support or intervene in their students' play; and it has been shown that teachers' interactions with their students during classroom free-play can vary due to characteristics such as years of teaching experience and education level (Pianta et. al, 2005; Thomaston & La Paro, 2012; Trawick-Smith &

Dziurgo, 2010). Teachers do not often receive training in facilitation or support of children's free play; this may be partly due to the fact there is a shortage of descriptive research on factors that influence in preschoolers' free play, particularly in culturally and linguistically diverse preschool settings. Especially for inexperienced teachers, this kind of work can be helpful for guiding preschool teachers' practices as they attempt to support and facilitate positive free play experiences in children's everyday classroom lives.

The Value of Sociodramatic Play

Sociodramatic play (SDP), or pretend play where dyads or groups of children take on assigned roles with implicit rules (Smilansky & Shefatya, 1990), often occurs during periods of classroom free play and continues to garner attention as a critical part of early childhood education. Around three years of age, children begin to engage in this pretend play with others, in which they must negotiate rules, roles, meanings, and norms in order to sustain the social play (Smilansky, 1968; Smith & Pellegrini, 2008). In their play scenarios with peers, children make sense of the world by framing their stories in their current understandings of concepts to construct new knowledge of those concepts (Monighan-Nourot, 1998).

There is an increasing body of empirical work that has explored children's SDP in preschool. First, research has demonstrated how a number of aspects of development, particularly those that are associated with future academic success, can be enhanced through SDP experiences in early childhood (Copple & Bredekamp, 2009; Isenberg & Quisenberry, 2002). Through SDP, children develop symbolic thought (a precursory skill for math and literacy development), as children use actions or props to represent their

ideas (Vygotsky, 1978). In particular, it has been linked to language outcomes, including expressive vocabulary and narrative abilities (Nicolopoulou, 2002; Podlozny, 2000). Research has also demonstrated that this type of play has important connections to children's cognitive development. For instance, the curricular model *Tools of the Mind* (Bodrova and Leong, 2001, Bodrova and Leong, 2007), which is designed to promote sociodramatic play as a means of developing cognitive tools such as attention, memory, and self-regulation illustrates the importance of this kind of play for children's cognition.

Research has highlighted the valuable ways that SDP can enhance children's experiences in preschool, and the factors that relate to SDP engagement. However, this research has predominantly described SDP that is supported by adults in the classroom, such as in the context of curricular activities or literacy interventions (e.g., Mages, 2008). For example, teacher-researcher Vivian Paley has provided decades of rich examples of how the incorporation of storytelling and storyacting activities could enhance preschool students' learning. In her abundant descriptions of the dictation and dramatization of children's own stories, she demonstrates how SDP can provide opportunities to address not only "academic" concerns such as literacy skills, but also issues of interpersonal development and social justice topics (see Paley, 1981, 1988, 1992, 1995, among others). However, a notable feature of her powerful and effective approach is the heavy reliance on teacher facilitation and adult scaffolding of SDP activities. Instead, in SDP that often occurs during free play without the assistance of a teacher, children must particularly rely upon their own individual skills and the peers with whom they are engaging in play.

Dissertation Overview

Dissertation Purpose

Aiming to increase preschool students' SDP engagement is a tenable and important goal in early childhood education. Although researchers have studied some important aspects of children's SDP, particularly how it can unfold *with* teacher support, descriptions of SDP that occurs without the presence of a teacher, such as during free play with peers, has been largely overlooked in the literature. Because of the demonstrated benefits of sociodramatic play, and the fact that children may engage in SDP in the context of classroom free play without the direct support of classroom teachers, this dissertation seeks to contribute to a gap in the literature by describing the factors that matter for high amounts of SDP in this context. Specifically, this project focuses on children's individual skills and their peer counterparts as they relate to sociodramatic play in diverse classrooms.

Play is an important learning medium for young children, and teachers' responsibility is to enhance this medium, even during times when they themselves may not be directly present in children's play. With descriptive information about children's play, including how students' own skills and their peer interactions matter for SDP, teachers can reflect on their classroom design and practices in order to enhance children's free play experiences. This type of information is even more crucial for new teachers who are a large portion of the early childhood workforce. Early education is notorious for high turnover rates (Holochwost, DeMott, Buell, Yannetta, & Amsden, 2009; NAEYC, 2004), resulting in a workforce of highly inexperienced preschool teachers. Descriptive work is particularly informative for teachers who may not have large amounts of experience of their own to draw upon as they consider the design of free play learning environments.

Dissertation Context

Head Start is a federally-funded program that comprehensively addresses the physical, cognitive, social, and emotional development of young children, and was a particularly useful context for this dissertation project for several reasons. First of all, the majority of students in Head Start are from low-income backgrounds (Joshi, Geronimo, & Acevedo-Garcia, 2016), and research has repeatedly illustrated that low socioeconomic status is associated with a number of negative social and academic outcomes (Weiland & Yoshikawa, 2014). Next, Head Start classrooms are notably diverse. A great percentage of students come from culturally and linguistically diverse families (Joshi et al., 2016); therefore, it is likely that there will be a range of oral language skills in English, which is the social language of play for these Head Start classrooms. Also, at least 10% of students enrolled in Head Start classrooms have diagnosed special needs (Joshi et al., 2016), further adding to potential diversity in terms of social, linguistic, and cognitive ability. Evidence suggests that high quality preschool experiences, while important for all students, can have a more substantial impact on children in Head Start (Yoshikawa, Weiland, et al., 2013). These students may particularly benefit from greater engagement in classroom SDP, given the demonstrated social and academic benefits of this type of social play.

Dissertation Approach

In developmental science and education, researchers are increasingly making use of multiple lenses (i.e., multiple sources of data and multiple analytic methods) to understand developmental phenomena in ways that go beyond the understandings that would be provided by quantitative or qualitative methods alone (Weisner, 2005). As

such, researchers have been able to achieve more nuanced understandings of complex topics. For example, quantitative data and analytic techniques can be helpful for measuring the pervasiveness of a child's behavior or detecting associations between contextual factors, while qualitative data and analytic techniques can shed light on meanings, intentions and goals connected to the behavior and contexts (Yoshikawa, Weisner, Kalil, & Way, 2013). Therefore, in attempting to more completely understand the complex relations between the individual and peer factors that matter for sociodramatic play, this dissertation employs a mixed methods approach, drawing upon qualitative and quantitative data and techniques to describe and provide insight into sociodramatic play in Head Start preschool classrooms.

Dissertation Summary

Following this introductory chapter, Chapter 2 provides a summary of relevant empirical literature and concludes with the research questions that were explored in the dissertation. Chapter 3 describes the quantitative and qualitative data sources and the methods that were used to address the research questions. Chapter 4 presents the findings of each of the research questions. Finally, Chapter 5 integrates and discusses the findings across research questions, notes the limitations, and highlights important implications of this dissertation, including directions for future research, and considerations for early childhood practitioners.

Chapter 2: Literature Review

This dissertation project is undergirded by two major premises: that sociodramatic play is an invaluable form of social play that can positively impact a number of important outcomes, and that young children's peer groups within their classrooms are a vital part of their development. This chapter provides some theoretical and empirical background on these topics. The first section describes individual factors that have been associated with sociodramatic play. The second section describes literature related to peer factors. Both sections begin with theoretical underpinnings and go on to describe empirical research on these topics.

Sociodramatic Play in Preschool

Sociodramatic play (SDP) is unique type of play, where groups of children engage in rule-based, imaginary activities, and has been positively linked to a number of important cognitive, social, and academic outcomes (Bergen, 2002; Fisher, 1992; Hanline, Milton, & Phelps, 2008). This section begins by providing some theoretical grounding for attention to SDP in preschool. Next, it discusses the skills that are necessary for, and can be developed as part of SDP.

Theoretical Basis

In his sociocultural theory, Lev Vygotsky (1978; 1986) conceptualized sociodramatic play as a means for young children to internalize social norms and develop behaviors that conform to cultural standards, viewing it as a crucial piece of children's cognitive, social, and emotional development. According to Vygotsky (1978), in this form of play "the child always behaves beyond his average age, above his daily behavior; in play, it is as though he were a head taller than himself" (1978; p. 102). As such,

Vygotsky emphasizes SDP as an important means for creating a Zone of Proximal Development (ZPD) for children: a zone where, in collaboration with their peers, children are able to go beyond what their abilities might allow them to do alone. This Vygotskian perspective frames both the need for and the importance of a number of individual skills and peer factors in sociodramatic play.

Factors that Influence Sociodramatic Play Engagement

SDP is an opportunity to develop valuable linguistic, social, and self-regulatory skills (Vygotsky, 1978). Importantly, SDP not only affords opportunities for children to develop certain skills, but also requires these skills for effective play engagement, making it a challenging classroom activity for particular students. Resultantly, there can be a great deal of variation in the amount of time that children spend engaging in SDP. Because sociodramatic play is inherently social and occurs in the presence of other children, it is a rich context for exploring the effects of children's individual skills and social behaviors. The following sections summarize skills and characteristics that have been shown to be particularly influential in the context of SDP.

Language. Language is a key feature of sociodramatic play. In order to effectively engage in sociodramatic play with peers, children have to share a common script or story (Garvey, 1974) and one of the most straightforward ways to share a script is through verbal communication. SDP is an opportunity for children to develop various linguistic and discourse skills, which are associated with future literacy abilities (Cazden, 2001; Ford, 2010; Pellegrini, 1980). Bergden (2002) summarizes a body of quantitative and qualitative research illustrating rich connections between linguistic competence and pretend play; in particular, she highlights work illustrating that students from low

from low socioeconomic backgrounds show limited gains in both pretend play and verbal interaction. In addition, this review presents studies that relate dramatic play and communicative competence in certain students with disabilities. Given the importance of language and SDP for future academic success, this body of work highlights a need to support students in low-income, inclusive classrooms.

Research has shown that oral language skills such as children's narrative abilities can facilitate social play during early childhood. Narrative ability can be described as the ability to provide organized, culturally meaningful accounts of the past, present, or future (Bruner, 1987; Fivush, 1991). Relative to other types of language expression, SDP prowess has been particularly associated with narrative language skills (Nicolopoulou, 2005; Nicolopoulou, Cates, de Sá, & Ilgaz, 2014; Nicolopoulou & Ilgaz, 2013). For example, in an experimental study, Kim (1999) found that dramatic play facilitated children's narrative recall abilities in the short term. Furthermore, the participants provided more elaborative narratives and used more advanced narrative structures in pretend enactment of stories as compared to simple storytelling. Together, this research demonstrates how narrative measures can provide a more contextualized view of children's language skill, illustrating that such measures can be a particularly valid, meaningful way of assessing preschoolers' language in relation to SDP.

Prosocial play behavior. Children's positive social behavior is another critical factor in SDP success. Prosocial behavior can be defined as empathetic, cooperative, or helpful acts for the purpose of benefiting others (Eisenberg, Spinrad, & Knafo-Noam, 2015). Prosocially-oriented children are more likely to approach peers and engage in social play, and positive peer engagement has been shown to extend preschoolers'

attention as they play (Blair & Raver, 2014). Importantly, prosocial skills have been associated with both the complexity and the duration of SDP in preschool students (Connoly & Doyle, 1984). For example, children who are adept at comforting or encouraging others and resolving social conflicts have important tools for not only engaging in, but also repairing breakdowns that may occur during sociodramatic play with peers.

Disruptive play behavior. Negative social behaviors, also referred to as antisocial or externalizing behaviors, include aggressive, destructive, and controlling behaviors that can disrupt children's play. Indeed, such behavior problems are negatively related to SDP engagement (Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Rubin & Mills, 1988). Attention to these negative interactive play behaviors may be important for understanding the success of preschool SDP, as disruptive behaviors may lead to the collapse of a sociodramatic play episode.

Self-regulatory behavior. SDP affords a host of executive functioning skills, such as the ability to express emotions appropriately, inhibit impulses, and make plans (Bodrova & Leong, 2008; Diamond, Barnett, Thomas, & Munro, 2007). In classrooms, executive functioning is often discussed in terms of self-regulation, defined as conscious control of one's own actions and thoughts (Rivers, Tominey, O'Byron, & Bracket, 2013). It involves both the ability to regulate impulses (i.e., stop doing something you want to do), and engage in a behavior on-demand (i.e., do something even if you don't want to). A growing body of literature highlights a striking connection between SDP and self-regulation (Elias & Berk, 2002; Diamond et al., 2007; Whitebread & O'Sullivan, 2012).

Given the fluid nature and implicit rules that can be a part of sociodramatic play, strong self-regulatory skills can be an asset for this socially and cognitively complex activity.

Gender. There are mixed views regarding the extent to which gender influences SDP. Observational studies have shown that girls tend to be more engaged in sociodramatic play than boys (Hughes, 1991; Lloyd & Duveen, 1992), while others have found no significant differences (Grief, 1976; Johnson, Christie, Yawkey, & Wardle, 1987). However, it has also been noted that children's sociodramatic play is greatly influenced by the props and materials to which they have access (Unger, 1981). In an experimental study, Neppl & Murray (1997) found that girls engaged in more dramatic play when engaging with "feminine" materials (a miniature dollhouse), but that boys engaged in more dramatic play when engaging with "masculine" materials (a miniature pirate ship). Traditional dramatic play areas in preschools often include kitchen sets and dolls, which children view as gendered toys (Freeman, 2007); this is one possible factor that might explain mixed findings with relation to gender and SDP. Consideration of not only the sex of social group members, but also the group's access to sex-typed SDP materials may be important for understanding the relations between gender and sociodramatic play.

Teacher presence in play. The presence of an adult is another factor that can influence children's sociodramatic play engagement. To some extent, this may be related to activity context. In general, the presence of a teacher in a classroom activity setting has been shown to encourage student's engagement in that activity (Johnson, Christie, & Yawkey, 1987). This could be partly due to the nature of an activity (e.g., teachers may spend more time in setting that have required more setting up or involve more mess, such

as a "product-oriented" craft activity in contrast to sociodramatic play, which is relatively self-sustaining), or based on the teacher's values (e.g., views that lead them to engage with their students over more traditional "academically" focused literacy or numeracy activities). Nonetheless, teacher involvement in children's SDP can discourage this type of play (Kontos, 1999). However, teachers may also enhance their student's SDP engagement, through a variety of roles in the play (e.g., behavior manager, mediator, social director, observer) (Banerjee, Alsalman, & Alqafari, 2016).

However, teacher presence has also been related to children's social behaviors, which can be, in turn, related to SDP engagement. According to a review by Kontos and Wilcox-Herzog (1997a), teachers spend more time in the presence of children with whom they enjoy spending time, and children who sought them out, suggesting that particular socially competent behaviors by children may elicit teacher presence. Other studies have shown that teachers tended to be less involved with children who showed greater levels of social competence with peers (DeKlyen & Odom, 1989; File, 1994), although it should be noted that these studies were in the context of inclusive classrooms and students with disabilities. In terms of problem behaviors, studies have related the amount and intensity of negative affect and low teacher engagement (Hestenes, Kontos, & Bryan, 1993). The management of problem behavior is also associated with teacher involvement in play (Kontos & Wilcox-Herzog, 1997b). While the findings of these studies are somewhat muddled, perhaps because of the varied classroom and student contexts, they collectively illustrate that a teacher's presence, in any number of capacities may matter for the amount of their students' SDP.

Considerations of Preschool Peers

Many opportunities for the development of children's individual skills occur within the context of peer play, such as sociodramatic play, which involves peer involvement by definition. Therefore, understanding peer interactions, relationships, and influences is key for supporting this valuable type of preschool play. This section begins by providing some theoretical foundation for the study of peers. Then, it discusses organization of children in preschool classrooms and the influences that preschool peers can have on each other.

Theoretical Basis

Homophily refers to the tendency for similarity in various attributes among individuals who affiliate with each other (Kandel, 1978), and is sometimes referred to as the "birds of a feather" phenomenon (e.g., McPherson, Smith-Lovin, & Cook, 2001). Theoretically, this homogeneity may occur as a result of selection (e.g., Latina children may seek out other Latina children as playmates) or socialization (e.g., boys may engage in more roughhousing behavior with boys that typically roughhouse). Using homophily as a framework for understanding peer affiliative groups can be empirically challenging as children may be similar with regard to a number of factors, making it hard to tease out the most salient features. Instrumental models of peer influence (e.g., Bandura & Walters, 1977; Vygotsky, 1978) assert that children are tools for their peers' acquisition of skills and behavior. In such models, peers actively help their peers learn by directly modeling or providing expertise. In contrast, social contagion theories of peer influence (e.g., Christakis & Fowler, 2013) posit that children emulate their peers, and absorb or internalize the behaviors and skills of their peers in a more organic way, without observing explicit modeling or receiving instruction. It may be that either of

these theoretical models can be used to explain homophilic profiles of preschool classroom subgroups, and it is conceivable that both models may simultaneously explain aspects of peer influence. However, studies with a concurrent design cannot speak to the directionality of peer effects; for this, longitudinal work is needed.

Organization of Classroom Peer Groups

Social interaction during play is not necessarily equal among diverse classroom peers. As children get to know their classroom counterparts in play, they develop diverse relationships and bonds with various members of their class based on various demographic, cognitive, and behavioral characteristics; as such, one peer's influence may not have the same weight as another's. Children as young as toddlers have been shown to have specific preferred play partners that can evolve into friendships (Howes & Phillipsen, 1998; Howes & Phillipsen, 1992), and by preschool (typically beginning around the age of 3), children's awareness of peers' social behavior relates to their level of "liking" certain peers (McCandless & Marshall, 1957). Moreover, the social organization of familiar peers increases in complexity between three and five years old; younger children begin social play primarily in dyads and the size of the average social play subgroup can approach four towards the end of the preschool period (Coplan & Arbeau, 2009). Moreover, these groups may be increasingly characterized by homogeneity in terms of one or a combination of demographic or individual skill factors.

Gender. One of the most widely-studied elements of playgroup homophily is in terms of gender. Across cultures, children as young as three years old already demonstrate a clear preference for same-gendered playmates (Monroe & Romney, 2006; Fabes, Martin, & Hanish, 2003), and may actively seek out playmates of the same sex. It

is important to note that same-gender preferences are not purely a matter of selection, but that children may also be socialized to play in same-gendered groupings. For instance, teachers and students view children who play with companions of the same gender to be more socially competent (Colwell & Lindsey, 2006). Moreover, gender-based preferences may not be directly due to gender, but also be due to similar interests in play activity, which may be associated with gender (e.g., boys may prefer more rough-and-tumble play, while girls may engage in more dramatic activities) (Else-Quest, Hyde, Goldsmith, & VanHulle, 2006; Neppl & Murray, 1997).

Race and ethnicity. By kindergarten, children have already developed racial attitudes that impact their interest and willingness to play with peers who are racially diverse (Rutland & Killen, 2015). As such, preschool children may also form social groups based on racial and ethnic similarity. Such visible characteristics may be a concrete way in which children can identify peers who are similar to themselves (Shrum, Cheek, & Hunter, 1988). In fact, in a social network analysis of play partners in preschool, Martin and colleagues (2013) found that social ties among preschoolers were more likely among children who shared an ethnic background.

Language. Quantitative research studying peer effects on language has occurred primarily at the classroom level. Some studies have found positive effects of peer language ability on preschoolers' language development (Justice, Petscher, Schatschneider, & Mashburn, 2011; Mashburn, Justice, Downer, & Pianta, 2009). Blum-Kulka & Snow (2004) describe how this may be particularly true for children who are acquiring a new language, while Justice, Logan, Lin, & Kaderavek (2014) discovered that children's language skills were even more consequential for the language

development of their peers with disabilities. However, there is also a body of empirical ethnographic work illustrating how small-scale peer groupings and peer interactions within preschool classrooms matter for language development (Tabors, 1997), and are means through which children refine and develop their communicative skills while strengthening their peer relationships (Evaldsson & Corsaro, 1998). Qualitative work has also pointed to the ways in which home language status and race or ethnicity may play a role in play culture, peer group formation, and friendship in classrooms comprised of students with different home language backgrounds (Feng, Foo, Kretschmer, Prendeville, & Elgas, 2004).

Behavior. Preschoolers may also be drawn to peers who are similar to themselves in terms of social behavior. Young children have been shown to prefer others with similar cognitive play qualities and social participation in play (Rubin, Lynch, Coplan, Rose-Krasnor, & Booth, 1994). Particularly in terms of externalizing behaviors, young children may gravitate towards others with similarly aggressive interactional styles (Farver, 1996; Hanish, Martin, Fabes, Leonard, & Herzog, 2005). One finding contrasts the premise of behavioral homophily is with regard to temperament: in Gleason, Gower, Hohmann, & Gleason's (2005) study, preschoolers preferred peers who had higher levels of impulsivity and soothability, regardless of their own temperamental traits.

Approaches to Studying Peers

Adequately determining the subgroup structures within preschool classrooms is central to studying peer factors, and various approaches have been used to identify classroom subgroups. Indeed, researchers have increasingly attempted to identify and validate the structure and features of preschoolers' social networks using various

techniques. However, with nuanced differences between methods and little replication (Santos, Daniel, Fernandes, & Vaughn,2015), determining the best way to identify such groupings in young children remains a challenge.

Sociometric approaches. Psychological and sociological researchers have used sociometry techniques to gather information about peer grouping in early childhood. However, there are varied approaches to peer sociometric measures (e.g., nomination, paired comparison, and rating scale techniques) and the computation of resulting scores; relatedly, there are mixed views regarding appropriate sociometric measures for preschoolers. As emphasized by Musun-Miller (1990), the approach selected must rely upon the consideration of contextual factors, and even then, must be interpreted and compared to work that used differing methods cautiously. However, although the stability of sociometric measures over time has been questioned due to the frequency of change in peer status and relationships among young children, there is evidence that peer ratings and nomination-based social preference scores are reliable ways of evaluating even preschoolers' social preferences (see meta-analysis by Jiang & Cillessen, 2005), making it an appropriate means of capturing information about preschool peer perceptions in concurrent correlational research designs.

Ethological approaches. Other developmental researchers have drawn from the field of ethology, or the study of animal social behavior, and have used observations of affiliative conduct to understand subgroups within preschool classrooms (Santos & Winegar, 1999). For instance, researchers have summarized affiliation structures for classroom members by observing directed interactions, visual attention, and physical proximity to peers in preschool (Daniel, Santos, Peceguina, & Vaughn, 2013; Santos,

Vaughn & Bonnet, 2000; Santos, Vaughn & Bost, 2008; Schaefer, Light, Fabes, Hanish, & Martin, 2010; Strayer & Santos, 1996). Derived from research on social behavior in primates, such approaches may be ecologically more valid, as they can circumvent certain developmental limitations, such as linguistic competence (e.g., young children may speak infrequently because they are simply still learning to talk) and discernable social comportment (e.g., parallel play may be an emerging form of young children's social behavior). On the other hand, a major challenge is that such approaches are quite resource-intensive, which may explain a dearth of research on preschool peer subgroups, as compared to research of social groups in middle childhood and adolescence (Santos et al., 2015). However, particularly with the technological advances for recording and social network analytic techniques, such methods have become more feasible in recent decades.

Combined approaches. There have also been compelling attempts to integrate multiple approaches in order to more adequately understand preschool social structures. Santos and associates identified preschool subgroups in Portuguese, Canadian, and United States classrooms, and further, they determined types of subgroups: high mutual proximity (HMP), low mutual proximity (LMP), and "ungrouped" students (Daniel et al., 2013; Santos, Vaughn, & Bonnet, 2000; Santos, Vaughn, & Bost, 2008; Santos,Vaughn, Strayer, & Daniel, 2008). Students in HMP subgroups were 'cliques' or 'clique-like' -- they had highly correlated proximity profiles and were all seen together at frequencies greater than chance. Instead, in LMP subgroups, the students were 'associates' -- their proximity profiles were similarly correlated across all members of the classroom; however, not all members of the subgroup mutually connected to all other members.

Importantly, Santos and colleagues (2008) identified functional distinctions between these two types, in terms of the amount of positive interactions and visual attention, and occurrences of mutual sociometric nominations. In short, HMP groups were more likely to be made up of friends who spent lots of time close to each other and had relatively high rates of interaction. Further, Daniel et al. (2013) discovered longitudinal associations between subgroup membership and individual children's social competence, as well as peer acceptance levels, with members of HMP subgroups showing higher levels of social competence and greater peer acceptance in a subsequent year. These examples highlight how using a combination of ethological and sociometric approaches can provide a rich picture of preschoolers' peer networks.

Statement of Purpose and Research Questions

The purpose of this project was to describe factors that are important for enhanced sociodramatic play in Head Start preschoolers. Exploring both individual and peer factors in SDP are important because many of children's abilities that are commonly used for peer interaction (e.g., effective communication skills, appropriate social behavior, strong self-regulation) have also been pointed to as assets for sociodramatic play, a unique type of social play where groups of children must coordinate their goals and behavior. Descriptive studies linking children's individual abilities, their peer networks, and play outcomes can provide valuable and relevant knowledge of this complex phenomenon, the findings from which can offer useful concrete examples for early childhood practitioners and point researchers to important directions for future research. To provide some insight into SDP during free play in diverse preschool classrooms, the following research questions (RQ) were addressed in this dissertation:

RQ1. In mixed-age, culturally and linguistically diverse Head Start classrooms, to what extent does expressive narrative skill, prosocial play behavior, disruptive play behavior, and self-regulation ability explain the variance in the amount of time children engage in SDP controlling for mental age, gender, and teacher presence in play?

RQ2. What are the peer networks in five mixed-age, culturally and linguistically diverse Head Start classrooms, and what are some demographic and social preference characteristics of the subgroups identified in these networks?

RQ3: In mixed-age, culturally and linguistically diverse Head Start classrooms, does the type of subgroup membership (Ungrouped, Low Mutual Proximity, High Mutual Proximity) predict the amount of sociodramatic play engagement controlling for mental age, narrative productivity, gender, and teacher presence in play?

RQ4: For students who engage in exemplary amounts of sociodramatic play in mixed-age, culturally and linguistically diverse Head Start classrooms, how do their individual profiles (including demographic characteristics, skills, perceptions, and play) and their experiences with peers relate to their amount of SDP engagement?

Chapter 3: Methodology

This chapter describes the methodologies of this dissertation. It begins with a summary of the overall design of the project, followed by a detailed description of the classroom contexts, participants, and sources of data. It concludes with four sections dedicated to explaining the analytic methods that will be used to address each of the four research questions.

Project Design

The purpose of this project was to describe factors that are important for enhanced sociodramatic play in Head Start preschoolers. A concurrent triangulation strategy was utilized; this approach entails collecting and analyzing quantitative and qualitative data at one time, relating the quantitative results to the qualitative findings, and merging the information into one overall interpretation, in order to enhance understanding of this complex phenomenon (Creswell, Plano Clark, Gutmann, & Hanson, 2003).

First, the project tested the relations between individual children's skills or behaviors and sociodramatic play engagement, with the goal of replicating and extending existing theoretical and empirical work to a diverse population. Next, the project identified and described peer subgroups in the classroom and tested the extent to which peer group membership was related to children's sociodramatic play engagement. Finally, the project described exemplary cases of children who engaged in high levels of sociodramatic play across classrooms to illustrate how certain individual factors and peer group factors mattered for those children's exemplary amounts of SDP engagement.

Sample

For this project, data was collected in five Head Start classrooms that were part of the ABCD Head Start network in the greater Boston area. ABCD Head Start offered two centers (one with four mixed-age preschool classrooms, the other with seven mixed-age preschool classrooms) from which participants could be recruited; both centers were located in Boston proper and shared the same program director. In the end, the five mixed-age classrooms that had the highest rates of returned consent forms were selected for the project. All teachers in these classrooms agreed to participate in the study.

All five classrooms had similar daily schedules until 2:00 pm (see Table 3.1 for a schedule example, which denotes the amount of time dedicated to each activity type), although two classrooms were extended day programs where children could remain until 5:30 pm, during which time they had an extended rest period and further opportunity for gross motor play. As all classrooms were overseen by the same director, they all used the same curriculum plans and had similarly-arranged physical environments. Each classroom had a carpeted "block area" (which was often supplemented with either animals, people figurines or vehicles), a water table, a sand table, two easels, a book

Table 3.1. Example of daily classroom schedule

Activity	**Time**	**Duration**
Arrival/Breakfast	8:30-9:05	35 minutes
Gross Motor Play	9:05-10:05	60 minutes
Morning Meeting/Introduction to Centers	10:05-10:20	15 minutes
Free Choice/Center Time	10:20-11:40	80 minutes
Read Aloud Group Story	11:40-12:00	20 minutes
Lunch/Toothbrushing	12:00-12:35	30 minutes
Quiet Activities/Rest	12:35-2:00	85 minutes

corner with small couches or bean bags, a "science table" with two chairs, a dramatic play area which had a "home" setup (in all participating classrooms this included a model kitchen with a small table, play food and dishes, and several dolls; some classrooms also

several dolls; some classrooms also had a dollhouse in this area) and three larger tables with between 4-6 chairs each. During free play periods, these tables were typically used for puzzles, manipulatives, or art projects.

Participants

Each of the five Head Start classrooms had between 13-16 students (73 total, across 5 classrooms); of these, 51 children received parental consent to participate in the study, but one child was dropped from the study because he moved prior to the beginning of data collection in his classroom. Therefore, there were 50 child participants in the final sample. Classroom teachers were also participants in the study, as they completed rating assessments of children's social behaviors. Children's parents participated by providing demographic data via questionnaire.

As expected for mixed-age Head Start classrooms, the participating sample of students was notably diverse. Overall, children were between 3- and 6- years old (mean = 49.7 months). Across the entire sample, racial and ethnic backgrounds varied, with white students comprising just a small portion of all participants (three classrooms with no white students, and two with less than 12% white) and a variety of home languages other than English represented. Head Start teachers are required to have a minimum of an Associate's Degree in Early Education or a related field; in this study, three teachers had Associate's Degrees, one classroom had a teacher with a Bachelor's Degree, and another had a Master's Degree. Tables 3.2 and 3.3 summarize the participants within each classroom and the characteristics of the five study classrooms, respectively.

Table 3.2. Summary of participants in five Head Start classrooms

Class	Center	Age range (months)	% Female	Races/ Ethnicities Represented	% Non-Hispanic White	Home Languages Represented	% Home Language: English	% on IEP
A	1	44-59	42%	Black, Mixed-Race, Hispanic	0%	English, Spanish, Cape Verdean Creole, Arabic, Somali	83%	8%
B	1	35-66	60%	Hispanic, Mixed-Race, Asian	0%	Spanish, English, Chinese	44%	10%
C	1	39-56	89%	Black, Hispanic, White	11%	English, Spanish, French Creole	33%	11%
D	1	37-65	50%	Black, Hispanic, Mixed-Race, White	10%	English, Spanish, Greek, Russian, Igbo	70%	10%
E	2	43-57	44%	Asian, Hispanic, Black, Mixed-Race	0%	Chinese, Spanish, English	44%	11%
All Classrooms (Full Sample)		**35-66**	**54%**	**Hispanic, Black, Mixed-Race, Asian, White**	**4%**	**Spanish, English, Chinese, Arabic, Greek, Russian, Cape Verdean Creole, French Creole, Igbo, Somali**	**56%**	**10%**

Note. Data is representative of students who had parental consent to participate (not full classrooms); Some children had English and another home language; Race/Ethnicity and Home Language data is listed in order of prevalence; IEP = Individualized Education Program

3.3. Classroom-level summary of five participating classrooms

Class	Center	Classroom Type	Teacher's Education	Class Size	Number of participants
A	1	Head Start	B.A.	16	12
B	1	Head Start	A.S.	13	10
C	1	Head Start	A.S.	14	9
D	1	Head Start Extended Day	A.S.	15	10
E	2	Head Start Extended Day	M.A.	15	9

Note. A.S. = Associate of Science; B.A. = Bachelor of Arts; M.A. = Master of Arts

Participant protections. Prior to collecting data, informed consent procedures approved by the Boston College Institutional Review Board were conducted. The director was consulted about which children and families had sufficient language and literacy skills in English to understand the procedures described to them and to ask questions about the study. As necessary, consent materials were translated for participants. Parent and teacher consent were obtained via a signed hard copy consent form. Classroom members who did not receive parental consent were not interviewed or assessed, and had their faces blurred if they were captured in other children's videos. Student assent was obtained by reading the assent form to students and probing them to evaluate their understanding of the study procedures, with assistance from school staff when necessary. All children who received parental consent agreed to participate; however, some children occasionally declined to wear a microphone while being video recorded. In these cases, children were recorded without wearing audio recorders clipped to their clothing (i.e., relying on the camera audio only; this occurred less than 5% of the time).

Data Sources

There are three main sources of data that were collected for this project: 1) naturalistic observations of children engaging in free play; 2) assessments and

demographic surveys to capture the skills and characteristics of individual participants; and 3) sociometric and semi-structured interviews with child participants. Data collection procedures and details are described in the following sections. The author of this dissertation conducted all data collection.

Data collection occurred during the spring of 2018. The period of data collection in each classroom lasted approximately three weeks, and occurred in three steps. During the first 3-4 days of data collection, the author met with children individually to introduce herself, the project, and familiarize the children with study materials, such as the camera and microphone. During this step, children completed an IQ assessment as a 'warm-up' activity. Next, video observations took place, over the course of approximately 5-8 days. Once all video observations had been completed, children were individually interviewed and administered language assessments; this final step usually took 3-4 days. Teachers were provided with surveys at the beginning of the data collection period for each classroom and asked to complete the forms by the completion of data collection. Parents returned questionnaires with demographic information along with the signed consent forms.

Classroom Observations

Preparation for recording. Each day, prior to collecting video data, the author logged any absences and children's clothing or identifying features, in order to return to the videos and identify children at a later date. A schedule was created for children to be followed in a randomly-selected order each day of video data collection. The schedule rotated through all of the children in the classroom four times. In the case of absence from school or other factors, a child's position in the rotation was shifted. Participants

were recorded four times, each on four different days; furthermore, all children were videotaped for a given round before any child was videotaped for the subsequent round (occasionally this was not possible due to back-to-back child absences, although no child was ever more than one round "behind" than any other child).

Notecards with identifying information and the date of data collection were created for all children and shuffled together in a random order. When a child's card came up, the author approached the child to let them know that it was their turn, and asked if it was okay if she attached the clip-on microphone to their shirt. The identification notecard was recorded in the first several seconds of every video as a means of ensuring proper identification in future coding.

Recording procedures. Video data collection used a focal procedure that captured video data during an approximately 80-minute child-directed free play times that regularly took place as part of the preschool classroom schedule. To account for a number of factors that could impact child play (e.g., preferences for certain classroom activities or materials that are expected to change within the classroom, child illness or lethargy on a given day, initial audience effects of being videotaped), the 20 minutes were collected in four 5-minute segments. This is in line with other play observation measures that recommend capturing at least 15 minutes of total play data but no more than 5 minutes of video data per child at a time (see Rubin, 2001) in order to capture the most valid measure of children's natural play styles. In cases where teachers had a special teacher-directed activity planned (e.g., requiring every child to make a thank-you card for another teacher, or inviting a musician), the author waited until the activity was finished, or postponed data collection by a day. As much as possible, the researcher

stayed to the side or corner of the classroom to be unobtrusive; for example, by using the zoom feature of the camera, instead of physically walking behind the child to record.

Video coding procedures. A partial interval coding technique as described by Chorney McMurtry, Chambers, and Bakeman (2015) was used. Interval coding provides a metric that is the proportion of intervals in which a given behavior occurred; a major benefit of this type of coding is that it captures the occurrences of particular types of behavior in a less time- and resource-intensive way than other coding techniques (Bakeman & Quera, 2011). This technique was useful in the case of the present study because it provided a means of comparing the proportion of time that a child is affiliated with a given peer. Video data was coded at 10-second intervals. This length of time could sufficiently capture a representative profile of a focal child's affiliative behavior; it was in line with interval length of other observational studies of children's play, and further, in pilot data coding, a shift in children's play type rarely happened more than once in a 10-second span. In this study, 120 observation intervals (four 5-minute video sessions x 30 ten-second intervals) were collected per participant (as focal child). The video data collected was coded using ProcoderDV software (Tapp, 2003), which can be used for marking and analyzing intervals and events in video and audio data. The program automatically paused the video after each ten-second interval to allow for coding the data of interest that occurred in the interval.

Affiliative behavior coding. To code children's affiliative behavior, or social patterns with classroom peers, child observations were collected using a focal individual sampling design; each interval was coded for the identity of each peer with whom the focal child engaged in affiliative behavior during the interval. Occurrences of any one of

three types of affiliative behaviors were counted: interaction, visual attention, or social proximity; therefore, it is possible that, in any given interval, a child may have more than one affiliated peer. Table 3.4 summarizes these three types of behaviors (the full coding manual can be found in Appendix 1), which were adapted from previous research on preschool subgroups (see Strayer et al., 2015).

Table 3.4. Summary of three types of affiliative behavior

Behavior	Definition	Example
Interaction	Peer who is involved in social exchange (whether initiator or recipient) with focal child	Peer puts a chef hat on and says "Hey, look at me" to the focal child, who laughs in response
Visual attention	Peer who receives visual regard from focal child	Peer stands at the opposite side of a table from the focal child and watches her play with dinosaurs
Social proximity	Peer who is within arm's reach (~3 feet) of focal child and engaged in the same/similar activity	Peer puts a diaper on a baby doll, while sitting next to the focal child who is giving a different doll a bottle

The author of this dissertation and a trained research assistant coded a randomly-selected 100 of the 200 video files for affiliative behavior. Reliability was established in two ways. To determine the reliability in individual codes across all five classrooms, coders overlapped (i.e., double coded) on a randomly-selected 20% of the video files. Chronbach's alpha (the reliability measure used by Santos and colleagues) was .98 across all codes in five classrooms, indicating high agreement between coders for affiliative behavior. However, since the purpose of this coding was to determine affiliative structures via hierarchical cluster analysis, it was also important to determine the reliability of the resulting clusters. As a next step, two classrooms were randomly selected for double coding in their entirety, and each coder's files were separately subjected to cluster analysis to compare whether the coding resulted in similar classroom

affiliative structures. One-hundred percent of the children fell into the same statistically significant clusters for each coder, indicating perfect reliability for clusters between coders.

Sociodramatic play coding procedures. Because social interaction among peers was a primary facet of this project, the play coding drew upon classic social play categories developed by Parten (1932). Like Rubin's Play Observation Scale (2001), this study integrated elements of cognitive play categories with social play categories in order to identify sociodramatic play (SDP), which was the primary play type of interest in this project, and was defined as "verbalizations or gestures directed toward one or more peers where the target child intends the other(s) to respond at least by listening, and the interaction is aimed at developing or maintaining a joint make-believe goal" (Elias & Berk, 2001, p. 224).

If the focal child was engaging in interactive play in a given interval, the coder determined whether the play was dramatic in nature (e.g., whether there was an element of pretense) and if so, marked the interval as SDP. Because this was the only play code of interest for the present study, any other type of play engagement (or non-play) was considered to be OTHER (see Table 3.5 for codes, descriptions, and definitions; a detailed play coding manual can be found in Appendix B). These two categories (like all other codes in this scheme) are mutually exclusive; therefore, any play that is not SDP must be coded OTHER). If SDP and another type of play occurred in a given interval, the coder "coded up" to give the focal child credit for the most sophisticated play (this is in line with other play coding schemes, e.g., Rubin, 2001).

The dissertation author coded all play data, and one-fifth of the files were

Table 3.5. Summary of Play Coding

Code	Description	Definition
SDP	Interactive Play with pretense	Focal child intends the other to respond (at least by listening) and interaction is aimed at developing or maintaining a joint make-believe goal
OTHER	Interactive Play without pretense	Focal child intends the other to respond (at least by listening) but no indication of make-believe
	Parallel Play	Focal child plays independently, but in awareness of and in proximity to other children
	Solitary Play	Focal child is focused on his/her own activity and pays little or no attention to other children
	Non-play	Focal child is not engaged in play

Note. Descriptions of play types in the OTHER category were for the purpose of more precise SDP coding, and were not used in analyses.

randomly selected and coded by a trained research assistant to confirm interrater reliability. The intraclass correlation coefficient (ICC) for Percentage of SDP coding was .98, indicating excellent interrater reliability (Koo & Li, 2016). Once coding and reliability processes were complete, the number of intervals of SDP were divided by the overall number of codable intervals for the child, providing a proportion of time spent engaging in SDP, which was the metric used for subsequent analyses. Using a proportion provided information about each child's play engagement on a normalized, continuous scale and accounted for unforeseen complications (e.g. sound issues). The average number of codable intervals across all students was 116.44 (out of 120 possible intervals) and ranged from 99 to 120.

Teacher presence in sociodramatic play. In a separate coding stream, coders marked intervals in which a teacher was present in children's play. An interval with teacher presence (TP) was operationalized as any interval in which a teacher was sitting or standing in a defined area where the child is playing, regardless of their proximity or

engagement with the target child (e.g., on a chair in the corner of the block area, when the child is playing on the floor in the opposite corner of the block area). Adapting from Kontos (1999), TP was coded in intervals where a teacher was present in the area that the children were playing, regardless of the extent of the teacher's engagement with students (e.g., the teacher could have just been sitting unengaged, or playing/conversing with the children). Teacher presence was also counted if a teacher was not in proximity to the child but interacting with the child distally (e.g., by calling across the room). In these cases, TP was only coded if the teacher's words were directed at the focal child. If the teacher was talking to a different child, TP was not coded. Again, one out of every five of the files was randomly selected and coded by a trained research assistant. The ICC for Teacher Presence was .87, indicating good interrater reliability (Koo & Li, 2016).

Individual Assessments

A battery of individual assessments was used to evaluate a set of students' linguistic, social, emotional, and cognitive skills. Data was collected in two ways: in direct assessment sessions with children, and from reports of children's behaviors and background provided by the child's classroom teachers and parents. For the direct assessments, each child accompanied the author to a quiet, private space in the child's school, and sat on the floor at a low table beside the author, who administered the assessments. Each assessment session lasted approximately 10 minutes. Children chose a sticker as a prize at the end of each session.

For the reports, teachers were provided a packet of questionnaires and were asked to complete the forms by the end of the data collection period (approximately 3 weeks). Teachers were compensated with a $75 gift card as thanks for their assistance

with the study. Parents were provided the demographic form with the consent form for the project, and all who agreed to participate in the study returned the demographic form along with the signed consent form.

Measures

Multilingual Assessment Instrument for Narratives (MAIN; Gagarina et al., 2012). The MAIN was used to capture indices of children's oral narrative ability due to its ecological validity (Botting, 2002), as narratives provide a rich source of information about children's communicative competence in a relatively natural setting (Gagarina, Klop, Tsimpli, & Walters, 2016). Moreover, due to the parallels with SDP (Nicolopoulou, 2007), a narrative assessment is an especially relevant measure of language competence for this study. The MAIN was created to assess the narrative skills of three- to ten-year-old children in multiple languages, and cultural variation was considered in the design of the measure (Pesco & Bird, 2016). The MAIN can be used to reliably assess monolinguals, bilinguals, and students with language impairments (Gagarina et al., 2016), making it particularly appropriate for assessing children in Head Start classrooms. Because teachers in this project reported that English was the social language medium of play in their classrooms and this project focused on social engagement with peers, children of all home language backgrounds were assessed with the English version of the MAIN.

The primary tool for the MAIN is a picture board with six panels used to illustrate each story; each of the stories in the assessment has three episodes with multiple characters (e.g., cat, birds, dog), and each episode has a goal (e.g., cat wants birds), an attempt (e.g., cat climbs tree to get birds), and an outcome for these characters (e.g., dog

pulls cat out of tree and saves birds). To serve as a model and aid children in understanding the task instructions, children first completed the story comprehension mode of the MAIN, in which the author used a six-panel picture set to tell a story. Next, the story generation mode was used to elicit children's narratives; children were asked to tell a story based on a parallel six-panel set. Video recordings of child narratives were transcribed by a native English-speaking research assistant using CHAT conventions (MacWhinney, 2000). To check the fidelity of each transcript, the narratives were reviewed by the dissertation author, a native English speaker; in a case of any discrepancy, both researchers reviewed the recording together and created a consensus transcript.

Two indices of expressive narrative ability were derived from the MAIN: a narrative productivity (NP) score – a measure of lexical diversity in student's narratives, and a narrative quality (NQ) score – a measure of children's ability to provide a clear, organized, and informative narrated story. A free online narrative calculation tool[1] was used to calculate *types*, or the total number of unique words used by a child in their narrative, which was the value used as the NP indicator. For NQ, the MAIN's "Production" coding scheme was used to code children's narratives. In this coding scheme, three components of children's narratives were evaluated: A) story structure, which counted the structural elements the three episodes in the story; B) structural complexity, which counted any sequences of Attempt-Outcome, Goal, Goal-Attempt/Goal-Outcome, or Goal-Attempt-Outcome that were included in the story, and C) Internal State Terms, which counted the number of tokens that indicated children's expression of characters' perceptions, mental states, emotions, etc. One out of five

[1] http://www.usingenglish.com/resources/text-statistics.php

narrative transcripts (two randomly selected from each classroom) were double coded to check interrater reliability. The ICC of .79 indicated good reliability (Koo & Li, 2016).

Primary Test of Nonverbal Intelligence (PTONI; Ehrler & McGhee, 2008). This direct assessment was used to capture children's cognitive ability, while limiting the impact of language on the estimation of their aptitude. This was particularly important in the current project due to the high numbers of students who did not have English as their home language, for identifying whether differences in children's play or social-emotional behaviors might be due to differences in mental age or cognitive issues. It requires minimal oral instruction and response, as children are provided a set of pictures (e.g., two black stars and a white star) and point to the one that does not belong in the set (e.g., the "different-colored" white star). Children move forward on the assessment until they err on 5 out of 7 consecutive items. It is designed for use with children as young as three years old, and the manual indicates concurrent validity with other measures of children's IQ, as well as adequate reliability when used to assess with children of diverse language backgrounds (Ehrler & McGhee, 2008).

Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, Sutton-Smith, Coolahan, Manz, Canning, & Debnam, 1995). This teacher report measure was selected to assess children's prosocial and problem behaviors. The PIPPS provides three subscales: play interaction, which will be used as an indicator of children's prosocial behaviors (e.g., comforting or helping); play disruption, which will be used as an indicator children's externalizing behaviors (e.g., aggressive or disruptive acts); and play disconnection, which will be used as an indicator of children's internalizing behaviors (e.g., withdrawal or social anxiety). In this 32-item questionnaire, teachers were provided 4-point likert-

scale items describing various social behaviors (e.g., "Encourages others to join play") and asked to indicate how often he or she has observed the behavior in children's play (from *never* to *always*). This assessment system was particularly designed for use with low-income, high-risk children living in urban areas, making it a particularly relevant measure for the population in the present project (Fantuzzo et al, 1995). The teacher report version has been shown to be reliable across teachers from diverse educational and cultural backgrounds and has been validated against other measures of social competence (Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998; Fantuzzo et al., 1995). T-scores of PIPPS variables were used for analysis in this dissertation (mean = 50, standard deviation = 10).

Behavior Rating Inventory of Executive Functioning - Preschool (BRIEF-P; Gioia, Espy, & Isquith 2003). This teacher report measure was selected as an indicator of children's self-regulation ability, which has been associated with aspects of SDP. Teachers were provided a 63-item questionnaire asking about children's difficulties in five areas: inhibitory control, shifting, emotional response, working memory, and organization/planning, and given three options (from *never* to *very often/always*) to respond to questions about children's behaviors in these areas (e.g., "is easily sidetracked"). For this dissertation, the global executive control (GEC) score, which captures inhibitory self-control, flexibility, and emergent metacognition skills, was used as a proxy for self-regulation. Raw scores were converted to T-scores (mean = 50, standard deviation = 10) and reverse-coded for ease in interpretation (higher scores indicated better self-regulation). The BRIEF-P has demonstrated good internal

consistency and convergent validity (Duku & Vaillancourt, 2014), and it has been previously used in studies of children in Head Start (e.g., Fuhs & Day, 2011).

Demographic form. The demographic form asked parents to report their highest level of education complete using categories from the Head Start Family and Child Experiences Survey (West et al., 2011). Parents were also asked to indicate their racial and ethnic background, languages that are spoken at home, and what they considered to be their child's first and most proficient language(s). Finally, parents were asked to indicate any suspected or diagnosed special needs.

Child Interviews

Sociometric interview. Following a widely-used protocol for collecting sociometric data from preschool-aged students (Asher, Singleton, Tinsley, & Hymel, 1979), each child was taken individually to a private space in their school for the interviews. Children were provided three containers labeled with a green smiling face, a yellow neutral face, and a red sad face. Using pictures of different kinds of food, the author modeled how to sort things they *always* liked to eat (happy container), *sometimes* liked to eat (neutral container), and *never* liked to eat (sad container). Children were then provided with a stack of food cards to sort into the containers. If the author felt that the child needed extra practice with the task, pictures of school activities were used for sorting. Once the author felt that the child understood the task and the purpose of the cups, children were provided name-tags that are part of the children's usual classroom materials (cubby labels). Name-tags were arranged in alphabetical order, and the same arrangement was presented to all children. The child was then asked to sort the name-tags: children with whom he or she *really* likes to play at school (happy box), sometimes

like and *sometimes* don't like to play with (neutral box), and those with whom he or she *doesn't* like to play (sad box). Children's responses were noted on paper, and transferred to an Excel spreadsheet after each interview.

Determination of social status. A sociometric method used in previous studies of social status (e.g., Asher & Dodge, 1986; Coie et al., 1982; Nelson, Robinson, & Hart, 2005) was used determine patterns of liking and classroom members' social status within their entire classroom. When considering social status among peers, social preference, or the level of children's acceptance (i.e., the degree to which a child is liked or disliked by his or her peers) may be distinct from children's perceived social status or social reputation (i.e., a child's power, impact, and visibility in the eyes of their peers), (Parkhurst & Hopmeyer, 1998), making it important to consider both the dimensions of preference and status when evaluating social status. Liking (L) and disliking (D) scores were tabulated and standardized (i.e., converted to z-scores) within each classroom. A social preference (SP) score was then calculated (L-D) and a social impact (SI) score was calculated (L+D). Next, the SP and SI scores were then standardized within each classroom so that children's social status relative to their peers could be evaluated.

Semi-structured interview. Upon completion of the sociometric interview the researcher put away the neutral and sad box. Then, all of the pictures in the happy box were removed and placed on the table in front of the child. The child was given his or her own picture and prompted to put it with the picture of the child that he or she likes to play with the most out of all the children. The child was then asked questions about his or her knowledge and perceptions of that most preferred peer in a semi-structured interview (see Appendix C for interview protocol). Based on pilot interviews, several

strategies and tools were used elicit conversation, including using markers and paper to draw the children's stories, and providing visual aids such as picture cards of classroom activities along with the photo name-tags. The semi-structured portion of the interview was video recorded and transcribed.

Data Analysis

Research Question 1

RQ1 tested the impact of various individual skills on SDP engagement in diverse Head Start classrooms in by asking:

- In mixed-age, culturally and linguistically diverse Head Start classrooms, to what extent does expressive narrative skill, prosocial play behavior, disruptive play behavior, and self-regulation ability explain the variance in the amount of time children engage in SDP controlling for mental age, gender, and teacher presence in play?

Hypotheses. Drawing from previous research, it was hypothesized that a child's narrative skill, prosocial behavior, disruptive behavior, and self-regulation abilities would be related with the amount of time the child engages in SDP, even when controlling for the effects of demographic factors and teacher factors. Specifically, narrative skill, prosocial behavior and self-regulation ability were expected to positively predict the amount of SDP engagement, while the disruptive behavior was expected to negatively predict the amount of SDP engagement.

Statistical Procedures. All statistical procedures were conducted in Stata 14 (Statacorp, 2016). Data were first examined for outliers using visual inspection of scatterplots; no data points were removed. For all variables, the amount of missing data

ranged from 0% to 8% and was determined to be missing completely at random using Stata's *mcartest* function (Li, 2013). To maximize statistical power, multiple imputation was used to address missingness (10 imputations). Visual inspection of scatterplots and histograms was supplemented with evaluation of descriptive statistics to check assumptions of linear regression (acceptable limits of skewedness and kurtosis set at ±2). Due to evidence of heteroskedasticity and non-independence of the classroom data, models were estimated using cluster robust standard errors. There was also evidence of multicollinearity (r = .796*) between the two components of expressive narrative language (i.e., productivity and quality) and only Narrative Productivity was significantly correlated with the outcome variable. Given that previous research that has demonstrated that lexical and structural narrative ability are distinct oral language skills (Pearson, 2002; Uccelli & Páez, 2007), only Narrative Productivity was used in the analysis.

Blockwise hierarchical regression analyses were conducted to address RQ1. This analytic approach is useful for selecting the most salient variables from a large number of potential predictors in cases of small samples. It relies on the researcher's expertise because the order in which variables are entered into the model is based on conceptual bases determined by the researcher, and not by a computational statistical procedure, such as in stepwise modeling (Fox, 1991). Preliminary blockwise analyses can be used to determine whether a significant amount of additional variance might be explained by given variables, as a means of selecting predictors from all candidate variables for the final model.

Here, a series of blockwise regressions was used to assess the unique contribution of variables that could explain the variation in children's sociodramatic play. Block 1

included the demographic control variables of mental age and gender. These were included first because they characterize children in basic ways that are not a function of sociodramatic play. Next, teacher presence was entered in Block 2 to control for the amount of time a teacher spent with a child during free play. Blocks 3 and 4 were used to assess the contributions of children's individual skills, the predictors of interest. Because children's social behavior has been shown to vary as a function of their language skill, Narrative productivity (entered in Block 3) was given priority over the social behavior variables (Prosocial behavior, Disruptive behavior, and Self-regulation; entered in Block 4). *F*-tests were used to determine significance by comparing R^2 values between each additional block of variables that was added to the model. Individual skills in blocks that did not significantly contribute to the variance in SDP engagement were not selected for the final model. As a last step, a final multiple regression model was built using the selected predictors and controls to determine the extent to which each variable uniquely contributed to the variance in SDP engagement when tested simultaneously.

Research Question 2

RQ2 identified and described the peer networks in the five Head Start classrooms that were studied in this dissertation by asking:

- What are the peer networks in five mixed-age, culturally and linguistically diverse Head Start classrooms, and what are some demographic and social preference characteristics of the subgroups identified in these networks?

Identification of peer groups. Affiliative subgroups of children were determined using hierarchical cluster analyses, as described by Santos, Daniel, Fernandes, and Vaughn (2015). For each classroom, the observed frequencies (number

of intervals in which a focal child [listed in rows] was observed with a given peer [listed in columns]) were tabulated in an asymmetrical dyadic co-occurrence matrix. Next, each matrix was rotated on its major diagonal and added to itself, creating a symmetric co-occurrence matrix for each classroom (ab = ba). In other words, at this point, each cell in a matrix contained the total the number of intervals that the dyad was ever affiliated with one another, regardless of which member was the focal child. The matrix was then divided by the total number of intervals in which the dyad could have been observed interacting (e.g., accounting for the number of intervals that a child was absent during the other child's observation sessions, and for children who did not have parental consent to participate and were never observed as focal children). Following recommendations to ensure that the dyadic correlations were meaningful (Santos, personal communication; Santos et al., 2015), across all classrooms, the number of observable intervals per dyad was at least 100 (mean observable intervals = 131.22), and all children were present for at least half of the observation rounds (mean rate of absence for the observation period = 13.5%).

These five matrices, which contained information about the similarity of affiliative profiles of classroom members, were subjected to Hierarchical Cluster Analysis (HCA) using Stata statistical software (Statacorp, 2014). This technique is useful for identifying subgroups (or clusters) within a sample based on some similarity; it is particularly useful when the number of subgroups is not known *a priori.* Following Santos et al. (2008) and Daniel et al. (2015), the similarity matrices were submitted to a complete-linkage clustering algorithm (often referred to as "farthest neighbor" method), using Pearson correlations as frequency-independent measures of association. This

method separates clusters based on the largest distance between any pair of objects within the clusters, creating very distinct groups, and makes it difficult to add new objects to existing subgroups at each clustering step. As such, the resulting compact clusters have members with greater profile similarity, and effectively serve the present purpose of identifying classmates with similar affiliative profiles.

Dendrograms, or graphical representation of the distances between merged cases at different steps of a cluster analysis, can be used to illustrate the distances between formed clusters, and were used to identify clusters. To validate the clusters identified in the dendrogram, still following methods used by Santos, Strayer and colleagues (Santos et al., 2015; Santos et al., 2008; Daniel, et al., 2015), the average within-cluster correlation coefficient ($p < .05$) was used to then confirm the integrity of the identified clusters. In the end, all children who were determined to be "affiliated" were positively correlated with their cluster-mates, in contrast to those "ungrouped", whose profile did not cluster or correlate with any other students.

Determination of peer group type. Next, children who were affiliated (i.e., fell into subgroup clusters) were split according to the level of mutual cohesion among co-members. Subgroups were considered more cohesive or tightly affiliated if each member of the subgroup directed a significant proportion of their overall affiliative activity towards subgroup peers. Methods designed by Santos et al., (2008) were used distinguish between two types of subgroups: those with high mutual proximity (HMP), in which *all* subgroup members are associated with each other at levels greater than chance, or those with low mutual proximity (LMP), in which at least one member of the subgroup directs affiliative behavior towards subgroup peers at or below chance levels. In order to

tabulate the 2x2 contingency tables, these analyses could only be conducted for subgroups in which all members had permission to participate. Using the contingency tables, members of these subgroups were tested using Chi-Square analyses ($> \chi^2(1)$ with $\alpha = .001$; the observed value = $\Sigma_a o_{ab}$ for subgroup member a, and expected_a = (n-1) x $\overline{o_{ab}}$ where n equals subgroup size). If $p \leq .001$ for any of these χ^2 tests, the subgroup was categorized as LMP. In cases of low cell counts, Fischer's exact test was used in place of Chi-Square. As acknowledged by others who have used this method to determine the cohesiveness of social subgroups, it is also acknowledged here that the predetermined significance level is an arbitrary distinction between affiliative subgroup types.

Demographic and social preference description of subgroups. Using parent-reported demographic information, subgroups were analyzed with regard to gender, race/ethnicity, home language status, and chronological age. Data from the child interviews was analyzed to determine whether there was mutual liking (i.e., if the children nominated each other as "really like" in the sociometric interview) and if there were any best friendships that were either unreciprocated or reciprocated among affiliates. To facilitate the analysis, information from the database was mapped onto the dendrograms using the *labels* function of HCA in Stata.

Research Question 3

RQ3 tests the influence of the type of subgroup membership on SDP engagement by asking:

- In mixed-age, culturally and linguistically diverse Head Start classrooms, does the type of subgroup membership (Ungrouped, Low Mutual Proximity, High

Mutual Proximity) predict the amount of sociodramatic play engagement controlling for mental age, narrative productivity, gender, and teacher presence in play?

Hypothesis. HMA subgroups are often marked by mutual friendship, and all members are likely to play together as a group. In LMA subgroups, children are "bound" by at least one member, although there may be less reported mutual preference. Ungrouped children do not have the same set of regular play partners. It was hypothesized that the more "tightly bound" groups of children were (i.e., Ungrouped < LMA < HMA), the more motivated they would be to engage with each other and better equipped they would be to anticipate other' scripts, social moves, and play routines, and consequently be able to engage in increasingly more sociodramatic play, even when controlling for individual factors that can impact SDP engagement.

Analytic plan. As noted previously, only subgroups with permission for all members were included in the analysis. Seventeen students whose subgroup status could not be determined because their clustermates were not study participants were dropped from the analysis. Remaining data was checked for assumptions of linear regression using visual inspection of scatterplots and histograms, and consideration of descriptive statistics and bivariate correlations. The assumption of independence was not met due to the nested structure of the data; however, the sample size was too small to employ multilevel modeling techniques, and therefore all models were estimated using cluster robust standard errors. Using Stata's *xi* command, subgroup status was specified as the indicator variable (e.g., data was "dummy coded" into the three types of subgroup status);

Ungrouped was the reference variable. Gender, Narrative Productivity, Mental Age, and Teacher Presence were included as covariates in the model.

Research Question 4

The purpose of RQ4 was to describe some exemplary cases of children who engage in high amounts of SDP in light of Phase 1 and 2 findings by asking:

- For students who engage in exemplary amounts of sociodramatic play in mixed-age, culturally and linguistically diverse Head Start classrooms, how do their individual profiles (including demographic characteristics, skills, perceptions, and play) and their experiences with peers relate to their amount of SDP engagement?

This question was explored to provide a deeper, more comprehensive understanding of individual skills and peer group factors that contribute to high levels of SDP, and to provide some illustration of these factors.

Analytic strategy. A multiple case study approach was selected for data analysis. Multiple case studies are empirical descriptions of specific instances of a phenomenon that are derived from a rich variety of data sources (Yin, 1994), and are developed by identifying patterns among constructs within and across cases (Eisenhardt & Graebner, 2007). In this study, the units of analysis were exemplary cases of students who engage in high levels of SDP; these were studied to provide a more detailed and nuanced description of relations between individual students' skills and peer factors and high levels of SDP engagement. The research question was addressed following Yin's (1994) recommendation that allowing a proposition or theoretical orientation to guide the analysis can be central to developing a high-quality, focused, and organized case study.

The proposition underlying this dissertation is that both individual factors *and* peer factors both matter greatly for sociodramatic play engagement. Therefore, an analytic protocol was developed to illustrate and describe some connections among these two sets of factors in cases of exemplary amounts of SDP using both quantitative and qualitative data.

Selection of cases. Purposive sampling, or the selection of information-rich cases that can lead to a depth of understanding and effective use of limited resources (Patton, 2002), was employed to select the students that would be the units of analysis; such sampling allows for comparability across cases that share similar contrasts with other cases (Teddlie & Yu, 2007). Exemplary cases of students who engage in high amounts of SDP were selected from classrooms, as a means of providing deeper insight on how children's individual characteristics and skills, as well as aspects of their peer experiences, may matter for successful SDP engagement. A case was sought from each classroom by 1) standardizing the amount of SDP engagement by classroom, 2) identifying students who engaged in more than one standard deviation above the classroom SDP average, and 3) confirming that all members of that child's affiliative subgroup were included in the sample. Because a goal of this RQ was to discuss these children in light of their peers, children who did not have subgroup members with analyzable data (i.e., without parental consent) were not selected as cases.

Within-case analysis. A descriptive profile of each case child was developed by using information extracted from a variety of data sources, including videotaped observations of children's play, parent reports of demographic characteristics, scores from assessments of students' and their peers' skills and behaviors (including

consideration of individual items from teacher reports), sociometric data, and semi-structured interviews with students. Information about children's skills, perceptions, and play were triangulated across data sources. Data were examined both quantitatively and qualitatively to describe how both the individual and peer factors related to SDP. For example, individual items that were rated as extremes by teachers (e.g., scores of 1 (*never*) or 4 (*always*) on the PIPPS) were interpreted as particularly characteristic behaviors for a child and triangulated in qualitative analyses of interview and video data. To compile the data, first, individual factors related to the SDP of each case child were summarized. Next, a profile of the case child in relation to her primary social subgroup members and to her full classroom of peers was developed. Finally, a word table, or a uniform framework to capture and display individual case findings (Yin, 1994), was created for each case.

Cross-case synthesis. Individual case profiles were then collectively compared to identify patterns in the skills sets and peer factors across these four children who displayed high amounts of SDP in their respective classrooms. The four case study word tables were aligned in a matrix array that allowed for comparison (Miles & Huberman, 1994), so that trends and patterns in findings across all four cases could be identified.

Chapter 4: Results

This chapter presents the results for the four research questions in this study. First, results of multiple regression analyses from RQ1 are reported. Then, findings from RQ2 are presented in three parts: 1) identification of the subgroup structures in each full classroom, 2) determination of the types of affiliative subgroups, and 3) description of the demographics and characteristics of the subgroups in which all children had permission to participate. Next, results from the regression analysis for RQ3 are reported. Finally, findings from RQ4 are organized into four within-case descriptions of each of the selected children and a fifth section that describes themes that emerged across the four cases.

Research Question 1

Preliminary Analyses

Table 4.1 reports the descriptive statistics for the model variables. A review of bivariate correlations between predictor and outcome variables were in the expected directions (see Table 4.2). Narrative Productivity, Gender (being female), and Teacher Presence were the only variables significantly and positively correlated with the outcome

Table 4.1 Descriptive statistics of model variables for RQ1

Variable	Mean	SD	Range
Percentage SDP	14.67	15.75	0 - 66.39
Narrative Productivity	25.33	15.56	0 - 61
Narrative Quality	12.2	8.45	0 - 31
Prosocial Behavior	50.92	11.41	22 - 67
Disruptive Behavior	46.24	8.12	26 - 62
Self Regulation Skill	88.96	15.08	38 - 109
Gender		56% Female	
Mental Age	41.52	11.09	25.16 - 68.58
Teacher Presence	27.36	16.84	0 - 87

Table 4.2. Bivariate correlations of model variables for RQ1

	1	2	3	4	5	6	7	8	9
1. Percentage of SDP	--								
2. Narrative Productivity	0.447**	--							
3. Narrative Quality	0.247	0.796***	--						
4. Prosocial Behavior	0.267	0.373*	0.574***	--					
5. Disruptive Behavior	-0.053	-0.019	0.074	-0.043	--				
6. Self-Regulation Skill	0.06	0.211	0.146	0.083	-0.497***	--			
7. Gender	0.322*	0.349*	0.183	0.115	-0.394**	-0.108	--		
8. Mental Age	0.254	0.510***	0.513***	0.335*	-0.214	-0.402**	0.222	--	
9. Teacher Presence	-0.286*	-0.317*	-0.249	-0.201	0.0257	-0.057	-0.312*	-0.126	--

Note. * $p < 05$; ** $p < .01$; *** $p < .001$; Gender was coded 0=male, 1=female

variable Percentage of SDP. The two narrative variables (Productivity and Quality) were strongly correlated with each other (r=.796*), suggesting multicollinearity. The first block, which included for the demographic variables of Mental Age and Gender, accounted for 13.9% of the variance in the model. Block 2 controlled for the amount of Teacher Presence in children's play and accounted for an additional 3.9% of the variance after accounting for Block 1; however, this was not a significant increase in R^2 (p = .16). Block 3 tested children's language ability after controlling for Blocks 1 and 2, and indicated a 7.7% increase in R^2 that was associated with Narrative Productivity (F (1, 41) = 4.76, p =.03). Block 4 addressed children's Prosocial, Disruptive, and Self-Regulation behavior after controlling for Blocks 1, 2, and 3, and showed a 1.8% increase in R^2, which was not significant (p = .79). In consideration of these preliminary blockwise results (reported in Table 4.3), the variables Mental Age, Gender, and Narrative Productivity were selected for the final multiple regression analysis.

Table 4.3 Results from Blockwise Hierarchical Regression Analysis

Block	*F*	*df*	*Residual df*	*p*	R^2	*Change* R^2
1	3.47	2	43	0.040*	0.139	
2	1.99	1	42	0.166	0.178	0.039
3	4.22	1	41	0.046*	0.254	0.077*
4	0.31	3	38	0.815	0.276	0.018

Note. Block 1 = Mental Age, Gender; Block 2 = Teacher Presence; Block 3 = Narrative Productivity; Block 4 = Prosocial behavior, Disruptive behavior, Self-Regulation; * indicates $p \leq .05$

Final Multiple Regression Analysis

Results of the multiple regression model (reported in Table 4.4) indicated that 22.8% of the variance in the amount of SDP engagement was explained by the final set of variables tested simultaneously; when adjusted for sample size and the number of

independent variables, the amount of variance explained was 17.8%. The only independent variable that maintained a significant unique contribution toward children's SDP in the final model was Narrative Productivity (b =.30, *S.E.* = 0.14, p = .03); thus, an increase of 10 unique words in a child's narrative production predicted a 3.6% increase in the amount of a child's SDP, controlling for mental age and gender. Mental age (p = .83) and Gender (p = .98) did not significantly predict the amount of SDP engagement, although Gender approached the .05 criterion for statistical significance (p = .07).

Table 4.4. Results of final multiple regression on Percentage of SDP

	b	***S.E.***	***p***
Narrative Productivity	0.361	0.148	0.019*
Gender	6.484	3.446	0.067†
Mental Age	0.044	0.205	0.831
Constant	0.165	7.786	0.983

Note. * indicates $p < .05$; † indicates $p < .10$

Research Question 2

Peer Networks Across Five Classrooms

RQ2 first identified the elements of each classroom's peer network by identifying the subgroup structures and children who did not have a regular social subgroup. A total of 22 subgroups were identified across all five classrooms (inclusive of all classroom members, regardless of participation status). Of these, five were triads (which was the largest sized subgroup that was significantly clustered across the sample); the other 17 were dyads. There were 24 children who remained ungrouped. Figure 4.1 presents results from the HCA in the form of dendrograms for each classroom. The horizontal reference line on each dendrogram indicates the cutoff point for subgroup membership for each classroom (i.e., clusters with horizontal connectors below the line are correlated

at the $p < .05$ level; those above are not). Table 4.5 summarizes the number of ungrouped students, dyads, and triads in each classroom. Further analysis of structures at the classroom level was not possible, due to restrictions related to students who were not consented participants (these students are indicated by **?** on the dendrograms in Figure 4.1)

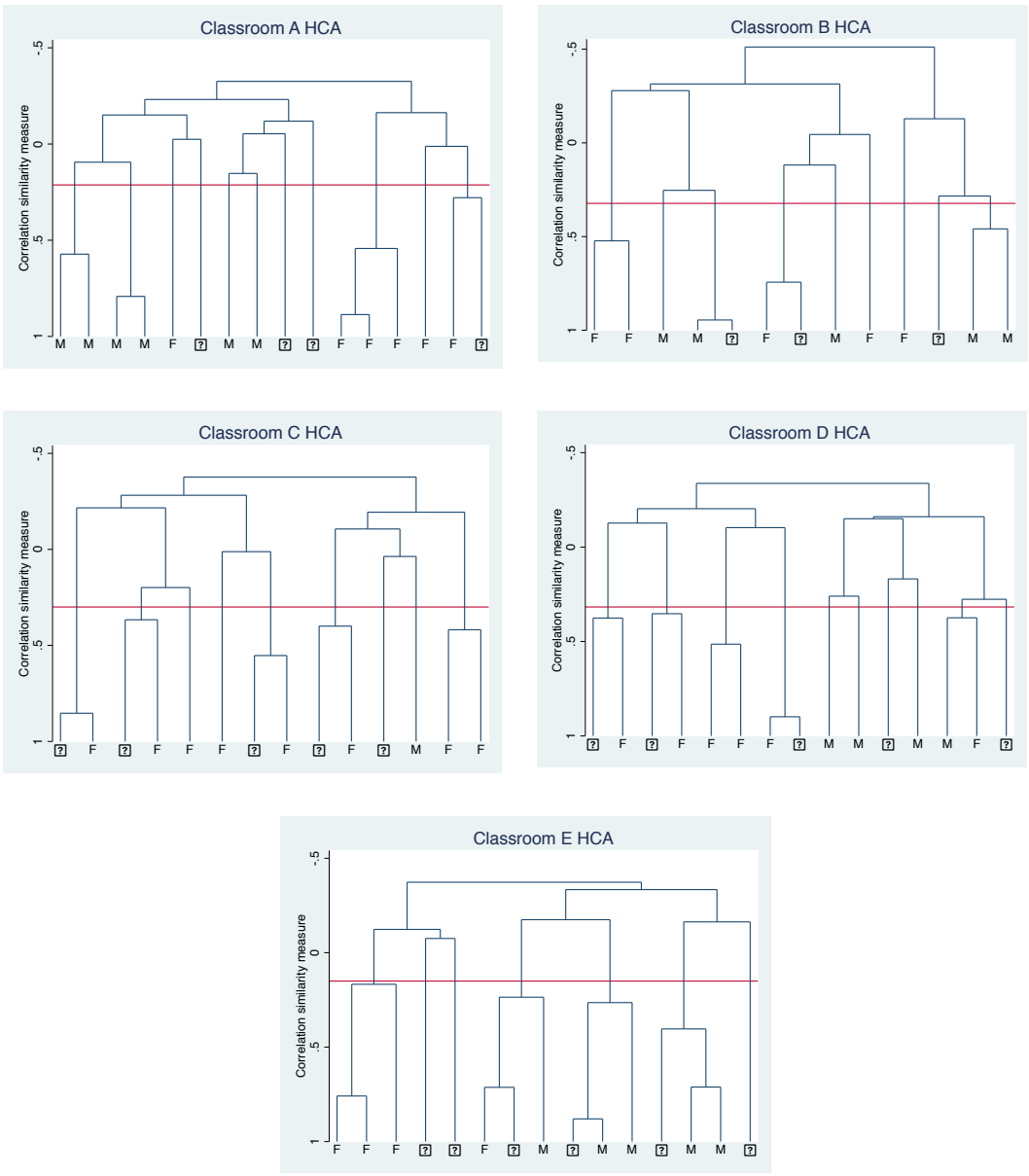

Figure 4.1. Dendrograms illustrating five Head Start classrooms' peer networks derived from Hierarchical Cluster Analyses (HCA)

Table 4.5. Summary of affiliative structures in five Head Start classrooms

	Ungrouped Students	Dyadic Subgroups	Triadic Subgroups	Total Number of Students
Classroom A	7	3	1	16
Classroom B	5	4	0	13
Classroom C	4	5	0	14
Classroom D	5	5	0	15
Classroom E	3	0	4	15

Subgroup Types Across Five Classrooms

To distinguish between high mutual proximity (HMP) and low mutual proximity (LMP) subgroups, Chi-Square analyses were conducted for all dyadic combinations (i.e., one χ^2 test for dyads, but three for triads) in subgroups where every member had permission to participate. These results are summarized in Table 4.6. In total, there were 9 subgroup clusters (20 students) that were analyzed. Of these, three subgroups (two dyads, one triad; 7 students) had χ^2 (or Fischer's exact) result with $p \leq .001$ among at least one pair of subgroup members, and were categorized as LMP. Six subgroups (five dyads, one triad; 13 students) had a χ^2 (or Fisher's exact) result with $p > .001$, and were categorized as HMP.

Description of Subgroups and Ungrouped Members

Although 22 subgroups were identified across all classrooms, some of them contained students whose caregivers did not consent to participation in this project, and thus, for whom individual data was not collected. A descriptive analysis was conducted for each of the nine subgroups that were complete (i.e., in which all students had permission to participate). To highlight aspects of within-group similarity (i.e., homophily) and social preferences of these nine affiliative groups, similar characteristics, mutual reported liking, and best friendship (both reciprocated and unreciprocated) are

Table 4.6. Results of analyses to distinguish LMP and HMP subgroup types

Group	Size	χ^2	*p*	Subgroup type
1	Dyad	n/a	0.001***	LMP
2	Dyad	0.7939	0.373	HMP
3 (AB)	Triad	2.438	0.118	HMP
(BC)		0.1882	0.664	
(AC)		3.7488	0.053	
4	Dyad	1.4844	0.223	HMP
5	Dyad	n/a	≤ .001***	LMP
6	Dyad	0.072	0.788	HMP
7	Dyad	0.57	0.45	HMP
8	Dyad	0.2298	0.632	HMP
9 (AB)	Triad	10.8307	0.001***	LMP
(BC)		n/a	≤ .001***	
(AC)		n/a	≤ .001***	

Note. n/a indicates that Fisher's Exact test was conducted due to small cell counts; *** indicates $p \leq .001$, the arbitrary threshold for LMP/HMP distinction.

illustrated in Figure 4.2. As noted in the description of the sample provided in Chapter 3, students in all classrooms were quite diverse with regard to gender, age, language, race, and ethnicity.

In terms of the subgroups identified in this sample, gender-homophily was the most prevalent type of demographic similarity seen in the sample; nearly all subgroups were comprised of students who shared the same gender; only one was mixed gender. Four of these same-gendered subgroups were male (all dyads) and the other four were female (two dyads, two triads). There was much less homophily noted in terms of children's chronological age; only three subgroups contained students who were born less than three months apart, another two contained students born within a six-month span, and the difference in ages of affiliates in the other four subgroups ranged from 8-17 months between the oldest and youngest subgroup member. There were also high levels of shared home language background in affiliated students. In two of the subgroups, students did not share a home language. Among the remaining seven subgroups, English

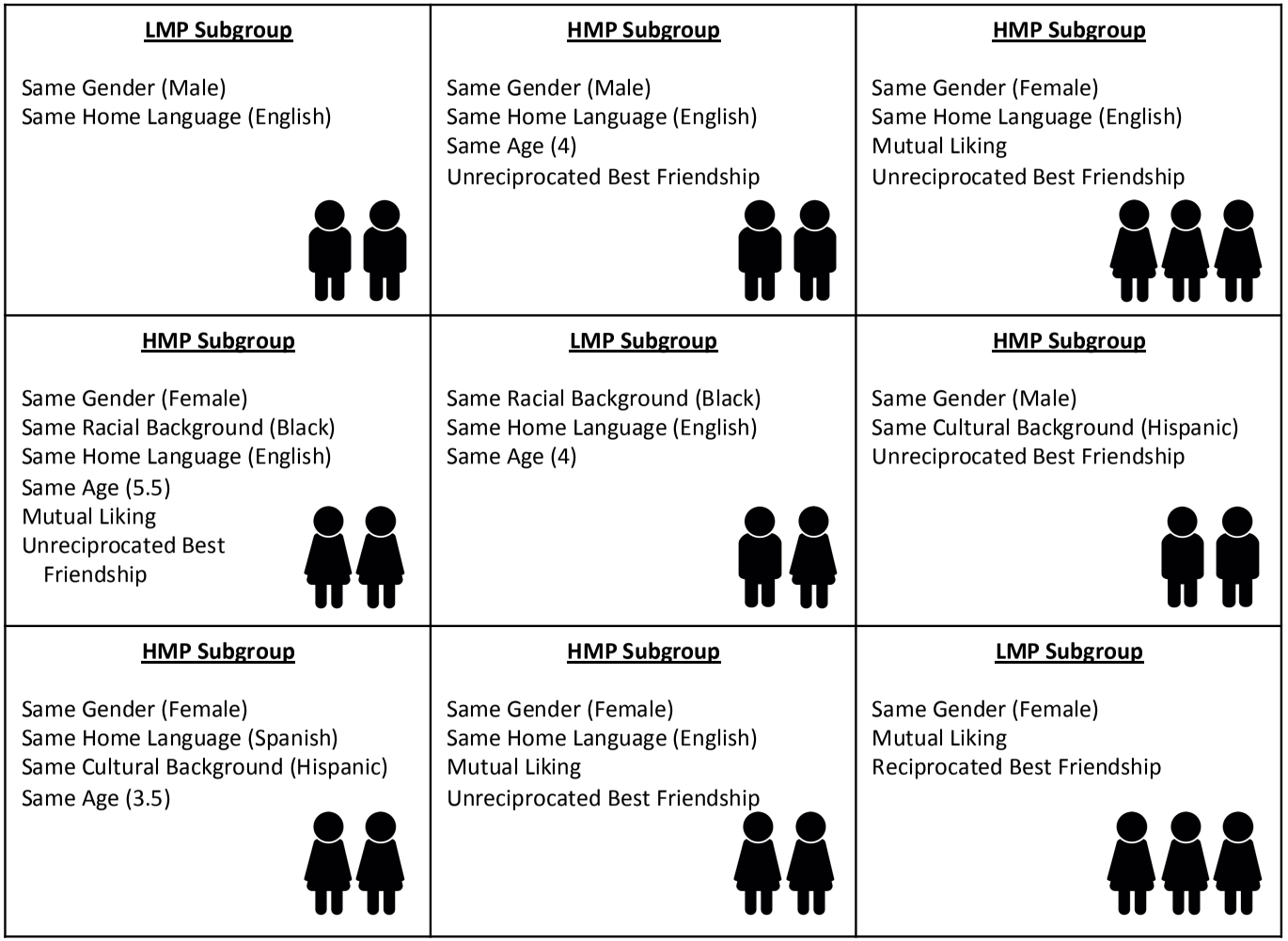

Figure 4.2. Illustration of similarities and within-group social preferences among members of nine preschool subgroups. HMP = High Mutual Proximity Subgroup, LMP = Low Mutual Proximity Subgroup. Same Age indicates birthdates within a 3-month span (age in years in parentheses

was the most common home language (although it should be noted that in some cases, students had more than one home language, besides English). One dyad shared Spanish as a home language. Findings were mixed with regard to children's racial or ethnic background; four subgroups were comprised of students who shared a racial or ethnic background (two Black, two Hispanic), while another four subgroups were made up of students who came from a mix of backgrounds. One subgroup could not be analyzed in terms of racial or ethnic background because a parent chose not to report their child's race or ethnicity. Social preferences among subgroup affiliates were also analyzed. In only three subgroups, students mutually identified the other subgroup members as people they usually liked. In one of the triads, mutual liking occurred among two of the three subgroup members. However, more often than not (5 out of 9 subgroups), students did not nominate another affiliate as someone he or she usually liked. When asked to choose a best friend in the class, five of the nine subgroups contained unreciprocated best friendships (i.e., at least one member of the group nominated a best friend who was an affiliative subgroup member, and at least one member did not), and there was only one subgroup in which students all nominated other subgroup members as best friends.

Research Question 3

Preliminary Analyses

Descriptive statistics (summarized in Table 4.7) were reviewed to confirm some basis for hypotheses; on average, ungrouped children engaged in less SDP than members of LMP subgroups, who themselves engaged in less SDP than members of HMP subgroups, indicating it reasonable to move forward with the regression analysis. Bivariate correlations of model variables were in the expected directions (see Table 4.8).

Table 4.7. Descriptive statistics of SDP engagement, by affiliative structure type

Affiliative Structure	**N**	**Mean**	**St. Dev.**	**Range**
Ungrouped	13	7.27	7.43	0 - 19.49
LMP subgroup	7	15.48	12.29	0.84 - 33.65
HMP subgroup	13	21.03	20.4	0 - 57.5

Table 4.8. Bivariate Correlations of Model Variables for RQ3

	1	2	3	4	5	6	7	8
1. Percentage of SDP	--							
2. Ungrouped	-0.376*	--						
3. LMP Status	0.035	-0.418*	--					
4. HMP Status	0.346*	-0.650**	-0.418*	--				
5. Narrative Productivity	0.455*	-0.282	0.06	0.22	--			
6. Gender	0.401*	-0.26	0.027	0.238	0.494**	--		
7. Mental Age	0.183	-0.293	0.225	0.105	0.476**	0.192	--	
8. Teacher Presence	-0.465**	0.238	-0.445**	0.135	-0.312	-0.314	-0.042	--

Note. * indicates $p < .05$; ** indicates $p < .01$, Gender was coded 0 = male, 1 = female

Ungrouped status was significantly negatively correlated with Percentage of SDP while Narrative Productivity, Gender, and HMP status were significantly positively correlated with Percentage of SDP. Narrative Productivity was significantly positively correlated with Mental Age and Gender. Teacher presence was significantly negatively correlated with SDP engagement and LMP subgroup membership.

Multiple Regression Analysis

Results of the regression analysis, reported in Table 4.9, partially confirmed hypotheses, indicating a significant predictive relationship between HMP subgroup status and the Percentage of SDP engagement, when controlling for Narrative Productivity, Mental Age, Gender, and Teacher Presence (b = 12.51, *S.E.* = 5.52, p = .03). Being a member of a High Mutual Proximity subgroup predicted a 12.5% increase in the amount of SDP engagement. Contrary to hypotheses, there was no significant difference between the SDP engagement of ungrouped children and children in LMP subgroups (p=.28).

Table 4.9. Results of Multiple Regression Model for Percentage SDP Outcome

	b	***S.E.***	***p***
Low Mutual Proximity (LMP)	-1.718	8.505	0.842
High Mutual Proximity (HMP)	12.508	5.522	0.034*
Narrative Productivity	0.214	0.180	0.247
Mental Age	-0.048	0.217	0.827
Gender	2.219	4.863	0.653
Teacher Presence in SDP	-0.499	0.228	0.039*
Constant	19.038	11.225	0.104

Note. * indicates $p < .05$; Ungrouped is the reference variable

Research Question 4

Selection of Cases

Across five classrooms, nine study participants (eight girls and one boy) engaged in a level of sociodramatic play that was more than one standard deviation above their

respective classroom average. Of these students, five were excluded from the selection of cases because they did not have subgroup peers who were consented to participate in the study. In all, 4 out of the 5 classrooms had children who met all of these criteria and were selected for the descriptive case study analysis. No case was selected from Classroom 2 because none of the students in that classroom who engaged in one standard deviation above the classroom play average had affiliative subgroup partners with consent to participate in the study.

Case Descriptions

Delia. Delia[2] was an almost 5-year-old black girl whose primary home language was English, although Spanish and Cape Verdean creole were also spoken in her home. She was captured engaging in sociodramatic play nearly 47% of the time that she was observed for this dissertation, and this type of play never took place in the presence of a teacher. When asked about her favorite things to play, Delia described sociodramatic activities, such as "Spiderman" and "taking care of the babies". In fact, she was seen engaging in baby doll play in several different video observations. According to reports by her teachers, she always encourages others to join play, comforts others who are hurt or sad, and shows positive emotions such as smiling and laughing. Furthermore, she always verbalizes stories during play and shows creativity in inventing play activities. Indeed, Delia was observed making up pretend scenarios, often involving "family" activities, such as a shopping excursion, or cleaning up the house.

In general, Delia had average social impact scores within her classroom, but high levels of social preference, suggesting that she was generally well-regarded, but perhaps had less social influence or power across the classroom. Delia affiliated most with two

[2] All names used in the case study descriptions are pseudonyms.

other girls in her class, 3½ year-old Zoe and 4½ year-old Annie. These three girls were members of a highly cohesive subgroup, which was corroborated by observations of their classroom play and conversations with them about their peer preferences. For example, besides being seen interacting frequently at school, these girls indicated that some of their social engagement also takes place outside of the classroom by giving examples of playing at each other's houses, further highlighting the high cohesiveness of this social subgroup. There was also evidence of mutual social preference among the subgroup members. In particular, Delia considered Zoe to be her best friend in the classroom, although this sentiment was not reciprocated by Zoe. However, Annie nominated Delia as *her* best friend. Best friendship aside, importantly, all three girls reported always liking each other. Delia, Annie and Zoe shared English as one of their home languages. All three girls also had darker skin than many of their classmates; however Zoe and Annie, unlike Delia, came from mixed-race backgrounds. Delia explicitly acknowledged the differences in their skin color when she describes Zoe, saying "she only this color, but I'm black in the dark", but later noted that they all like to take care of the black babies. These examples highlight how race and ethnicity may have been a salient element of this group's composition and play.

While Delia engaged in more sociodramatic play than the other two subgroup members, all three girls engaged in above-classroom-average levels of sociodramatic play. Compared to the other two members of this subgroup, Delia demonstrated the lowest level of disruptive behaviors, the highest level of prosocial behaviors and self-regulation skills, and also used the greatest numbers of unique vocabulary words in her narratives -- a strong combination of individual skills that might help explain her

exceptionally high levels of SDP. However, it may also be the skills collectively held by the subgroup that served Delia well in her sociodramatic activities. For instance, all three of the group members had both narrative productivity and quality skills that are higher than the classroom average. This idea was further supported by classroom teacher reports indicating that verbalizing stories during play is something that all three girls always do. This was confirmed by observations of Delia's subgroup's classroom play captured on video; when members of this group engage in sociodramatic play together, there was a consistent running dialogue in which some member of the group was verbally directing or narrating the ongoing scenario.

Ariela. Ariela was a 3 ½-year-old girl from a mixed-race background who spoke Spanish and English at home. She engaged in sociodramatic play 57.5% of the time that she was observed, and rarely (less than 5% of the time) did this play occur in the presence of a teacher. Besides frequently playing in the classroom's kitchen area, she also engaged in more abstract sociodramatic play scenarios, such as going to the movies and a rollercoaster. When asked about her favorite things to do at school, she mentioned "play house, play toys and... my baby, put it in place", referencing some materials in her classroom's dramatic play center. Her strongest social skills, according to her classroom teacher's reports, are that she often helps and shares toys with other children, shows positive emotions (e.g., smiling, laughing) during play, and is creative in making up play stories and activities. However, her teacher also reported that she always fights when she disagrees with others, although no fights or disagreements were captured in the video observations collected for this dissertation. Ariela was on an IEP for speech and language support.

Across all classroom peers, Ariela's social status in her classroom was average (e.g., she was not particularly liked or disliked, nor was she viewed particularly notably, as indicated by social preference and impact scores that were around the classroom average). More specifically, Ariela was most frequently observed with Yolanda, a 3-year-old Latina girl who only speaks Spanish at home. However, despite their high frequency of proximal play, the girls did not articulate mutual preference for each other. Both girls nominated classmates outside of the subgroup as best friends; moreover, while Ariela nominated Yolanda as one of the classmates she *always* liked to play with, Yolanda nominated Ariela as one of the classmates she usually *never* liked to play with. Most of the play that these two girls engaged in together was not sociodramatic play; they were more often observed doing sensory activities (e.g., playing at the sand table or with playdough) in proximity to each other, but often in a state of parallel play. In terms of sociodramatic play, Ariela was observed engaging in SDP with a number of other classroom peers; however, Ariela was the only play partner with whom Yolanda (whose overall observed SDP was below the classroom average) engaged in sociodramatic play. Consideration of this unbalanced overlap introduces the possibility that while Yolanda may not have had great impact on Ariela's sociodramatic play engagement, Ariela's interest and engagement in this kind of play may have been key for Yolanda's SDP. It was also interesting to note that, despite the fact that these two children share a home language of Spanish, they were only ever observed playing in English. Further, their teacher reported that both Ariela and Yolanda never verbalize stories during play, which was indeed observed in their videotaped play. Their SDP scenarios were simple and repetitive in nature, with Ariela typically giving occasional basic verbal cues which were

followed by with primarily nonverbal (emotional and gestural) responses from Yolanda. In one instance, Ariela was seen taking food items out of a shopping bag for Ariela and herself, and saying excitedly "Food time!" or "Yummy!", which was followed by primarily emotional and gestural responses from Yolanda (e.g. laughing, nodding, pretending to eat), to which Ariela would say "Food time!" again, repeating the script.

Pearl. Pearl was a 5 ½ year-old African American girl whose home language is English. She was on an IEP for social language support. Forty-five percent of her observed play was sociodramatic in nature, and none of this observed SDP occurred in the presence of a teacher. When interviewed about her favorite school activities, she mentioned the "house area" and "dining area", both elements of the dramatic play center set up in her classroom. In fact, her sociodramatic play revolved around the kitchen area, but the stories often extended out to the adjacent book corner, where the characters in her stories would take a break from the house to "rest". Pearl's classroom teacher reported that, during play, she always verbalizes stories, shows positive emotion, and displays creativity in making up stories and play activities; however, she reportedly also often rejects the play ideas of others, which was confirmed in video observations of her engaging in play with her peers.

Pearl had an interesting social status within her classroom. She had a high social impact within the classroom, but low social preference, suggesting that she was highly visible to her classmates, but not necessarily for positive reasons. Nonetheless, Pearl was part of a highly cohesive subgroup with Marina, a 4-year-old Latina girl who spoke English and Spanish at home. Both girls nominated each other as a playmate that they always like to play with, and Marina choose Pearl as her best friend in the classroom

(although this best friendship was not reciprocated, as Pearl nominated a best friend outside of the subgroup). The two girls shared the "housekeeping area" as their favorite classroom activity, and frequently engaged in sociodramatic play together; in fact, when asked what it is that she likes to do best with Pearl, Marina described a sociodramatic play scenario: "We play happy birthday… we make our cake and then we sing happy birthday to someone!".

All of the sociodramatic play that was observed between Pearl and Marina involved cooking and preparing food for stuffed animals or other classmates in the classroom's pretend kitchen. Although Pearl was often observed rejecting the ideas of other children who attempted to influence ongoing play in that area, she was seen accepting and being quite accommodating of Marina's ideas. For example, in one play scenario where Pearl was cooking at the stove, another classmate came to the stove with his stuffed snake, trying to get some food for his pet. Pearl ordered the child to go sit back down, saying that the snake couldn't have any food. Shortly afterwards, Marina came to the stove to get some spaghetti vegetable soup for *her* stuffed puppy, which Pearl proceeded to prepare, quite agreeably. Instances like these exemplified the potential power of subgroup membership by highlighting the difficulty that non-subgroup members might encounter in trying to access ongoing SDP.

Lexi. Lexi was a 3 ½-year-old Latina girl, whose home languages were English and Spanish. Nearly 36% of her play was sociodramatic in nature, and of this SDP, a teacher was present 77% of the time. She named Lego blocks and the farm set as her favorite play activities at school, and she was observed using these types of materials in sociodramatic play; for example, using blocks to make structures (e.g., houses,

playgrounds) for animal figurines. According to her teacher's assessment, Lexi had a number of strong prosocial skills – she always helps others, shares toys with other children, helps settle peer conflicts, and shows positive emotions, such as smiling and laughing, during peer play. However, her teacher also reported that Lexi often hovers outside her peer group, needs a teacher's direction when playing, and never shows creativity in making up play stories or activities.

In light of her high social preference scores, it appeared that the children in this classroom had a positive overall view of Lexi; however, her social impact score was more than a standard deviation below the classroom average, suggesting that she did not have a particularly prominent or powerful standing in the classroom social network. Lexi was primarily affiliated with two 4 ½-year-old girls: Jennifer, who is Asian and spoke Chinese at home, and Tori, who is white and spoke English at home. Lexi nominated Tori as her "favorite friend", claiming that she and Tori both like to play with Legos. Tori reported always liking Lexi. However, Tori and Jennifer nominated one another as best friends, leaving Lexi as the "out" member of subgroup best friendship. Lexi's narrative productivity, narrative quality, and prosocial behavior were stronger than her subgroupmates' skills, although she had worse reported self-regulation and overall levels of disruptive behaviors compared to Jennifer and Tori. This triad was determined to be low in cohesiveness, and this was evidenced in a number of instances captured on video, where Jennifer and Tori were frequently interacting with or conversing with each other, while Lexi just observed from close proximity. In one striking instance, Jennifer and Tori engaged in a rich sociodramatic play scenario where, sitting at a small table, they had built a stage with blocks and were pretending that people (figurines) were dancing in

a show. While they planned this scenario and engaged with each other, Lexi sat next to them, holding figurines near the stage, and watching, but not engaging in, the sociodramatic play, despite the directions provided by her peers as opportunities to enter the play (e.g., " Girls on here!", or "Dance on the stage!"). In this example, Lexi appeared unwilling or unable to pick up on her peer's social overtures in order to join the play. In a different video, Lexi was captured engaging in sociodramatic play with another peer and their teacher, using dinosaurs and blocks. In this case, Lexi did pick up on the overtures provided by her teacher (e.g., "What's the dinosaur's name?", "Where you want to go play?") in order to extend her SDP engagement. However, it is important to note that findings from the current study cannot speak to the qualities of the teachers' engagement that aided Lexi's SDP engagement, but instead to the amount of SDP in which she engaged.

Cross-case Synthesis

There were rich differences in the individual and peer profiles of these four children who displayed high amounts of SDP in their respective classrooms; descriptions of these profiles shine light on some variations in factors that might have enhanced SDP engagement for each of these exemplary cases. However, comparison of these children's profiles also highlighted some similarities across these four cases. Several noteworthy patterns emerged from the cross-case analysis.

Girls were more likely to engage in exemplary amounts of SDP. The most obvious pattern across all four cases was the similarity in gender. This first became evident in the case selection process: across all five classrooms, eight girls and one boy engaged in SDP at levels greater than one standard deviation above the classroom

average. The four exemplary cases selected were all girls who were members of same-gender social subgroups. While it must not be concluded that boys do not engage in high amounts of SDP, it was notable that many more girls than boys met the criteria in this dissertation project.

Sociodramatic play occurred across multiple classroom areas. Each classroom in the study had a designated area for children to engage in SDP. Across all classrooms, this area was similarly furnished, with a wooden stove and refrigerator, a table and chairs, and some cupboards filled with plastic food. Dramatic Play, or "Housekeeping" as it was referred to by a number of students and teachers, was often seen used for more traditional play scenarios (e.g., using the cooking props to make food). However, in all four exemplary cases, the children were also observed engaging in SDP outside of this specifically designated area of the classroom (e.g., using magnifying glasses from the science center as telephones, or "shopping" in the book corner) or observed using the dramatic play area in a non-traditional way (e.g., setting up chairs in the "Housekeeping" area to make a roller coaster). These children did not appear to feel constrained by the confines and norms of the standard classroom play areas and their materials. Children's broader use of classroom spaces and objects for this type of pretend may have contributed to the extended amount of SDP observed in these children.

All four exemplary cases had Narrative Quality scores above their classroom's average. Despite the previous quantitative analysis that didn't find a significant correlation between Narrative Quality scores and SDP, it is interesting to note that these exemplary cases all showed high levels of ability in providing a clear, organized, and informative narrated story. What was particularly notable about all four

of these children's narratives was that they went beyond simply recounting the story presented on the pictures. They enriched their tales by providing dialogue for the characters in the story (e.g., "Doggie say 'NO running!'", or "The kitty want the birds because they are saying "Mommy, Mommy!") and described the characters' mental states (e.g., pointing out that the dog was *mad* or that the cat was *angry*).

For the exemplary cases, patterns in teachers' social behavior ratings reflected differences in teacher presence during students' SDP. While any number of social behaviors could potentially benefit or hinder children's SDP, there was a small set of these behaviors that could be argued to be particularly relevant for SDP and teacher presence which stood out in the cross-case analysis. For Lexi, the case that had a very high level of teacher presence in SDP, the classroom teacher reported that she *never* shows creativity in making up play stories or activities, *always* hovers outside her peer group, and *always* needs teachers direction when playing. Instead, for the three students who were essentially never observed to have teachers present during their SDP, teachers noted that these students *always* showed creativity in making up play stories and activities, *never* hover outside their peer group, and *never* need teachers' direction when playing. In other words, the stark contrast in the amount of teacher presence observed during SDP aligned with contrasts in rating extremes (e.g., 1=never or 4=always) that teachers gave to these students. While this finding should be considered cautiously given the small number of cases analyzed here, this pattern of sensitive teacher behavior is compelling, and suggests possible relations between teachers' perceptions of children's social behavior and their presence in children's sociodramatic play.

Chapter 5: Discussion

Using a variety of data sources and methods, this dissertation project examined individual and peer factors that could be related sociodramatic play occurring in the context of free play in five mixed-age Head Start classrooms comprised of cognitively, culturally, and linguistically diverse children. This chapter first summarizes and discusses the findings in light of existing research. Next, the limitations of this dissertation are noted. Finally, the chapter discusses the implications of this work, including highlighting some potential directions for future research and providing some practical considerations for teachers as they work to facilitate sociodramatic play engagement in their classrooms.

Insights into Language

This study took place in classrooms where English was the established social medium of classroom play, as reported by the classroom teachers. While there were occasional instances where students who shared a home language other than English were observed interacting in that language, this occurred in less than 15 minutes out of the 1000 minutes (nearly 17 hours) of video data coded for this dissertation, confirming the teachers' reports. While there is certainly evidence that home language can be a valuable asset when used in the preschool classroom, practical realities of classroom life in preschools with students of mixed language backgrounds can make the inclusion of home languages unfeasible. It was for this reason that the project focused on children's English abilities.

This study found that children's SDP engagement was greater for students who produced higher numbers of unique vocabulary words in their narratives. Sociodramatic

play, which is often characterized by decontextualized talk (i.e., language that is removed from the "here-and-now"), is a context where children must both use language as a clarification tool and also as a way to represent meaning symbolically (Pellegrini, 1985). Children who are able to use a wider variety of words in context may be better equipped to meet the unique demands of communication in SDP, and therefore may have an easier time engaging in this type of complex play. For example, children with smaller vocabularies may be restricted to playing out scenarios related to the available props and materials in the environment, while children who have a greater range of words to apply to play scenarios, are less limited in terms of the topics for play scenarios. In fact, some children in this dissertation sample (as presented in the cases of exemplary SDP engagement) were observed to engage in play scenarios that were not about topics related to their immediate environment (e.g., pretending to sit in a movie theater or going on a roller coaster). These children had to use more specific decontextualized language to make the meaning of their play clear to their play partners. For others, their symbolic play was more contextualized, and related to props and materials in the environment (e.g., cooking up a meal with plastic food on a play stove).

The fact that narrative quality was *not* significantly correlated with sociodramatic play, but that all four exemplary cases of SDP had above-average narrative quality scores is also worthy of note. This mixed finding was somewhat surprising. There is theoretical relevance for relations between the ability to construct a coherent, structurally-sound narrative and SDP engagement, given that sociodramatic play is ultimately an enactment of a story (Nicolopoulou & Igaz, 2013). Moreover, previous empirical research has linked sociodramatic play to narrative story structure and connective discourse (Baumer

Ferhold, & Lecusay, 2005; Dansky, 1980; Nicolopoulou, 2002; Saltz, Dixon, & Johnson, 1974); however, in all of these studies, teachers were facilitators, and in some intervention studies, trainers of children's narratives. It could be that when young children engage in free play with peers, in contrast with teacher-scaffolded sociodramatic activities, what a play scenario is about (which can be communicated primarily using rich content words) may be more relevant for high amounts of dramatic play than the story of the scenario itself. It could also be the case that children's relatively high narrative quality, on top of the rich lexicon that that they make use of in the context of SDP, is what makes them particularly exemplary in terms of the amount of SDP engagement.

Another noteworthy pattern was that the majority of students in identifiable subgroups had English as a home language (which was *not* the case for the majority of participants in the study), suggesting possible linguistic homophily (i.e., language might be one of the elements of similarity that brings children together). This language pattern has not yet been explored in studies of homophily in preschool. Although this finding must be interpreted with caution, given the number of students that were excluded from the subgroup analyses, it is reasonable to think that children who share familiarity with a particular communicative tool (English) might be more likely, and better equipped, to affiliate with each other in the classroom. Further, having a home language which matches the language of social power in the classroom can matter for children's comfort and engagement in certain types of social play (Hazen & Black, 1989; Tabors, 1997), such as the sociodramatic play studied in this dissertation. It could be that children who spoke English in their homes may have felt more at-ease using English socially in school, and this level of confidence could have led to increased SDP engagement.

Insights into Gender

Findings from this dissertation work evidenced the impact of gender on sociodramatic play engagement. Descriptive findings regarding the gender composition of peer subgroups in mixed-age Head Start preschools illustrate that only one out of the nine subgroups analyzed were comprised of different-gendered students. This finding aligns with existing research in other classroom contexts, demonstrating that most preschoolers interact with same-gendered peers, and about 10% engage other-sex peers in their interactions (Fabes, Hanish, & Martin, 2003). It is interesting to note that these patterns hold, even in cases of mixed-language classrooms that were studied in this dissertation; this emphasizes the robustness of the gender homophily phenomenon in preschool social groups over other types of possible homophily.

Further highlighting the importance of gender was the marginally significant effect of gender in RQ1 and the fact that, strikingly, *all* four students who were selected as cases because of their particularly exemplary amounts SDP engagement (and all but one of the nine students who were considered as cases) were girls. Together this evidence illustrated how being female was important for higher amounts of SDP engagement for the students in these five Head Start classrooms.

There are a few possibilities for this connection between SDP and gender that emerged in the present data. Most markedly, the majority of the dramatic play props and materials provided in the participating classrooms (e.g., kitchens and dolls) were stereotypically "feminine" (Freeman, 2007; Neppl & Murray, 1997). Since SDP, by definition, requires multiple students' engagement, it is plausible that such patterns of play may not be directly due to gender, but due to similar peer play preferences which are

themselves associated with gender (Else-Quest, Hyde, Goldsmith, & VanHulle, 2006). In this dissertation, the exemplary girls and their subgroup peers (i.e., play partners) all reported some type of SDP scenario as their preferred activities (e.g., housekeeping, taking care of babies); it is possible that increased levels of SDP were related to play partners' shared interests in sociodramatic activity, which in turn may be related to gender. This finding could also have been related to differences that have been identified in boys' and girls' storytelling styles. Because SDP is undergirded by a story that children enact, gender differences in story types could lead to gender differences in SDP. Nicolopoulou and colleagues (Nicolopoulou, Cates, de Sá, & Ilgaz, 2014; Nicolopoulou, Scales, & Weintraub, 1994) discuss how children can be socialized to tell different types of stories, marked by clear gender-related differences in content and structure. These researchers described how girls' stories often have characters that engage in harmonious relationships, while boys' stories contain more agonistic roles and conflict-ridden plots. On numerous occasions in the present project, boys were observed having their sociodramatic play cut short by a teacher because their stories involved some sort of combat, and therefore, their enactment of the story often involved loud and potentially unsafe behavior (e.g., yelling and using blocks as pretend swords to fight). In contrast, these kinds of limitations were rarely observed in SDP among girls.

Insights into Peers

This dissertation provided rich description of established classroom subgroups in five Head Start classrooms by combining observational, assessment, sociometric, and demographic data. Importantly, results from this study replicate and extend previous research investigating preschool classroom subgroups in a socially, linguistically, and

culturally diverse population. Beyond the patterns in gender homophily described earlier, many aspects of the peer networks identified in this dissertation aligned with the findings of Santos and colleagues (2008) in their much larger study of 30 Head Start classrooms comprised of primarily African-American students. These researchers found that approximately ⅓ of the students were of 'Ungrouped' social status, similar to the proportion of 'Ungrouped' students in this dissertation; furthermore, in both samples, there were more HMP subgroups than LMP subgroups (although it must be noted that more than half of the subgroups identified across the five classrooms in this dissertation could not be analyzed for subgroup type). Nonetheless, the present patterns mirror findings in a different Head Start population, suggesting that peer networks in mixed-age preschool classrooms are similar in classrooms with more culturally and linguistically diverse students.

Findings between Santos's work (2008) and this dissertation differed, however, in terms of observed subgroup sizes. While dyads were the most common subgroup structures in both samples, Santos and colleagues observed subgroups with as many as five members, whereas the largest subgroup size in this project was three (and triads were only observed in four out of five classrooms). There are several possible explanations for this. First, this is a notably smaller sample; it is possible that with more sites, this study may simply have encountered classroom networks that contained larger social structures. However, it is also possible that there were contextual features of the classroom environment that limited the affiliation patterns in the present study. In the five classrooms observed, which were under the same direction and utilized similar classroom management strategies, teachers enforced rules regarding the number of students that

were allowed in a particular area of the classroom at a once (for instance, only two children allowed at the sand table at a time). While children could freely choose the activities they wanted, the rules indicated that only one to four people (maximum group size allowed) at a given center, depending on the area of the classroom. As such, children may have been limited in terms of their engagement with peers that they may have otherwise played with, which impacted the observed classroom social structures.

Results from this study also indicated that being a member of a high mutual proximity subgroup, or in other words, having a regular set of affiliative partners with whom you share a more "balanced" or reciprocated amount of affiliation, is particularly important for SDP, given that this type of play requires a good deal of social "give-and-take". There are several possible reasons for this. First, HMP subgroups are generally characterized by high levels of mutual liking and friendship (Daniel, Santos, Peeguina, & Vaughn, 2015; Santos, Vaughn, & Bost, 2008), so within-subgroup SDP may be marked by fewer negative interactions and breakdowns in play. However, being a member of an HMP subgroup might also be beneficial for SDP that occurs with non-subgroup peers. Paralleling arguments made by attachment theorists (e.g., Grossmann, Grossman, & Zimmerman, 1999) that a secure base can make students more comfortable exploring interaction with others, it may be that membership in a regular, trustworthy subgroup may make children more comfortable to engage with peers outside of their subgroup, thus broadening the group of potential SDP partners in the classroom.

Insights into Teacher Presence

While this dissertation was primarily a study of child free play, analyses accounted for teachers' presence, given the extant research on teacher presence in

children's play impacting the type and amount of play in which children engage. Here, teacher presence was negatively correlated with SDP engagement, indicating that the more a teacher was with a child, the less SDP would take place. Indeed, teachers were infrequently observed engaging with students in SDP. Some reasons for this association were illuminated in the video data, as teachers were primarily seen facilitating art projects (e.g., painting), literacy activities (e.g., dictating stories about pictures) or STEM curriculum (e.g., charting the results of a taste-test experiment), or preparation of didactic materials (e.g., cutting shapes out of paper for an activity later in the day). This negative association could be for several reasons; for example, perhaps teachers felt their presence was more necessary or more valuable in the more structured activities, or perhaps children were more likely to remain at an activity where a teacher was present to maintain their engagement and focus. Either way, this result is important to point out, in light of mounting evidence that if teachers *are* present in their students' SDP, children's engagement can be extended and improved (Banerjee, Alsalman, & Alqafari, 2016; Bodrova, 2008; Keleş & Kalıpçı-Söyler, 2013). It would seem that teachers in these classrooms were missing out on potentially important opportunities to scaffold a valuable classroom activity.

In consideration of this evidence, the case study portion of this dissertation explored this idea of teacher presence more deeply by looking at the amount of teacher presence *specifically* in the context of children's SDP, beyond overall teacher presence in play. In particular, the case of Lexi illustrated that, for a child with reported challenges for skills that are necessary or useful for SDP, a teacher's presence and play scaffolding may afford opportunities to access and extend this type of play. The findings from this

case, in light of the finding that teacher presence does not predict the duration of overall SDP engagement, suggest that perhaps there are moderating factors that might make teacher presence impactful for certain children's SDP engagement (e.g., students with low creativity or particular dissociative behavior). Although evidence from this single case should be interpreted with caution, it is in line with existing research and has important implications for future research and practice, making it worthy of note.

Limitations

This dissertation contributes to gaps in the literature on SDP in free play settings by providing some rich insights into a complex phenomenon, and studying a diverse population. However, while there are some compelling findings that emerged as part of this dissertation, they must be considered in light of project limitations.

A strength of this study was its rich data set derived from multiple sources. However, due to limited resources for collecting this varied set of data, the study had a relatively small sample. Findings from statistical analyses should be considered preliminary, given that models testing relations could not use multilevel techniques to account for the nesting in classrooms due to the small sample size, which would have been a more ideal estimation method. Replication studies with larger data sets are needed to confirm results and test more nuanced relations between variables.

Compared to many other developmental studies conducted in classrooms, this study boasted relatively high participation rates within classrooms (e.g. approximately two-thirds to three-quarters of students receiving consent to participate); however, in this dissertation that aimed to better understand the inner-workings of classroom peer networks, these rates of "missing participants" limited the scope of some of the analyses.

For example, a number of children who were members of social subgroups in their classrooms could not be descriptively analyzed for subgroup type because their subgroup peers were not consented study participants, nor could they be included in regression analyses to test the effects of subgroup type on SDP engagement. Further, non-consented subgroup peers led to the exclusion of some exemplary cases of sociodramatic play for the case study analysis which, if included, could have furthered the richness and breadth of the findings.

It is important to emphasize that this dissertation focused on the *amount* of SDP that classroom members and their peers engage in. While there is evidence that more SDP can be beneficial for a number of developmental and academic outcomes, it is also true that the quality, not just the quantity, of SDP engagement matters for these outcomes (Rubin, Fein, & Vandenberg, 1983; Smilansky & Shefatya, 1990; Smith, 1983). As such, these findings should be interpreted with caution, as this dissertation did not address the possible effects related to qualitative differences in SDP, just the sheer amount of engagement in this valuable type of play.

The concurrent descriptive design of this study afforded a rich snapshot of classroom play towards the end of children's scholastic year. However, children's skills, peer structures, and play evolve over the course of a school year, and could have emerged differently at a different point in time. Findings from this study suggest connections between a number of factors, but this dissertation cannot provide insight into the directionality of these influences, and therefore, cannot make specific recommendations for intervention.

A final limitation of the dissertation is the generalizability of the findings. This project focused on students in classrooms overseen by the same director and with similar curricula and resource allocation. These classrooms were mixed-age, inclusive (i.e., contained students with diagnosed special needs), and most notably, these classrooms had students who spoke a number of different languages in their homes, but used English as the established language of social communication at school. Finally, nearly all Head Start students come from disadvantaged or low socioeconomic status backgrounds. Therefore, findings from this dissertation may not be generalizable to students in other populations. For example, different types of early childhood programs (e.g., public preschool or private daycare centers) may have classrooms with different approaches to free play, and sociodramatic play in particular. Furthermore, classrooms with different compositions of dual language learning students (e.g., classrooms that are more dichotomous, such as students with only Spanish-English backgrounds) might have different established language-use norms, which could result in differences in peer play engagement. Different findings could emerge in classrooms comprised of students with less variation in terms of cultural, linguistic, or developmental characteristics, or from programs that include children from diverse socioeconomic backgrounds.

Implications

Most of the research regarding SDP has focused on investigating the benefits of this type of play for children's learning and skills. In light of this research, it is important to understand the factors that allow children to access and engage in this highly beneficial activity. As one of the few investigations that have focused on SDP as an outcome, this dissertation is a step towards greater understanding of the factors that are important for

this valuable learning experience. As such, implications from this study include directions for further investigation of this topic, as well as suggestions for teacher training and the design of preschool learning environments.

Suggestions for Researchers

Future directions for research on language. Because narrative productivity was shown to be an important predictor of SDP engagement, future work should seek to better understand the lexical items that children use as they engage in this kind of play. For example, researchers could explore the level of contextualization of words used in SDP. A deeper understanding of how the unique vocabulary used by children in their narratives relates to concrete objects in the classroom could have practical implications for the preparation of materials and environments that can encourage and sustain SDP during times of free play.

Findings from this dissertation also suggest the potential for complex relations between various aspects of students' home language status and abilities, the established language medium of the classroom, and play outcomes. It could be that children's home language plays a role in their interactions and social play outcomes; thus, given the increasingly varied approaches to classroom language use, there are enormous practical implications for understanding how these factors are related. Future studies with larger samples could use structural equation modeling to test causal hypotheses relating these variables, and extend them to different program types (e.g., two-way bilingual models). This research could also be supplemented with ethnographic work exploring children's language use and status and social power in sociodramatic play, the findings from which could provide illustrative examples for practitioners to consider.

Finally, the role of narrative quality in sociodramatic free play should continue to be explored in future work. Comparative studies which explore the SDP narratives occurring with and without teacher presence could have important implications for helping teachers understand how their presence in this type of children's play may be useful. Besides using quantitative narrative metrics that aggregate aspects of narrative quality, qualitative methods could also be utilized for determining which particular elements of children's narrative quality are especially impactful in context of sociodramatic play. Using discourse analytic techniques, for example, researchers could explore how the structure and continuity of children's stories extends their sociodramatic free play engagement.

Future directions for research on gender. Children may be socialized to play with others of the same gender; however, they also may be socialized to engage with certain types of play materials or tell certain types of stories. All of these factors could collectively relate to gender differences seen in SDP outcomes. Future research should seek to tease out these potentially complex relations between gender-based homophily, gender-based play interests and styles, and SDP engagement. Such work can clarify how various aspects of play are connected to gender-related differences in play, and could help teachers understand how to manipulate elements of their classroom play environments to enhance SDP experiences for children of any gender.

Also, because there are demonstrated differences in boys' and girls' play engagement, and only girls qualified as cases for analysis in this dissertation, the findings cannot speak to factors that might matter for boys' SDP. However, boys are certainly quite capable of engaging in high amounts of SDP in preschool; therefore, descriptive

case studies of boys should be conducted to provide an important perspective that is missing from this dissertation analysis.

Future directions for research on peers. While ethological approaches are useful given the developmental constraints related to identifying peer structures in preschool, they are also resource-intensive. Papers providing more explicit methodological guidance could be useful in designing research that collects data in the most efficient, effective ways. For instance, one issue with the methods used in this dissertation is with regard to social structures that include non-consented children who were captured if they were they are affiliates of consented peers in observation videos. Further, preschoolers are generally notorious for frequently being sick and absent from school. Currently, no empirical work has tested the extent to which non-participation and student absence impact cluster analyses of classrooms. Studies empirically investigating these impacts could contribute to a more precise understanding of the amount of data needed for valid and meaningful results, and help researchers make better use of their resources as they design of future studies using this methodology.

Understandings of how subgroup profiles and distinctions can be identified by teachers in practice will be central to making practical use of study findings. While functional differences between LMP and HMP subgroups have been described in this dissertation and other work (e.g., Santos et al., 2015; Santos et al., 2008), it is important to understand whether teachers will be able make use of this information in ways that informs their classroom practice. Future work should explore the practical utility (e.g., whether these distinctions can be distinguished by teachers) of such methods and provide practical guidance for observing and identifying subgroups in classrooms.

Future research should also seek to extend the body of research on different types of homophily in preschool subgroups by studying how similarities in language factors relate to subgroups in classrooms. For example, homophilic patterns related to language status and ability highlighted in the present descriptive analyses could be empirically tested using social network analytic methods. Such work could be informative for teachers as they observe and seek to facilitate valuable social engagement and social play experiences among their students.

Understanding change over time is key for making effective recommendations for intervention; thus, longitudinal work should be conducted to better understand the directionality of relations between children's skills and subgroup status. Because preschoolers' skills, relationships and play co-evolve in preschool classrooms, analyzing children's subgroups several times over the course of a school year could increase teachers' understandings of factors that might be related to subgroup formation and change. Further, given that preschool subgroup status has been associated with future social competence and peer acceptance outcomes in subsequent years, (Daniel, Santos, Peeguina, & Vaughn, 2015), this work would have enormous implications for play intervention design that could impact children's future social outcomes.

Future directions for research on teacher presence. Research should also explore how it is that teachers come to arrive in children's SDP during free play. Some research has quantitatively explored features of children (e.g., behavior) and classroom environments (e.g., play context) to understand what draws teachers to interact (or perhaps not interact) with preschool students (Kontos, 1997). Qualitative approaches, perhaps using surveys and teacher interviews, could build off of this work and illuminate

teachers' perspectives and decision-making practices related to their presence children's SDP in free play settings. This information could be particularly useful in informing the design of professional development devised to train teachers on how to most effectively integrate themselves into children's free play. Finally, researchers could explore possible moderating factors for the relation between teacher presence and SDP engagement in order to better understand how particular children and subgroups may especially benefit from the presence (or non presence) of a teacher in play.

Considerations for Practitioners

Play is a learning medium for young children. Preschool teachers have a responsibility to enhance this important medium, even during times when they themselves may not be directly present in children's play. As pointed out by Samuelsson and Carlsson (2008), teacher training in early education has focused much more on the *object* of learning rather than the *act* of learning (i.e., *what* children learn vs. *how* they play). This is reflected in the way that teachers often make use of free play in preschool -- it may be treated as a reward, a break from the daily 'work', or a classroom management tool to keep children busy while teachers prepare and transition to a new 'learning' or 'academic' activity (Pui-Wah & Stimpson, 2004). However, there are enormous potential learning opportunities in free play, and teachers must be better equipped to identify and capitalize upon these important opportunities.

Over the past few decades, Head Start has been working to increase the training and education levels of their early childhood educators through teacher training and professional development sessions (USDHHS Administration of Children and Families, 2012). While many pre-service and in-service teachers are taught about the important

relations between play and learning and development, this is not necessarily sufficient for helping them create play environments in their classrooms that will support children's learning (Hyvonen, 2011). Instead, understanding how children play with their peers and the factors that influence that play is important for maximizing the learning that can occur in children's play. This dissertation is a first step in providing descriptive information that can be useful as Head Start teachers consider ways to maximize the free play SDP experiences for all of their students.

Teachers must design and prepare free play learning environments in which their students will engage in sociodramatic play, and therefore, must consider a number of factors that matter for children's sociodramatic play in their classrooms. Appendix D provides an example of a tool for teachers in mixed-age, diverse Head Start classrooms. It provides teachers with some questions to consider as they work to enhance their students' sociodramatic play experiences during times of classroom free play. While providing answers to such questions is outside the scope of this study (for reasons pointed out in the prior discussion of generalizability limitations), the study does provide insight into aspects of children's skills and peer networks that matter for SDP, from which these questions were developed. Teachers can use questions like these to guide their observations of students' free play, and can use the descriptive findings from this study as examples of things to consider as they seek to answer these questions in their own classroom contexts.

Conclusion

Engagement in sociodramatic play has been linked to factors that are critical for school readiness, such as pre-literacy skill, appropriate social behavior, and self-

regulation (Copple & Bredekamp, 2009; Diamond, Barnett, Thomas, & Munroe, 2007). Therefore, getting students to engage in more SDP is a critical objective in early childhood. This is especially important for Head Start students, who may particularly benefit from increased SDP engagement given their documented school-readiness needs (Eggum-Wilkens et al., 2014;Yoshikawa, Weiland, et al., 2013).

Using a mixed-methods approach, this dissertation described some aspects of children's individual skills and peer networks that particularly mattered for sociodramatic play during free play settings in mixed-age, diverse Head Start preschool settings. Findings illustrated that narrative ability, home language status, gender, membership in a cohesive peer subgroup, and the presence of a teacher were particularly important for increased SDP engagement in these five mixed-age Head Start classrooms.

Early childhood educators must see themselves as responsible for increasing the amount of this type of play engagement for all of their students. As demonstrated by the findings of this project, these teachers can have a vital role as they take part in their students' play. But, perhaps more importantly, they also have a critical role outside of their students' play. For example, facilitating relationships between peers, preparing environments with considerations for gendered-materials, and establishing classroom norms are ways that teachers can impact their students' SDP even when they themselves are not engaging in the play. Teachers should be trained to understand these factors that impact play – the most valuable type of learning experience – for their students. They must understand that they can impact SDP experiences in free play even when they are not around, just as they can when they are present.

In conclusion, this investigation adds to the limited body of descriptive research on the factors that matter for preschoolers' sociodramatic free play. Providing information and examples of children's engagement in successful SDP is a first step for educators to better understand and facilitate ongoing play in their classrooms, and for researchers to further this line of inquiry. As the field moves towards universal preschool programs, we must be cognizant of best practices for creating high quality preschool environments. Sociodramatic play is an essential part of these environments, making this study, and future studies in this line of research, valuable contributions to the field of early childhood education.

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Appendix A: Affiliative Coding Manual

This coding manual describes the procedures for coding children's affiliative behaviors for determining classroom peer networks. It is an adaptation of procedures described by Santos et. al (2015).

Coding Descriptions

There are three types of affiliative behaviors that will be considered: Interaction, Visual attention, and Social Proximity. It is not necessary (or expected) that a focal child will engage in all three of these types of behavior in the same interval. A focal child's peer should be marked if the focal child engages in any one (or more) of the three affiliative behaviors during the interview.

Behavior	Definition and Examples/Non-Examples
Interaction	Peer who is involved in social exchange (whether initiator or recipient) with focal child *Example: Peer puts a chef hat on and says "Hey, look at me" to the focal child, who laughs in response*
Visual attention	Peer who receives visual regard from focal child. Note that only children who are the *recipients* of focal child attention should be coded; if a focal child is being observed by a peer, that peer should *not* be coded for the interval. *Example: Peer stands at the opposite side of a table from the focal child and watches her play with dinosaurs*
Social proximity	Peer who is within arm's reach (~3 feet) of focal child and engaged in the same/similar activity. Note that children who are in close proximity but have not seen each other/are not aware of each other should not be coded. In many, but not all cases, the two children will be engaging in parallel play. *Example: Peer puts a diaper on a baby doll, while sitting next to the focal child who is giving a different doll a bottle* *Non-example: The focal child is playing in the housekeeping area and peer walks by, brushing his arm, on her way to the sand table.*

Appendix B: Play Coding Manual

This manual describes the procedures for interval coding preschool free play for sociodramatic play (SDP), non-dramatic interactive play (NIP), Parallel Play (PP), Solitary Play (SP), and Other (O). This coding scheme is adapted from Elias & Berk (2002) and Rubin (2001).

Coding Descriptions

Broadly, this scheme captures a child's social participation in play, and, following Rubin (2001), relates a cognitive aspect of play (pretense) in the interactive category.

Interactive Play - In this study, interactive play is conceptualized as any associative and cooperative play behavior in the classic play categories developed by Parten (1932). For this code, the child plays with other children and there is a common goal or purpose to their activity. They may be following one another in a functional activity, or they may be organized for making some material product, striving to attain some competitive goal, dramatizing situations of adult or group life, or playing formal games. Whatever the activity, the goals are definitely group-centered.

Following Rubin (2001), this study integrates elements of cognitive play categories with social play categories. If children are engaging in interactive play in a given interval, the coder must then determine whether or not the play is dramatic in nature (e.g., whether there is an element of pretense). Remember that these two categories (like all other codes in this scheme) are mutually exclusive (i.e., if it is not SDP, it must be SIP).

> **Interactive Play with pretense (i.e. sociodramatic):**
> When determining this code, there must be evidence of both the INTERACTIVE *and* PRETEND in the child's play during the interval (i.e., there must be an element from *both* of the columns below).
>
> **Interactive Play without pretense:** When determining this code, there must be evidence the INTERACTIVE but *not* the PRETEND.

Use the following table to determine distinctions between Interactive lay (elements from only the Interactive column), and Sociodramatic Play (elements from both the Interactive and Dramatic column)

INTERACTIVE Target child intends the other to respond, at least by listening	**PRETEND** Interaction is aimed at developing or maintaining a joint make-believe goal
Requests: The child asks or seeks something of another child. Requests can be for things other than material objects. Child may use words or gesture.	**Imitative Role Play:** The child adopts a social role and expresses that role through imitative behavior. *Example: Child pretends to be a mother and*

Example: "Can I be the purple witch?" *Example: "Will you give me the bowl?"* *Example: Without using language, the child reaches her hand out to indicate that she wants a toy.* **Commands**: The child directs another child to speak or perform. Child may use words or gesture. *Example: The child points to the chair to indicate where a peer should sit for the game.* *Example: "Go get the bone, doggy!"* **Explanations**: Child uses language to describe a plan or ongoing action. Often explanations are seen in the form of a child narrating his/her own play *Example: "All fairies have wings so I put them on so I can fly and do magic"* **Offers**: Child gives or provides something to another child. Children may offer a material object or information. *Example: Child hands a chef hat to another child* *Example: "Here are the spoons!" (indicating intent to share)*	*dresses a doll that is her "baby"* *Non-Example: A child is wearing a firefighter hat while playing in the block area. However, the child's play does not reflect adopting a firefighter role.* **Pretend with Objects:** Movements, verbal declarations, and/or materials or toys that may or may not be replicas of the object itself are used in elaborating a make-believe theme. Objects may be used functionally or symbolically. *Example: The child makes two stuffed animals speak to each other.* *Example: The child drags a block around the carpet saying "Vroom" (pretending it's a car)* **Pretend in Regard to Actions and Situations:** Verbal descriptions are substituted for actions and situations in elaborating a make-believe theme. *Example: (The child is making a plan for play) "This is a hairdresser salon and we are going to shampoo first"*

Parallel Play: The child plays independently; however, the activity often, though not necessarily, brings him/her within three feet of other children. If the child is very attentive to others while playing independently, parallel play is coded regardless of the distance between the focal child and the other children. S/he is often playing with toys that are similar to those that the children around him/her are using. The child usually seems to be somewhat aware of, and attentive to, his/her playmates, and frequently

engages in "parallel speech" (i.e., verbalizing his/her own thoughts for the benefit of the other children). In short, the child plays beside, or in the company of, other children but does not play *with* his/her companions.

Note that for this code, there should not be evidence of INTERACTIVE as described in the table above. If interactive behaviors are observed, the interval should be coded SDP or SIP.

Solitary Play: The child is usually playing with toys that are different from those other children are using. The child is centered on his/her own activity and pays little or no attention to any children in the area. Physical proximity (or lack thereof) may be used as a clue for determining this code, but note that if the child is playing in a small area, using space as a determiner is often not applicable. The observer must rely upon the relative attentiveness of the child to others in his/her social arena.

Other: This code indicates that the child is not engaged in any form of play. Instead, the child may be unengaged, or engaged in onlooker or transitional behavior, as described below. Note that it is sufficient to code 'Other' for any of the following behaviors.

> Generally, there are two types of unengaged behaviors: (1) the child is staring blankly into space; or (2) the child is wandering with no specific purpose, only slightly interested, if at all, in ongoing activities. If the child is engaging in a functional activity (e.g., fiddling with an toy) but is not attending to the activity, then the child is considered to be unengaged.
>
> When onlooking, the child watches the activities of others but does not enter into an activity. S/he may also offer comments, or laugh with the other children, but does not become involved in the actual activity.
>
> Transition behavior occurs when a child is setting up a new activity or moving from one activity to another. Examples are walking across the room to watch an activity or to get a drink of water, setting up a game, tidying up an activity, or searching for a desired object.

Appendix C: Semi-structured Interview Protocol

(*Put away the neutral and frowning boxes. Remove all of the cards in the smiling box and place them in the table in front of the child. Hand the child his/her own picture card.) "* Here is your picture! I know you really like to play with all of these kids here, but is there one you like to play with the very best? Can you put yourself with that friend? Oh, you like to play with [XXX]? Is [XXX] your best friend in your class? He/she does seem like a pretty neat person! I want find out some more about [XXX].

"Why is [XXX] your best friend?"

"What do you like about [XXX]?"

"What is [XXX] good at? How can you tell?"

"What are [XXX]'s favorite things to play? What are your favorite things to play?"

"Do you and XXX usually play by yourselves, with just the two of you, or do you like to play with other kids, too?"

"Do you and XXX ever play separately? When?"

"Are there times when it is hard to play with [XXX]? Why?"

"What is your favorite activity that you like to play at school? (*If child doesn't answer, bring out activity photo cards. Only use the cards if the child does not/cannot answer the question*. *Say* "*Here are some things that you might play with at school – water table, animal toys, painting, play kitchen, blocks, books. Which one of these do you like the best?")*

"Oh you like [YYY]? Me too!! So let's pretend one day you came to school and your teacher had set out a really cool [YYY] activity. But it turns out that [XXX] doesn't want to play with [YYY] that day. He/she wants to play with something else. So you have to choose. You can decide to play with [XXX] or you can decide to play with [YYY]. What do you think you would do? Why would you choose to do XXX/YYY instead of YYY/XXX?"

*For all questions, use follow-up probes to clarify children's responses if unclear.

Appendix D: A Reflection Tool for Teachers

SOCIODRAMATIC PLAY

Sociodramatic play is pretend play that occurs while interacting with others. It is different than pretend play that children do alone. Often, you might see children engaging in sociodramatic play during free play or choice times.

Sociodramatic play has important benefits for students, and can improve their school readiness.

LANGUAGE CONSIDERATIONS

- What is the established language (or languages) of play in your classroom?
- Is the language (or languages) of play the same for all students or groups of students?
- Do children whose home language matches the classroom language of play engage in more sociodramatic play than those who do not?
- How is unique vocabulary elicited and used in SDP?
- How is students' storytelling important for their SDP?

GENDER CONSIDERATIONS

- Do more girls or boys engage in sociodramatic in your classroom?
- What are the physical areas in which sociodramatic play occurs in your classroom?
- Do you notice that more girls or boys engage in sociodramatic play in each of these areas?
- Are there materials and props or other contextual factors that facilitate gendered play in those areas?.

PEER CONSIDERATIONS

- Can you identify social subgroups in your classroom peer network?
- For each subgroup, what features, characteristics, or preferences seem to connect these group members?
- For each subgroup, do all group members engage with each other equally and reciprocally, or does their engagement seem unbalanced or one-sided?
- For each subgroup, do all members usually play in sociodramatic play together, or do members also play with classmates outside of the subgroup?

TEACHER PRESENCE CONSIDERATIONS

- What types of classroom activities do you tend to be present for during free play?
- What individual, peer, or contextual factors lead you to engage with students during sociodramatic play?
- Do some children seek your presence more than others during sociodramatic play?
- Do you engage in sociodramatic play with some children more than others?

IN REFLECTING ON THESE QUESTIONS, HOW DO YOU THINK YOU MIGHT BE ABLE TO IMPACT YOUR STUDENTS' SOCIODRAMATIC PLAY EXPERIENCES DURING FREE PLAY OR CHOICE TIME?