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REEVALUATING PRETEND PLAY AT HOME: CHILDREN'S INDIVIDUAL VARIATION,
PARENT PARTICIPATION, AND DEVELOPMENTAL OUTCOMES

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For Richard,

Who gave me everything so that I might succeed.

*Come with me and you'll be
In a world of pure imagination
Take a look and you'll see
Into your imagination*

*We'll begin with a spin
Trav' ling in the world of my creation
What we'll see will defy
Explanation*

*If you want to view paradise
Simply look around and view it
Anything you want to, do it
Want to change the world, there's nothing to it*

*There is no life I know
To compare with pure imagination
Living there, you'll be free
If you truly wish to be*

—Roald Dahl

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ABSTRACT

Following over a century of research, pretend play has come to be known as an important feature of childhood. Children across cultures have been observed spontaneously engaging in pretend play, promoting the notion that pretend play serves a special developmental function. Early research described how pretend play provides a unique platform for children's self-directed learning. Today, particularly in the U.S., pretend play is understood to be so important for young children that parents are encouraged to promote it and participate in it at home. How then does pretend play function in development when it is no longer spontaneously motivated by children? In this dissertation, I examine the prevailing assumptions regarding the role of pretend play in children's lives and the role of adults in supporting pretend play. Using a mixed-methods approach, I describe how 60 families drawn from an urban American population vary in their practice of pretending at home in the preschool years. I then evaluate the relation between pretend play practices and learning outcomes at kindergarten. I find that children vary significantly in their investment in pretending at home, with distinct patterns of pretend play investment over time. Several children pretended rarely at all observations, and most children remained constant or *decreased* their pretend play time between three and four years of age. For the 25% of children who invested the most time in pretending, parents were also most likely to be participating. Parents and children pursued distinct goals during pretend play, and parents' efforts to achieve learning objectives through pretend did not always produce the expected results. This study contributes new insights through the in-depth examination of pretending at home in a large, representative sample, and highlights the importance of examining the variation across families in order to better understand and better serve children's learning and development.

1 Why Do They Pretend Play?

“Those who have watched the play of children have long looked upon it as Nature’s means of individual education. Play is indeed the child’s work, and the means whereby he grows and develops. Active play can be looked upon as a sign of mental health, and its absence, either of some inborn defect, or of mental illness.”

-Susan Isaacs, The Nursery Years, 1929

Following over one hundred years of research, pretend play has come to be known as an important feature of childhood. Observations from across the world confirm pretend play as an activity of children that manifests universally across diverse cultures and contexts that have been studied (Gosso, Otta, Morais, Ribeiro, & Bussab, 2005; Roopnarine, Patte, Johnson, & Kuschner, 2015). Early observers described the spontaneous production of pretense by very young children in functional terms, hypothesizing that children are learning about others and preparing to take future roles in their society (Lancy, Bock, & Gaskins, 2010). Cognitive researchers argued that pretend play supported children’s capacity to manipulate symbols, developing language and abstract thought (Bretherton, 1984; Piaget, 1952; Vygotsky, 1967). Others focused on the emotional arousal of pretend play and hypothesized that it promoted the development of social understanding and empathy (Seja & Russ, 1999). Given its pervasiveness, and its obvious parallels with social, emotional and cognitive development, researchers have been inclined to believe that pretend play serves an important, potentially universal function to support learning in childhood.

It has become accepted wisdom that pretend play is self-motivated, and that learning opportunities afforded through pretend play are unique because they are self-directed by children. Children choose their own paths in their pretend play, and limit their own behavior to conform to the pretend situation, self-regulating by choice, for the pleasure of playing the game

(Fein, 1981; J. L. Singer, 1961; Vygotsky, 1967). Children could inhibit the real world in favor of an imagined situation and come to understand the meaning of social constructs such as “sister,” in ways they did not living in the everyday world (Vygotsky, 1967). The pretend space allowed children to be and do more than they were capable of in real life, and in this way pretend play itself became the “zone of proximal development.”

Following from the descriptions of pretend as a behavior with special developmental significance, researchers have argued that pretend play practice is critical for healthy child development (Ginsburg et al., 2007; Mendelsohn et al., 2018). Extending this logic, some have even argued that children who do not pretend are at risk, and should be guided towards the practice of pretending (Goldstein & Lerner, 2017; Smilansky, 1968). The deficit model of pretend play has most often been applied to children from low-income or disadvantaged backgrounds, although sufficient ecologically valid data has rarely been available for these populations (McLoyd, 1982).

Nonetheless, the notion that pretend play is critical, and that adults can and should guide children toward optimal play behavior has become pervasive in the U.S. and other Western, industrialized societies (Weisberg, Hirsh-Pasek, Golinkoff, Kittredge, & Klahr, 2016). This view has been applied not only to children who do not pretend enough, but to those who might not be pretending in the “optimal manner.” As one might expect, what is considered as constituting “optimal” pretending is context-dependent, but ultimately determined by adults – often by direction of experts in parenting and child development, who prescribe the optimal conditions for child growth and learning (Hulbert, 2003). Pretending that is most beneficial to children has also become associated with pretend play that is “complex” as measured by cognitive criteria (Melzer & Palermo, 2016). Since the rise of applications of neuroscience to developmental imperatives,

parents have specifically been assigned responsibility for young children's "cognitive stimulation," with pretend play cited as a primary opportunity to achieve this goal (Macvarish, Lee, & Lowe, 2014). American parents have increasingly become the instrument of their child's development by participating in children's pretend play at home (P. K. Smith, 2005).

Paradoxically, the expert advice on supporting child development, which initially highlighted pretend play because it offered the child an unparalleled opportunity for self-directed learning, now recommended that pretending was too important to be left up to the child alone.

This paradox exists today as an unacknowledged tension in the pretend play literature between pretend play as self-directed learning by children and learning through play by intervention from adults. Although much pretend play research has focused on the child's learning outcomes, consensus has been difficult to establish (Lillard et al., 2012; P. K. Smith, 1988), and parent involvement in pretend is rarely included in these investigations. In part, the field lacks sufficient longitudinal, naturalistic studies to evaluate such questions (Nicolopoulou, 2018). But, the function of play from these two perspectives is also at odds. If pretend play is important because it is the source of the child's self-motivated learning, what happens when adults become the "teachers" in the classroom of children's pretend play?

In this dissertation, I examine the prevailing assumptions about the role of pretend play in children's lives and the role of adults in supporting pretend play. I will argue that the participation of adults fundamentally alters the activity of pretend play, and must be examined to evaluate claims about the developmental benefits of pretending for children. Specifically, I ask:

1. How much time do children spend pretending at home during the preschool period and with whom are they pretending?

2. How cognitively complex are children's episodes of pretend play?
3. How do parents influence the complexity of pretend play episodes and communicate their priorities for the play?
4. How do patterns of pretend play behavior across the preschool period relate to cognitive outcome at kindergarten?

To answer these questions, I focus exclusively on the pretend play of children from the onset of pretending at home through the preschool years. The preschool period is the most strongly defined as the critical time for children to benefit from pretend (D. G. Singer & Singer, 1990). Other periods of children's lives, when pretending can and does thrive among children, are often overlooked in pretend play research (E. D. Smith & Lillard, 2012). Certainly, the focus on the preschool years has been influenced by the seminal works on pretend play and child development by Jean Piaget (1952) and Lev Vygotsky (1967). Although the two scholars did not necessarily agree on how pretend play functions in children's lives, they both identified the preschool period as the important moment to observe children engaging in pretend and to map the cognitive transitions that they are simultaneously undergoing.

I also limit this inquiry to the study of children's pretend play at home. Much literature has focused on observations of pretend play in controlled settings, under experimental conditions or within school environments (Haight & Miller, 1993). I argue that the differences in these contexts from the home environment are important for assessing claims about pretend play. Most notably, if we expect parents to enhance learning through pretend play, we should evaluate the impact of pretend in the context in which parents are participating. The home environment differs from preschool in its social composition, increasing the likelihood of interactions with adults or siblings, and decreasing the opportunities to pretend with other child peers. The toys

and spaces available for pretending are not consistent across households as they are across many preschools, with well-provisioned play areas for pretending about everyday life. Although they may share an interest in activities that promote children's learning, parents have distinct priorities from teachers or researchers. All of these contextual factors may serve to shape the pretending that children engage in, and the substance of pretend play may impact the kinds of benefits that can be achieved through pretending.

Within these contexts, we aim to understand how much and in what ways does pretending at home relate to the development of cognitive skills. Cognitive development is certainly not the only the arena where benefits have been ascribed to pretend play. However, cognitive development has been the most strongly promoted function of pretend play by developmental researchers across the large body of research (Lillard, Pinkham, & Smith, 2010). Much of this research emphasizes pretend as a symbolic activity (Bretherton et al., 1981; Huttenlocher & Higgins, 1978), and presumes that the practice of manipulating symbols in pretend play fosters further development of the symbolic function and capacities for abstract thought (Bretherton et al., 1981; El'konin, 1966; Hopkins, Smith, & Lillard, 2016). Cognitive skills are linked with school-readiness and school success, including literacy, self-regulation and social understanding (Toub et al., 2018; Wallace & Russ, 2015; Weisberg, 2015; White & Carlson, 2016). The outcomes associated with school success are prioritized in the American cultural milieu, and these priorities have been made apparent through popular media, research, legislation and government funding (Zigler & Bishop-Josef, 2006). I focus in the present study on the strongest claims regarding pretend play and cognitive outcomes measured through language skills, theory of mind, executive function and narrative production (Lillard et al., 2012). All of these measures represent different aspects of cognition and skills related to school

achievement, which occupies the major set of benefits that justify the importance of engaging in pretend play in preschool.

We bring to this inquiry the asset of a large corpus of observations of typically-developing children from a demographically representative sample. One of the major critiques of the study of pretend play is that the research is overwhelmingly drawn from samples which are not globally (or locally) representative (P. K. Smith, 2005). Many of our assumptions about pretend play come from published research describing the behavior of Western children from advantaged White families. There is also a dearth of longitudinal and naturalistic studies on which to base strong claims. Our goal is to shed light on the questions surrounding the pretend play of preschool children with longitudinal data across a broader spectrum of American families. We do so with a sample that is not only demographically representative of an American community, but also large in its scope (60 families) and longitudinal in design, capturing data from children across many visits during infancy through the preschool age. In addition, these children were part of a larger study of development which collected many assessments across the study visits, allowing us to make direct connections between observed behaviors and measured developmental outcomes.

The current sample is drawn from The Language Development Project corpus which contains video recordings of 64 typically-developing children who were recruited as a sample of families demographically representative of Chicago in the year 2000. These children were visited every four months from 14 months to 58 months, and were video-recorded for 90 minutes engaging in typical activities at home. In addition, researchers administered standard assessments of child development at each visit, resulting in a large database of information about the children's growth over time. After 58 months, families were visited annually for continued

assessments through the ninth grade. Parents were also administered cognitive assessments and surveys regarding their parenting knowledge and mental health. This corpus represents an ideal resource for a mixed-methods approach to investigating variations in development because we can combine data from naturalistic interactions with standardized assessments over multiple timepoints and observe pretend play in the context of the early home environment.

This study will also take a holistic approach to the study of pretending at home. Our goal is not to decompose pretend play into a series of specialized behaviors and analyze their individual relations with specified outcomes. Rather, we recognize that pretend play is made up of numerous distinct behaviors, but that these behaviors are complementary and housed within a consistent social context, i.e., the home environment. While some of the features of pretend may utilize distinct skills, the constellation of behaviors that make up pretending travel together. Therefore, our goal is to understand and describe patterns of pretending at home and generate profiles of different players across the sample to use in our analysis of child outcomes.

In Chapter 2, I trace the history of the study of pretend play from its psychological roots to the present context where pretend play is described as an imperative for children's healthy development. While tracing this trajectory, I outline the social and cultural pressures that shape widely held beliefs about children's play, learning, and the role adults should serve in both. Contrasting this attitude with attitudes and beliefs held in other cultural spaces, I acknowledge how beliefs about pretend play are rooted in the socio-cultural context in which they are derived. I highlight how, unlike many other contexts across the world, modern American parents are charged with the responsibility for promoting pretend play practice with children in order to ensure optimal learning and development, and cognitive development in particular, during the preschool years.

In Chapter 3, I describe the challenges inherent in identifying pretend play in the home environment and the features of pretending that have been deemed important by the literature. I review the methods for distinguishing episodes of pretend play and the criteria used for excluding ambiguous behavior from the observations we examined. Finally, I describe the methods for quantifying the pretend play behavior collected in this corpus and report the methods and scores for inter-rater reliability in identifying pretend play time. Through this discussion I underscore the variation in behaviors that make up pretend play, and emphasize the difficulty in arriving at consistent conclusions about pretend play when the essential behaviors are inconsistently defined. I justify the criteria we've selected to identify pretend play in the current sample based on the most consistent definitions in the existing literature, and base our analysis on the seminal study of pretending at home conducted by Wendy Haight and Peggy Miller (1993).

In Chapter 4, I describe how much time children spend in pretend play in the recorded sessions from our representative sample. I also describe the frequency of parent participation in pretend to understand how often pretending happens as a solo activity, with an adult or with a child partner at home. I utilize the existing work by Haight and Miller (1993) as a point of contrast for the results we find in the current study. Haight and Miller (1993) conducted extensive observations of nine White children from advantaged families in the preschool period, and this work is unique in the literature in its focus on pretend play at home. Our study mirrors that work, but increases the sample to 60 children recruited to be representative of the population of Chicago in the year 2000. I emphasize how this study adds critical value to the field by allowing us to describe the variation in pretend play behavior – an advantage afforded to us by our comparatively large and diverse sample.

In Chapter 5, I describe the content of children's pretend and its relation to categories of pretending described in the traditional and more recent literature on children's cognitive development. In this chapter play behavior is categorized by degrees of cognitive complexity. Complexity is defined by elements that are symbolic, requiring abstract thought. Degrees of complexity are derived from how much "cognitive distance" exists between the imagined circumstance and the here and now (Werner & Kaplan, 1963). I discuss the frequencies of pretend behaviors such as object, role and setting transformations, use of abstract scripts for story narratives and play about fantasy and reality. Each of these elements has been associated with cognitive outcomes in the literature. In this chapter I emphasize the scarcity of the features considered to be most cognitively complex, including longer narratives, abstract transformations and play with invented fantasy. I also review how these features vary across children who pretend most and children who pretend least, as a means of describing patterns in groups of children.

In Chapter 6, I describe the variety of ways that parents contribute to children's pretend play. Investigating the complexity of episodes from chapter 5 further, I break down the features of play into those produced or initiated by adults versus children. I discuss how the developmental trajectory of children's pretend behavior is distinct from the pattern over time contributed by adults. I emphasize the distinction between these contributions because while adult participants are capable of the full range of cognitively complex behaviors, young children are not. In part one of this chapter, I evaluate the complex elements of pretending that may signal children's cognitive development over time, and distinguish these from the contributions of adult play partners. In part two of this chapter, I focus on the interactions between children and adults in pretend play episodes where parents communicate their priorities for children. I examine

interactions qualitatively with a focus on how parents use questions during pretend play to evaluate children's knowledge or elaborate play. In addition, I describe how parents use pretend as a means of achieving behavioral goals for children. Throughout these descriptions I raise questions about the alignment of goals between parents and children during play, and consider how authority and the relative status of adults to children is negotiated and alters the play itself.

In Chapter 7, I analyze the relation between the patterns of pretend play behaviors in the home and children's later outcomes at kindergarten. I focus on the cognitive skills linked to school-readiness outcomes which are used to justify the importance of pretend play (Melzer & Palermo, 2016). I first examine pretend play data to develop profiles of pretend play behavior based on the large sample of children and the observations of pretend play episodes observed in the sample. I then evaluate the relation between profiles of pretend play behaviors and variation in cognitive outcomes that are associated with pretend play in the literature. The outcomes include language, executive function, theory of mind and narrative production. I test these claims from the literature and describe the evidence from this corpus that relates pretending at home to cognitive benefits for children.

At the conclusion of this dissertation, I discuss how this study provides new insight into the importance of pretend play in children's lives and the impact of parents on pretending at home. I outline the needed research to further justify (or revise) the current claims asserted by the literature about the relations between parents, pretending and cognitive development in preschool. Given that over 100 years of research has not resolved debate on the function of pretend play, a single verdict on this subject is unlikely. And yet, in the interest of both parents and children, the importance of pretend play for learning must be better understood. Without adult intervention, children may not learn from pretend play what adults deem to be important,

including school-readiness skills. But does children's pretend play still have value if it serves children in learning what *they* are seeking to understand? Despite the ambivalence in the field, educators, clinicians and parenting experts have disseminated the message that parents should include participating in pretend play among their many parenting responsibilities. Does this prescription serve both children and parents? And if so, how do we know? This study examines the current assumptions regarding parents and pretend play, and with a larger, more diverse sample, offers new perspectives on these questions.

2 Theories on the Role of Pretend Play in Child Development

“In play a child is always above his average age, above his daily behavior; in play it is as though he were a head taller than himself.” (Vygotsky, 1967, p. 16)

2.1 Introduction

Despite more than one hundred years of research and debate on the subject of children’s pretend play, questions remain outstanding on the role of pretend play in child development. This chapter will review two of them:

1. How does pretend play benefit young children’s cognitive development?
2. How does the social, historical and cultural context of children’s lives impact their pretend play?

I frame these questions in the terms of developmental benefit because these are the major grounds upon which the debate rests. The study of pretend play has generated a vast literature, stretching across studies in psychology, anthropology, education, psychiatry, health, parenting, creativity and the arts and many other fields. Across this literature it is widely assumed that pretend play is important for children, although the claims about how and why it matters in children’s lives vary considerably and have been the subject of much debate.

In one such arena, scholars debate whether pretend play primarily serves a social or an individual function. For example, is the function of pretend play to assist children in understanding relationships and assuming future roles in their societies? Is it to learn to interact, cooperate and negotiate with others? Or is it a special mechanism for developing the symbolic function, which fosters the ability in individuals to formulate decontextualized thought and abstraction? As we shall see, the proposed functions and benefits of pretend play vary with the

behaviors that children produce, the context in which children live, and the ideologies that shape each field of research.

Play in general, and pretend play more specifically, is among many of the nearly universal behaviors observed in children across cultures (Gosso et al., 2005; Lancy, 1996; Schwartzman, 1978). One reason play is considered a context-independent phenomenon is that it is conceptualized as intrinsically-motivated. As with other human phenomena, the evolutionary roots that undergird pretend play may remain consistent, but how these behaviors manifest across the world may be radically different (Gaskins, Haight, & Lancy, 2006). As described by Gaskins, attachment theory encounters similar problems, as a proposed universal mechanism in human development that manifests with significant variation in behaviors across cultural contexts (Gaskins, 2008). The mechanism and function of pretend play can also vary significantly when the contexts in which it occurs are so distinct. In this dissertation, I argue that this context has important implications for the evaluation of theoretical claims regarding the significance and the benefit of pretend play for children's development. Therefore, in this chapter I describe how the specific behaviors that have been historically described in pretend play manifest within a social, cultural and historical context and argue that recognizing the impact of the surrounding social milieu on these behaviors is the first step to evaluating the importance of pretend play in children's lives.

In part one of this chapter, I review research stemming largely from developmental psychology which argues that pretend play is beneficial for children's cognitive development. I describe the unique benefits proposed not only by engaging in pretend play as a whole, but also by engaging in the distinct behaviors that make up pretend play, such as role play. In part two, I describe how American children's pretend play is embedded in a larger social, cultural and

historical context, and how that context has influenced the form and function of pretend play over time, including the ways in which adults participate in children's pretending.

Through this literature review I uncover a tension which remains largely unacknowledged with regard to the participation of adults. Pretend play is traditionally described as an activity that belongs to and is organized by children. And yet, a concurrent body of literature also describes pretend play as an important vehicle for parents to enhance their children's development through scaffolding. I argue that pretend play cannot simultaneously be both organized by children and directed by adults because the direction of adults fundamentally alters the play, not only in its content, but also in its objective. To illustrate this contradiction in practice, in the ensuing chapters I will examine how these two perspectives are negotiated by the families of preschool children pretending at home.

2.2 The developmental benefits of pretend play

Despite the variety of domains in which pretend play has been implicated, including empathy, social skills, mental health and creativity; the emphasis in the psychological literature remains on the features of pretend play that are symbolic (Bergen, 2013; Lillard et al., 2013, 2012) and related to advancing cognitive development. Below I summarize this vast literature by describing the proposed mechanisms (e.g., the features of pretend play which are theorized to support the development of cognitive skills) and three major cognitive outcomes associated with pretend play which are suggested by the literature. Although there is by no means consensus on this collection of claims in the developmental literature (Lillard et al., 2012), I limit the discussion here to proposed theories which are supported by substantial research, and which can also be tested by examining children's pretend play in context.

2.2.1 Symbolic Features of Pretend Play

2.2.1.1 *Transformations*

Pretend play is considered at its core symbolic because the pretend features that are invoked in play only exist as mental representations (Piaget, 1952). In order for a behavior to be considered pretend play, there must be at least one transformation of the present context to one that is imagined (Fein, 1975; Lillard et al., 2010). As described by Fein (1975), a transformation incorporates features that are not immediately perceptible in the here and now. Transformations can be applied to concrete features of the existing environment, such as imagining coffee in a toy coffee pot, or they can be produced entirely from mental imagery, such as inventing an imaginary sword with which to slay an imaginary dragon. Fein (1975) and others (Matthews, 1977; McLoyd, 1980; Pellegrini, 2009) refer to these two types of transformations as “material” and “ideational,” and propose that material transformations are easier for children to make than ideational transformations because material transformations are grounded in the features of the here and now and ideational transformations are composed entirely in thought.

Different researchers have placed more emphasis on certain symbolic features that appear in children’s pretend play. Piaget, for example, focused more on **object transformations**, and specifically those object transformations wherein one object was used to represent a distinct object: *object substitutions* (Piaget, 1952). Object substitutions have been assigned a special function with regard to symbolic development because they are inherent in pretend, and according to Vygotsky, in practicing pretend children learn to separate objects from their labels (Vygotsky, 1967). The importance of this development is highlighted as necessary for language development and the ability to make abstractions, describing ideas and events which are not present in the here and now. Both Piaget and Vygotsky highlighted the separation of objects

from their labels as important for abstract thought, although Piaget focused more on this move as an indication of progressing cognitive development, whereas Vygotsky focused more on the future capacities that become available to children through the practice of separating concepts from concrete objects in pretend play (Göncü & Gaskins, 2011; Pellegrini, 2009).

El'konin (1966) was perhaps the first to articulate what became the three most commonly identified transformations in pretend: the objects, roles and **simulated activities** (later described as action schemas or scripts; (El'konin, 1966). According to El'konin, "In extensive symbolic play, at least two forms of symbolization occur: first, the assumption by the child of the *role* itself (the child identifies himself with another person) and the fulfillment of play *activities* which substitute for and, consequently, symbolize real activities; second, the substitution, or symbolization, of one *object* for another." Curiously, El'konin does not identify activities as a third major symbolic element of pretend play in his discourse, although he acknowledges that such activities are, in his estimation, symbolic. Although actions and activities had long been included in the early discussions of pretend play, the first clear analysis of the structure of children's pretend actions was developed by Garvey and Berndt (1975). According to their work, children performed pretend stories based on "schemas," or frameworks of expected sequences of events (e.g., "making a telephone call"). Each of these frameworks could vary in detail when performed (e.g., picking up the receiver, saying hello, saying goodbye, etc.), but the schema or script formed the abstract representation of a sequence of actions, making this type of play symbolic. Vygotsky also discussed pretend activities, but highlighted the social world that pretend play simulates in activities. Though he did not name "roles" or "scripts" per se, he described how children make meaning of abstract concepts in the social world, such as "mother" and "sister," through stereotypical activities ascribed to these social roles (Vygotsky, 1967).

El'konin elaborated on **role play** as a symbolic activity in pretend play, highlighting the child's capacity not only to simulate activities but also to take on the identity of another.

According to other theorists, role play becomes symbolic when the player explicitly identifies the role being adopted; e.g., "I'm a mommy," (Huttenlocher & Higgins, 1978). This explicit role assignment, either for self or others, indicates a symbolic framework more convincingly than simple role enactment, which includes performing stereotypical activities, such as rocking a baby, but no clear identification with an abstraction of the "mother" relationship (P Miller & Garvey, 1984). Later work highlighted the work of role play as an explicit perspective-taking process which is required for children to express the thoughts, feelings or desires of another in their play (Harris, 2000). For this reason, role play has been described as offering distinct developmental benefits for children related to the development of social cognition, and specifically theory of mind (Kavanaugh, 2012; Lillard & Kavanaugh, 2014).

A developmental trajectory has been proposed for the appearance of symbolic transformations in pretend play, centered on the degree to which transformations are grounded in the here and now. According to many observers, pretending begins with self-directed action with replica objects, and gradually undergoes "decentration" or moving away from the egocentric perspective to take other perspectives into account (Bretherton et al., 1981; Fein, 1975; Piaget, 1952). As pretend play develops children also demonstrate increasing "decontextualization," or separation between the present context and the pretend referent. As classified in the literature, the degree of "psychological distancing" determines the complexity of the play, as the child must manage more content which is not provided in the physical environment with mental representations alone (Overton & Jackson, 1973; Werner & Kaplan, 1963). Following this logic, Overton and Jackson (1973) suggested that pure pantomime constitutes a more advanced level of

play, and others observed that this type of transformation hardly appears until after 31 months (Bretherton, 1984). Explicit role play (with identified roles) was also observed to be rare before 36 months, whereas role enactment (simulated activities without explicitly identified roles) could be seen in much younger children. Fein (1975) also supported this developmental trajectory with combinations of object transformations, suggesting that two-year-old children were more likely to pretend when the number of object substitutions modeled by adult experimenters were fewer and less abstract. In her experiment, children could pretend to give a replica toy horse a “drink” with a replica toy cup, but fewer two-year-olds pretended to give a drink to a toy horse when one of the items required a more distant substitution (e.g., the cup was replaced with a more abstract, less “cup-like” item, such as a clam shell). Likewise, the youngest children were even less likely to pretend when *two* abstract transformations were required; using a clam shell to “give a drink” to a horse-shaped metal object.

Once children have mastered both material and ideational transformations in their play, the transformations they choose to utilize may become dictated by other factors. Based on work by Garvey and Berndt (1975), objects in the environment may prompt a story, but later object substitutions might be determined by the story itself. For example, a fireman’s hat may prompt a story about putting out fires, but a broom or a rope might as easily be taken up to become a “hose.” Some even suggest that object dependence or independence may be a reflection of style, rather than developmental level (Bretherton, 1984; Garvey & Berndt, 1975; Pellegrini, 2009). Bretherton (1984) described children who, beyond the age of four, tended to make choices in play that demonstrated their preference for object-based versus object-independent pretending. According to some researchers, these choices, particularly an emphasis on role play versus object

substitutions, can impact developing capacities, although the research on the distinct benefits of these features of pretend play remains limited (Nicolopoulou, 2018; Sachet & Mottweiler, 2013).

2.2.1.2 *Fantasy*

“Fantasy” has been considered a fundamental feature of children’s pretend play (Bretherton, 1984; D. G. Singer & Singer, 1990). Like “symbolic play,” “fantasy play” is also used interchangeably with pretend play, although in some work “fantasy play” is contrasted with “sociodramatic play” which centers on simulating the everyday activities of people in the social world that children inhabit. The fantasy play of North American children has been described most frequently in the pretend play literature, where examples of children’s pretend are often filled with magical entities and fairy tale characters, and where sometimes an otherwise impossible world is invented (Gaskins, 2013; D. G. Singer & Singer, 1990; Taylor, Sachet, Maring, & Mannering, 2013). Where it is observed, this type of fantasy play has been considered among the most mature and “highest forms” of play (Garvey, 1990; Paley, 2004).

Although the criteria used to label “fantasy” play have not been consistent, researchers have again recognized an important feature in the degree of “distance” from the child’s everyday experience. Stone (1962) referred to a distinction between roles that children could play as “anticipatory” and “fantastic.” In anticipatory roles, the child takes on roles which she might reasonably encounter or embody someday (e.g., adult roles, occupations). In fantastic roles, the child enacts roles which she may rarely or never expect to encounter or perform (e.g., pirates, aliens; (McLoyd, 1980; Stone, 1962). Bretherton (1984) distinguished between “as-if” pretend play, which “simulates” everyday reality, and “what-if” pretend play, which transforms reality into fictive worlds. She distinguished between *low-level* “what-if” play, with smaller breaks from reality such as substituting a stick for a spoon, or a toddler for a “mommy,” from *high-level*

“what-if” play, which incorporates “impossible” worlds that may suspend the laws of time, space and causality. Others (Dore & Lillard, 2015; Pierucci, O’Brien, McInnis, Gilpin, & Barber, 2014) define fantasy by similar “impossibility” criteria, although they categorize “pretending to be an animal” as imaginative, but not necessarily fantastical in the way that pretending to be a princess or flying to the moon might be. Gaskins (2013) describes reality-based pretend as “interpretive,” because children are interpreting the world around them, whereas “inventive” pretend departs from the expected script. For Gaskins (2013), pretending that Cinderella’s pumpkin becomes a stagecoach would not be inventive, because it follows the well-known events of a familiar story which children have been told, read or seen; in this case the children are interpreting a story as they have experienced it through storytelling. Cinderella’s pumpkin becoming a spaceship, on the other hand, would be considered “inventive.” In all of these examples, researchers mark the critical quality in fantasy pretend play as content that departs from the familiar experiences (including stories) in the child’s everyday world. Throughout this dissertation, I will refer to the two types of pretend content discussed here as pretending about “fantasy,” e.g., experiences the child can’t or won’t have in the real world, and pretending about “reality” or experiences drawn from the child’s everyday world.

Some developmental researchers have placed particular importance upon a child’s propensity to engage in fantastical worlds and consider the affinity for such fantasy a stable, innate trait they refer to as “fantasy orientation” (Pierucci et al., 2014; D. G. Singer & Singer, 1990; Taylor & Carlson, 1997). Although the definition of fantasy orientation varies somewhat across studies, measures of fantasy orientation have largely been based on parent and child interviews about preferences for media with fantastical themes, inventing or performing songs or stories, engagement in fantastical pretend play, and having an imaginary companion (Dore &

Lillard, 2015; D. G. Singer & Singer, 1990; Taylor & Carlson, 1997). Researchers examining this construct have claimed that fantasy orientation may confer a variety of benefits upon children who possess it, including greater control over emotions, empathy, creativity, theory of mind, and executive function (Brown, Thibodeau, Pierucci, & Gilpin, 2017; Dore & Lillard, 2015; Pierucci et al., 2014; Taylor & Carlson, 1997; Taylor et al., 2013; Thibodeau, Gilpin, Brown, & Meyer, 2016).

2.2.2 Cognitive outcomes of pretend play

Claims about the salutary nature of pretend play are based on a vast catalog of prior literature in developmental psychology, education and clinical practice, fields that have shown the greatest interest in pretend play as a tool for promoting healthy child development. Since the literature on these claims and the domains in which they play a role are many, below I limit the discussion of correlational relationships to four school-readiness outcomes with strong claims in the literature about their relevance to pretend play: language, narrative skill, executive function and theory of mind.

2.2.2.1 *Language*

Many researchers have assumed a relationship between pretend play and language skill because both skills employ symbols (Bretherton et al., 1981; Werner & Kaplan, 1963). According to Vygotsky (1968), as children develop the ability to decouple objects and their labels in pretend play, a parallel development is reflected in language. Although many early studies demonstrated concurrent relations between pretend play and language (Bretherton et al., 1981; Lyytinen, Poikkeus, & Laakso, 1997; McCune, 1995; Ogura, 1991; Shore, O'Connell, & Bates, 1984), it remains unclear whether pretend play is predicted by early language skill, or if the practice of pretend play encourages the development of language (Lillard et al., 2012).

Pretend play might encourage language development because it is decontextualized, and therefore requires players to practice using language because they cannot rely on the cues of the immediate environment for the play to be fully understood. Decontextualized language has many features that may promote children's language development: it is more syntactically complex, contains more unique words, and has a longer MLU than contextualized speech (Beals, 2001; Cummins, 1985; Demir, Levine, & Goldin-Meadow, 2015; D. Dickinson & Tabors, 2001; Marvin & Cline, 2010; Rowe, 2012). However, decontextualized language is an umbrella term for a variety of speech contexts, including personal narrative, explanations and formal definitions, which may vary in the degree to which they require such complex language (Demir, Rowe, Heller, Goldin-Meadow, & Levine, 2015; Rowe, 2012). Certainly, in the early period, pretend play relies heavily on objects and features of the present environment, and in many cases does not require language at all (Bretherton, 1984; P Miller & Garvey, 1984; Shore et al., 1984). A child might simply be understood through enactments with replica objects alone. If speech occurs, it may contain large amounts of onomatopoeic utterances, sound effects, or speech from the everyday dialogs of children's typical activities (Bates, Bretherton, Snyder, Shore, & Volterra, 1980).

In prior work examining decontextualized speech using longitudinal data from this corpus, no relation was found between pretend play and measures of receptive vocabulary (Peabody Picture Vocabulary Test) at any time point when controlling for overall amount of parent speech (Demir, Rowe, et al., 2015; Rowe, 2013). In these studies, pretend play was measured by the quantity of speech produced by parents and children during pretend play. Although there is precedent for examining pretend speech as produced in utterances alone, as

described above, speech alone may not carry the full degree of symbolic complexity that is manifested in children's pretend episodes, particularly in the early years.

An alternate theory is that language and pretend play are related by an underlying skill – the development of a symbolic capacity, which manifests over time in both language skill and pretend play (Lillard & Kavanaugh, 2014; McCune, 1995). If this were the case, then we should expect the symbolic complexity in pretend play to relate to the development of language skill over time more than quantity of pretend speech alone. As children produce more complex transformations, they may also become more skilled in using language. Some prior research has found relations between object substitutions and language skill concurrently (McCune, 1995; Ogura, 1991; Sachet & Mottweiler, 2013). Longitudinal research has examined features of pretend play with a variety of language measures including vocabulary, syntax, semantic diversity, and mean length of utterance (MLU), although findings have been mixed (McCune, 1995; Ogura, 1991). These studies have proposed that certain features of play, such as “other-directed” actions (e.g., feeding a baby doll with a spoon) and ideational transformations may selectively predict multi-word on-set. It is perhaps more likely that selected features of pretend play predict language outcomes, given that research from our corpus finds that early gesture use selectively predicts language skill (Rowe & Goldin-Meadow, 2009). That is, children who have a larger gesture vocabulary (e.g., point to dog = dog) at 18 months have a larger receptive vocabulary at 42 months. Whereas, children who combine speech with gestures that convey different meanings, forming a sentence-like combination, have improved syntactic skills at 42 months. Considering that early pretend play relies heavily on nonverbal enactments and action sequences, it is plausible that early symbolic production in pretend play, rather than utterances,

may be a better predictor of the development of symbolic capabilities later in the preschool period.

2.2.2.2 *Narrative Skill*

Another cognitive domain often associated with the practice of pretend play in preschool is the development of narrative skill (Lillard et al., 2012; Nicolopoulou & Ilgaz, 2013). As recognized by many researchers, constructing a narrative is inherent to pretend play whether the actions in a fictional story are enacted or simply described (Pellegrini, 2009). The domains of storytelling and pretend play have much in common, although the skills required and the content highlighted in each activity can and do diverge as children develop through preschool (Nicolopoulou, 2006). For example, some authors propose that children's fictional stories grow out of children's pretend enactments, gradually becoming overtaken by language alone (Engel, 2005). Others suggest that pretend play and storytelling develop independently during preschool, and are influenced by media, family storytelling, and cultural norms (Reese, 2013). Children may perform elaborate play stories but provide few events or details in their spontaneous fictional narratives (Nicolopoulou, Cortina, Ilgaz, Cates, & de Sá, 2015). In addition, pretend play tends to highlight interpersonal content (e.g., character dialogue and affect), whereas fictional narratives feature more plot elements (although this could be a function of gender; see Pellegrini, 2009). Some work on pretend and narrative in preschool suggests that pretend and storytelling do not influence one another (sharing themes between them) until much later in preschool and kindergarten (Nicolopoulou, 2006; Toub et al., 2018).

Some of the most convincing research regarding the relation between pretend play and narrative skill has focused on the combination of story reading and pretend enactment in school-based interventions (Nicolopoulou & Ilgaz, 2013). In some of the most comprehensive work on

the topic, sociodramatic play and narrative skill were examined in a large-scale experimental control trial and found to be significantly associated, although prior skills mattered for how effective such interventions were for children (Pellegrini & Galda, 1991; Williamson & Silvern, 1991). That is, for children with fully developed narrative skills story acting did not further enhance skills, nor were skills advanced where children did not begin with a sufficient level of skill to benefit from the story acting. Of particular significance to the current study, in other work sociodramatic play and fantasy play have been compared to directly address the effectiveness of engaging in story acting of the two types. Results have been mixed, with some studies claiming significant benefits to narrative from sociodramatic play, and others claiming added benefits from fantasy play (Nicolopoulou & Ilgaz, 2013; Weisberg et al., 2015). Intervention studies have also compared the benefits of story acting with peers and with adult facilitators as well, with differentiated impacts of the two types of play interactions depending on the age of the observed children. Importantly, these studies were only done in classroom settings, and it remains to be seen how pretending at home with siblings and adults may impact the development of narrative skill.

2.2.2.3 Executive Function

According to several researchers, executive function requires many of the same features that are required for pretend play, including inhibition, flexible thinking, and self-regulation. Vygotsky (1967) described pretend play as another form of games with rules, arguing that in order for children to pretend they must inhibit their automatic response to the here and now in favor of responses appropriate for play. For example, the child must suppress the impulse to actually eat a toy cookie, and must inhibit an object's real identity and replace it with a representation of a pretend one (e.g., a ruler substituting for a wand).

Why does the child not do what he spontaneously wants? Because to observe the rules of the play structure promises much greater pleasure from the game than the gratification of an immediate impulse.... A child's greatest **self-control** occurs in play. (Vygotsky, 1967, p. 14)

Vygotsky (1967) also argued that children practiced self-regulation by adapting to a play partner in social pretense, and adhering to the rules of a pretend frame as well, by behaving in a way that is appropriate to their pretend character or scene, rather than as they would otherwise. In this way, pretend play allows children to be reflective about the meaning of their roles, and distance themselves from the immediate context in order to select responses based on a conceived schema (Sachet & Mottweiler, 2013; Vygotsky, 1967).

Again, the notion of "psychological distancing" becomes relevant (Müller, Yeung, & Hutchison, 2013; Werner & Kaplan, 1963). Pretend play may offer children practice stepping back from a problem and re-evaluating it based on a symbolic alternative (Sachet & Mottweiler, 2013). In early pretend play, as discussed above, children's transformations undergo increasing decontextualization, advancing from more proximal transformations to those that are more displaced (Sigel, 1970). The more separated the mental representation becomes from the here and now, the more challenging it may be for children to maintain the dual representations of real content and pretend content (Leslie, 1987). If the key element is distance from reality, then the degree of symbolic distance in pretend play content may underlie the relation between pretend play and executive function.

Extreme cases of symbolic distance may explain why some of the effective intervention studies measuring executive functioning have involved fantasy content. An early study measured self-regulation by asking children to stand still, and those who stood still the longest had higher scores on the measure of fantasy orientation (J. L. Singer, 1961). Anecdotally these children

mentioned that their strategy for standing still was to imagine another world. A more recent study proposed that fantasy content in pretend play improved preschool children's executive function above and beyond imaginative play such as pretending to be animals (Thibodeau et al., 2016). As mentioned above, the fantasy orientation literature argues that high fantasy magnifies the distance between reality and pretend, highlighting the alternative to the present context even more strongly for children than more reality-based pretend play (Dore & Lillard, 2015; Pierucci et al., 2014).

2.2.2.4 *Theory of Mind*

There is a robust literature on the relation between pretend play and theory of mind (ToM), the ability to understand what another is thinking or feeling (Wellman & Liu, 2004). The relation is intuitive because in pretend play, particularly in role play, children practice taking on the perspectives of others (Harris, 2000). Others have argued theoretically that the practice of pretend play exercises the developing capacities for mental representation and promotes an early understanding of mental states (Leslie, 1987). Role play was initially implicated in theory of mind development through the production of role enactment and role assignments in children's pretend play (Astington & Jenkins, 1995; Youngblade & Dunn, 1995). In Astington & Jenkins (1995), role assignments predicted performance on false belief tasks, even though total amount of pretend play did not. These researchers argued that a better understanding of children's ToM and social understanding could be found by taking an ecological approach alongside an experimental one, examining both the child's pretend play behavior and the outcome measures of interest.

However, longitudinal studies assessing the effect of pretend play on ToM have been mixed. In a study done in the homes of preschoolers, children's role enactment at two and a half

predicted children's performance on false belief tasks seven months later (Youngblade & Dunn, 1995). In another study, rather than seeing pretend play predict theory of mind, researchers found that theory of mind predicted children's social pretend play behaviors, including role assignments (Jenkins & Wilde, 2000).

More recently, researchers have claimed that children who display preferences for fantasy play (Fantasy orientation, FO) also score higher on ToM measures than other children at 4 years old (Taylor & Carlson, 1997). Though it was a correlational study, the authors suggested future research should explore a causal link between pretend play with imaginative fantasy content and the understanding that mental representations can be distinct from reality. FO in this study was assessed through interviews asking children about their favorite pretend games and whether they had an imaginary companion. This association has not been tested in naturalistic settings, where the propensity for pretending with fantasy content has been observed in children's typical pretend play behaviors.

2.2.3 Interim Discussion

The research linking pretend play to cognitive outcomes is vast, representing fundamental theoretical frameworks followed up by a variety of observational and experimental studies. Researchers continue to pursue relations between pretend in preschool and developing cognitive capacities, although the directionality and causality of some of these claims has been difficult to establish (Lillard et al., 2012). Nonetheless, large bodies of literature suggest a positive relation between pretend play and the developing capacities of language, narrative skill, executive function and theory of mind in preschool children. Researchers dedicated to this pursuit are committed to the idea that pretend play is not only related to these capacities, but that pretend play is vital for a child's optimal development (Toub et al., 2018).

2.3 The Problem: Understanding Pretend Play in Context

Despite the expansive literature on the benefits of pretend play, the role of pretend play in child development remains elusive. Two main critiques persist with the existing literature. First, the studies of pretend play suffer from methodological shortcomings, including experimenter bias, research designs that cannot support a causal interpretation, and insufficient attention to variation. Critics point to an attitude described as the “play ethos,” a commitment to play by researchers and educators as “all good for all children” despite the lack of empirical support for some claims (Lillard et al., 2012; P. K. Smith, 1988).

Second, the literature on the importance of pretend play draws primarily on “WEIRD” samples (Henrich, Heine, & Norenzayan, 2013), embedded with assumptions about play based largely on behaviors that are only relevant in the American or Western context. Some of this bias can be contributed to the assumption of universality, which implies that context is irrelevant for human phenomena that appear so consistently across cultures. As we shall describe below, many researchers have argued that although pretend play has been identified in nearly all observed human societies, the form and function it takes on in each environment can be radically different. Therefore, making claims about the importance of pretend in the absence of cultural and contextual information leaves out a critical variable. In this section, I argue that pretend play behaviors in our American sample are strongly influenced by the social, historical and cultural context in which these families live.

2.3.1 Pretend play as socially constructed

As mentioned in the chapter introduction, one of the key tensions in the pretend play literature is the consideration of **pretend as an individual activity versus a social activity**. Piaget and Vygotsky, undoubtedly the most influential theorists on the role of pretend play in

cognitive development, understood the consequences of pretend play differently, and these differences have had implications for the research perspectives that followed. To some degree, their theoretical differences grew out of distinct interpretations of the reality and fantasy principles that were first offered by Freud and built upon by his contemporary Eugen Bleuler (Harris, 2000). As described in Harris (2000), Bleuler introduced the distinction between a rational mind and an ‘autistic’ mind which is a “mode of thought dominated by free association and wishful thinking.” In Freud’s conception, the autistic mind is akin to the pleasure principle, which is the primary structure of thought for the infant, and represents the base impulses which are eventually overcome by rational thought; i.e., the reality principle. Bleuler, on the other hand, while building on these two distinct types of thought, disagreed with Freud that the autistic mind was primary and pathological. Instead, he argued that autistic thinking, effectively the capacity to imagine, was an achievement in late infancy and a useful skill that continued to serve human beings from childhood through adulthood.

Piaget took up the suggestion of Freud regarding the pathology of autistic thinking, while Vygotsky followed the criticism of Bleuler with regard to understanding imagination as an achievement and an asset to development. Freud’s influence appears in Piaget’s descriptions of pretend play as a temporary phenomenon reflecting individual development from assimilating the real world into the child’s desires (pretense) to accommodating the real world with adaptations to their own thinking (rational thought). While both theorists supported pretend play as a kind of “wish fulfillment,” where children can achieve in pretense what is not available to them in reality, Piaget focused on the “ludic” or playful quality of pretense in childhood and described its decline and eventual disappearance as the triumph of the rational mind. Vygotsky, on the other hand, focused on the appearance of pretense in later infancy as a sign of newly

acquired cognitive capacities which afford opportunities for new and ongoing learning. Thus, in these two theorists' perspectives we find the two opposing views on the role of pretense in development – causal or epiphenomenal – that continues to be debated today (Lillard et al., 2012).

Piaget and Vygotsky also emphasized the solo and social aspects of pretend play differently. Whereas Piaget focused on how pretend play is utilized by the individual child to fulfill her idiosyncratic desires, Vygotsky focused on pretend play as a platform for children to understand the social environment in which they live. Both theorists agreed that pretend play served to help children interpret their experiences in the real world. But Vygotsky's view included a clearer description of how the child internalized the rules of the larger social context in which they were learning to become a mature participant. In a famous example, he describes two sisters playing at "being sisters." According to Vygotsky, the play afforded the opportunity for each child to understand the relationship that is "sister" differently than simply being a sister in everyday life could. They achieve this by disconnecting from the real world, where they act without reflecting, and they arrive at a new level of understanding by performing according to the abstract rules, as they understand them, that govern what "sisters" are. As a result, according to Vygotsky, pretend play itself becomes a *zone of proximal development*: a platform for children to behave in a more capable manner than they could otherwise.

Play is the source of development and creates the zone of proximal development. Action in the imaginative sphere, in an imaginary situation, the creation of voluntary intentions and the formation of real-life plans and volitional motives – all appear in play and make it the highest level of preschool development. (Vygotsky, 1967, p. 16)

Importantly, neither Vygotsky nor Piaget considered the social context – that is, the individuals with whom children engage in pretending – to be central to their theoretical claims

(Göncü & Gaskins, 2011). Though Vygotsky described social pretense as an opportunity for making meaning of the child's world, this process was framed in terms of how this learning was internalized by the individual child. For both theorists, pretend was an activity that was sometimes social, in the sense that it was occasionally carried out with another participant. But neither emphasized the role of others in the development of pretend play or the learning that came from it. Vygotsky's perspective, in fact, has often been misconstrued, because much of his most well-known work on the zone of proximal development invokes the idea of "scaffolding," a term coined later by Bruner (Wood, Bruner, & Ross, 1976). Both the *zone of proximal development* and "scaffolding" concepts describe the capacity of children to complete tasks "under adult guidance or in collaboration with more capable peers" which would have been too challenging for them to complete on their own. But this is not, as described above, what Vygotsky intended when he described pretend play, because Vygotsky did not consider the influence of individuals in the child's environment as a critical part of the learning that occurs during children's pretend play. Nonetheless, ensuing research clearly adopted the notion that adult scaffolding can and should be used as a means of increasing the educational benefits of pretend play with preschool children (Katz, 2001; Melzer & Palermo, 2016; Toub et al., 2018; Weisberg et al., 2016).

As Piaget's and Vygotsky's works were becoming the foundational principals of child development research, Greta Fein, a student of Piaget, and El'konin, a student of Vygotsky, began to debate this very idea: whether the social context – the involvement of adults in particular – did in fact play an important role in the development of pretense (El'konin, 1966; Fein, 1975). In the Piagetian tradition, Fein examined pretend play as it "naturally" unfolded within individual children. She created careful experiments to demonstrate how children's

cognitive development progressed with their ability to pretend with objects, replacing a play object with an increasingly abstract substitution, and garnering more success as they grew older. According to El'konin, object substitution developed out of the practice of mechanical actions that were associated with particular objects because adults had first demonstrated those actions with those objects. For example, an adult might demonstrate how a child could give a drink to a doll with a toy cup, and the child might repeat this action not because the doll or cup were symbols for the real thing, but because they had learned from adults to perform these actions with these specific objects. Later, the child develops the ability to generalize this action to a class of objects (e.g., dolls and animals can be given drinks; any vessel can be a cup). Thus, El'konin credited adult modeling for the initiation of pretend development in young children.

Although Fein directly opposed El'konin's assertions about adult modeling of pretend, El'konin was joined in support for the role of parents in pretend play by developmental researchers who **observed children in their home environments** (Dunn & Wooding, 1977; Garvey, 1990; Lillard, 2011; Youngblade & Dunn, 1995). In one of the earliest examples of research on this front, cited by El'konin, a Russian researcher named Fradkina, describes the frequent interactions between young children and their parents with early pretense. Others compare how parents and siblings engage in pretend with children, and describe how mothers highlight roles, such as the "mother-baby" relationship, in pretend play. More recent work describes the subtle, nonverbal communicative devices, such as pauses and smiles, that mothers use to mark when they are pretending with their young children (Lillard et al., 2007; Nakamichi, 2015). Today, there exists a large body of evidence that many children in their natural environments have a variety of social partners, including adults, who are regular participants in their pretend play and can affect the play itself.

El'konin also brought an ideological conviction to claims about adults participating in children's play. He stated that the field of child development should come to understand pretend play **so that it may be further promoted by adults**. "By revealing the actual nature and function of play symbolics, it is possible to penetrate more deeply into the life and development of preschool children and *to outline ways of guiding play*." Ensuing studies not only offered evidence of the involvement of parents in pretending at home, they also took up the idea that adults could enhance children's pretend, and invoked Vygotsky's zone of proximal development in their work (though not in the sense that he intended it when he described pretend play). For example, Dunn and Wooding (1977) described "scaffolding" as a key interest of their study examining pretend play with parents in the early home environment. They offered a detailed account of the differences in support for pretend play by parents of differing social classes, and claimed that "...class differences in the parental conception of a guiding role, and the interest in teaching... may well be apparent by 18 months." In a later study by Dunn and Dale, children's play with parents and siblings were compared, leading to the conclusion that two-year-old children were able to engage in more complex pretend earlier than they would be expected to if they pretended with a more mature play partner (either an older sibling or an adult). Here, the authors reference Vygotsky directly, quoting, "– what the child can do today in cooperation, tomorrow he will be able to do on his own."

Over time, the two ideas became so intertwined that Vygotsky's original argument regarding the benefit of pretend play as a platform for children's self-directed learning is overshadowed by the incorrect idea that Vygotsky asserted that parents ought to enhance children's pretend play as teachers.

Vygotsky maintained that pretend play does not simply reflect children's development but also contributes to it by providing a cognitive space in which children can use functions and skills which are in the process of maturing. And **through play with a more skilled partner, a child can attain a level of performance that is beyond his or her actual developmental level.** Social interaction within a shared cultural context is thus fundamental to Vygotsky's 1978 conception of pretend play. (Katz, 2001, p. 58)

As a result, scaffolding has become central to the modern conception of the role of adults in children's play. The zone of proximal development, however, was initially described as a tool for learning from adult guidance in problem-solving tasks, not play. The term "scaffolding" in an early example appears in the discussion of an experiment examining how children perform on a problem-solving task when they are and are not assisted by adult "tutors" (Wood et al., 1976). It is striking to note how the role of the adult is first described: explicitly to engage children in the task at hand and to avoid the distraction of play.

The tutor's first and obvious task is to enlist the problem solver's interest in and adherence to the requirements of the task. In the present case, this often involved **getting the children not only interested, but weaned from initial imaginative play** with the blocks. (Wood et al., 1976, p.98)

If we extend the notion of scaffolding to pretense, it applies a new meaning to the task of pretend play: one that is goal-driven and whose objective is determined by the adult.

This scaffolding consists essentially of **the adult controlling those elements of the task that are initially beyond the learner's capacity**, thus permitting him to concentrate upon and complete only those elements that are within his range of competence. The task thus proceeds to a successful conclusion. (Wood et al., 1976, p.98)

Drawing parallels between problem-solving tasks and pretend play seems almost paradoxical here, as the notion of scaffolding expressly prohibits child-directed activity. It also implies that pretend play can be evaluated in terms of relative success, which requires an

imposed objective and standards for meeting such an objective. But play, as we have described, was argued to have merit for its own sake expressly because the child could pursue independent and self-directed action to their own ends; as Vygotsky states, "...the creation of voluntary intentions and the formation of real-life plans and volitional motives." How is the activity changed when it becomes subject to adult standards of success and achievement? The existing literature largely ignores this question.

Thus, the research remains ambiguous on whether the benefits of pretend play are created by "the child's work" or the parents' performance of "scaffolded cognitive stimulation." The lack of clarity on this topic is certainly influenced by the diverging theoretical platforms which motivated the foundational research. Nonetheless, modern perspectives place a heavy burden on American parents to ensure their children's success and promote learning through play from very early on. This burden is not new, but it is perhaps manifesting itself more profoundly in the American early home environment today, where the onset of pretend play intersects with the drive to safeguard children's future economic status and academic success, the preoccupation with child safety which has increased in the twenty first century, as well as the childrearing beliefs which have developed over the preceding centuries regarding the proper way to cultivate independence in American children (Fass, 2019).

2.3.2 Pretend play in the American historical context

American parenting has been marked by a commitment to the development of children's independence since the founding of the republic (Fass, 2019). As described by Paula Fass (2019), Alexis de Toqueville observed a breakdown of the traditional family hierarchies in American families, where a belief prevailed that in order for children to participate as citizens in the great "democratic experiment," their self-determination must be fostered even from an early

age. Children at this time were described as participating in social life with adults, allowed great freedom to work and travel, and showed precocious maturity and responsibility (though some of this behavior was interpreted by foreigners as impolite). Toqueville also afforded with this loosening of parental authority a deepening of affection between parents and children. This kind of affection and emotional intimacy became an expectation of American parents over the next century (and also a matter of some debate).

After the civil war rendered many families fatherless, homeless and disbursed, middle class activists sought to rescue American children from the circumstances they were left in, resulting in the creation of many government and charity organizations dedicated to the proper care and education of children (Fass, 2019; Myers, 2006; Zelizer, 1985). Popular rhetoric at the time blamed the rise in homeless children on the irresponsible behaviors of the poor and immigrant families, rather than the economic and social upheaval of the war and its aftermath. At this time, poverty was considered a legitimate justification for taking children from their families to live in institutions or foster care (a problem that has not entirely been resolved today; Wulczyn, 2005). Part of the justification for these removals was the fear that children were vulnerable to corruption by poverty, essentially inheriting the “bad habits” of their pauper parents.

At the turn of the century, a gradual shift in the perspective of society toward children began to manifest in domestic, economic and legal affairs regarding children. At this time, child labor was becoming a target of “child-savers,” lobbying to protect children from maltreatment and exploitation. Although the child labor movement began as a response to the conditions of factory work, child labor of any kind that contributed to the household economy became conflated with exploitive labor, and was over time considered an unfair burden to place upon

children. Drawing on earlier Victorian ideals, the innocence and sentimental value of children overcame a more utilitarian perspective on children's value to the family (Zelizer, 1985). The innocence of childhood became a right that ought to be protected, and "proper" childhood was now seen as removed from the sphere of adult life and responsibility, not burdened by work, childcare, or other contributions to the family economy, and only preoccupied by play. This movement described "proper" childhood in decidedly class-based terms (Fass, 2019).

Family life in the high Victorian manner was distinctly a middle- and upper-class affair. Private life, let alone the highly ritualized private life that was helping to define the Victorian family, can only happen where houses or apartments have suitable places for privacy – separate spaces for sleeping, childrearing, and personal hygiene – dwelling privileges not usually available to the poor... The new standards of family were class standards as the reformers incorporated class ideals into the very notion of family decency. (Fass, 2019, pp. 82-83)

What were once the standards that distinguished "respectable" families became the standards of child care expected of all families, with a focus on play, family and schooling. Consequently, families who depended upon children to contribute to the economic stability of the household were construed as "bad" parents, and their children as "deprived" of a childhood that was seen as their "right" as American citizens. Mandatory schooling was instituted, as well as new laws defining formal marriages that placed new legal responsibilities on parents for the care of their children.

While the ideal of childhood afforded children plenty of time for schooling, it did not afford children the opportunity to develop the skills to contribute to household work or childcare that many children around the world learn early on. Consequently, Americans became increasingly inexperienced in the care of infants and young children when they first became

parents. At the same time as the ideal of the protected childhood was embraced in middle class American households, so was the “new” science of child development, bolstered by new capacities to collect and examine data, which offered parents prescriptions for the proper care of their children (Fass, 2019). Although the new science at the turn of the century originally focused on issues of public health and child survival, the work transitioned to one promoting “normal” and later “optimal” development, and placed significant burden on parents to ensure the ideal conditions for their children to succeed.

2.3.3 The popular case for the involvement of adults in children’s play

Although family, schooling and play had been the focus of “modern” childhood in the late nineteenth century, pretend play was first discussed by childrearing experts as a potentially important feature of children’s development in the early 1920’s and 30’s, as part of the emerging science of child development (Fass, 2019). One of the earliest examples from the popular literature was written by Luella Palmer in a 1916 manual “Play life in the first eight years.” In the manual, pretend was credited for helping children develop, among other things, “sympathy for other people.” It is worth mentioning even here that the author encourages adults to support children’s pretend by invoking a play stance to make household chores more enjoyable, and helping children sustain pretend stories as they begin to create them. According to Palmer:

At about three years of age a child begins to weave the different incidents of home life into a short plot. His ideas are becoming related to each other so that he can play with the thought of sequence. These connected stories will be acted out if nothing interesting happens to distract his attention. All such efforts at sustained thinking should be encouraged by the adult. A monotonous repetition of one idea retards mental growth, but a sustained idea which involves seeing different aspects of some event develops the reasoning powers. (Palmer, 1929, p. 18)

Even at this early period the mental development of the child was highlighted through the act of pretending, and parents were recruited to participate in this behavior, at the risk of

neglecting their child's proper growth. The manual even recognizes how pretend may be related to social development, (e.g., empathy) and cognitive development (e.g., reasoning). This parental advice appears many decades before the work of Vygotsky reached the United States, and well before the work of El'konin was produced. If not from the developmental theorists we have traced, where did this messaging come from?

Parenting advice has, of course, been distributed at least since the invention of childhood in the 16th century, and well before the advent of developmental psychology as a formal science. This advice has been consistently rooted in the popular beliefs and perspectives of the time and place. In the mid-19th century, the American journal *Ladies Repository* (1855) promoted middle class Victorian perspectives, with sentimentalized and deeply moralizing depictions of the respectable mother and household, decrying the sins of “depravity, dirt and disease.” Among the features of an “intolerable” household were also “ill-trained children,” whose “...neglect, perhaps the ignorance of mothers themselves ill-disciplined in youth, is mainly to be blamed for this,” (Cook, 1855). One of the earliest manuals for infant care, the *Care and Feeding of Children* by L. Emmet Holt (1894) prescribed precise formulas, schedules for feeding and sleeping, and “no play with baby,” (Hulbert, 2003). The “hard” perspective of discipline and regimented control contrasted with “soft” approaches highlighting children's sensitivity to affection and emotional needs, child-centered pedagogy and prescriptions for “imaginative, emotional” bonding with children. This contrast continued to play out in popular parenting advice throughout the 20th century in the work of Gesell and Watson, Benjamin Spock and Bruno Bettelheim, Brazelton, and many others into the 21st century (Hulbert, 2003).

This history corresponds with yet another tension in the literature on the benefits of pretend play: does pretend play function primarily for cognitive development or for socio-

emotional development? In the earliest psychological literature on the topic, Freud argued that children's pretend play helped children process significant emotional experiences by repetition and reconstruction of those experiences, asserting control over them in the pretend context. As mentioned above, both Piaget and Vygotsky supported this approach, although they emphasized the symbolic function more strongly. Emotional expression has continued to be the focus of study for therapeutic uses of pretend play (Russ, 2004). Greta Fein even promoted the emotional importance of pretend play for young children, highlighting this less-emphasized aspect of Piaget's work on cognitive development. "The distortion, exaggeration and extravagance [in pretend play] reveal a considerable degree of affective force but cognitive theorists have all but ignored the affective side of pretense..." According to Brian Sutton-Smith, even Fein's efforts could not shift the developmental psychological trend of prioritizing the implications of pretend for cognitive development, which in essence removed the emotional salience of play in favor of describing the linear trajectory of an increasingly rational mind (Sutton-Smith, 1997).

The shift in analytic priority likely reflects the increasing importance of children's formal education in Western societies during the 20th century, and the impulse to capitalize on children's learning in the early years to ensure later school success. What became in psychology a "cognitive revolution" in the later part of the century had important implications for education and public policy as well as perspectives on child development and the value of play (Zigler & Bishop-Josef, 2006). One of the concerns for some educators was that play was only considered valuable for socio-emotional learning, which was determined to be less important than cognitive skills associated with reading and math which are assessed in school. A clear example appears in a version of the 2003 Head Start revision bill, which replaced most instances of "social and emotional development" with "literacy."

These pressures on ensuring school readiness dovetail with descriptions of a parent's responsibility to provide "cognitive stimulation" for optimal infant brain development. Increasingly in the 1990s, the "first three years" movement tied a child's early life to later outcomes through the development of the brain, calling for "rich" and "stimulating" environments to ensure better brain development (Macvarish et al., 2014). Although the neuroscience term "toxic stress" has provided important language for pediatricians and system leaders to take early childhood trauma seriously (Garner et al., 2012; Spain, Brown, & Sander, 2020), this literature took on a different message in the popular media. Infants could now be construed as especially fragile even in stable, wealthy environments if they were not provided with the optimal developmental conditions and interactions (Macvarish et al., 2014). Critiques of this movement have argued that the new emphasis placed on brain interventions "established new norms and standards, in particular, with their demands for intensive maternal interaction with the baby..." With infants portrayed as fragile and "at-risk" without intentional early stimulation, these arguments "construct as biologically necessary a lifestyle that is in reality only realistic for a small number of better-off mothers with the inclination to devote all their time to baby-care," (Macvarish et al., 2014). This perspective parallels the Victorian era descriptions of vulnerable children and the prescription for parents to meet a class-based standard of resources to protect them. In the modern era, though, these resources include considerable amounts of time spent in parent-child interaction, which are even said to be "vital for ordinary emotional development."

To review, for at least a century, American parents have been the target of much advice and prescription, although not all of it consistent, encouraging them in the best interests of their child to take an active role in their child's play. Failure to do so, according to popular media,

could have dire consequences, up to and including lifelong pathology. Parenting under the influence of the “new” science and its popular American interpretation leaves parents with little choice but to make concerted effort to ensure that their child is developing at optimal capacity, a matter which cannot be left to nature alone. From within this historical context, we will observe families in our corpus attempting to satisfy societal and personal expectations by choosing when and how (and whether) to play pretend with their preschool children.

2.3.4 Pretend play as culturally constructed

As we see from the American historical context, conceptions of a protected childhood and the vital role of parents in children’s development create conditions that promote the importance of children’s play for learning and the active role of parents in supporting that learning. It is important to recognize, however, that this context is unique to American and Western or WEIRD (Western, Educated, Industrialized, Rich, Democratic) societies (Henrich et al., 2013). The conception of a protected childhood raises the cultural importance of play in the life of a child who is kept from participating in adult activities outside the nursery. In effect, play takes on greater significance for children’s learning in the absence of other learning opportunities which children in other cultures have through “legitimate participation” in the everyday world of adults (Gaskins, 2015).

Although pretend play has been observed in nearly all cultures studied across the world, pretend play behavior is not pervasive in childhood in every culture where it is found. Significant differences between the play of children in different societies has been identified (Gaskins, Haight, & Lancy, 2006). Gaskins and colleagues (2006) propose three distinct cultural approaches to children’s play: cultivation, acceptance and curtailment. In societies where play is curtailed, such as the Yucatec Maya, little attention is paid to children’s play, which is only

acceptable when there is no productive work for the child to do (Gaskins, 2006). In this context, children expect to contribute to the family economy, and experience relative independence and autonomy in a largely rural setting (conditions which are reminiscent of the revolutionary-era descriptions of independent American children). Where play is accepted, groups of children may spend considerable time engaged in play largely without interference or interaction with adults. European-American families stand out in the extreme amount of support they provide for pretend play, by allocating resources for objects, costumes, space within the house and their own time dedicated to its cultivation (Haight & Miller, 1993).

Pretend play practices also vary within a society, though fewer studies have focused on this variation. American parents from different cultural communities may provide fewer replica toys, or show little or no support for fantasy stories owing to their religious beliefs (Carlson, Taylor, & Levin, 1998; Heath, 1983). Some research has shown that play in immigrant communities within the U.S. contains more reality-based and less fantastical content than Anglo-American children's play (J. A. M. Farver & Shin, 1997). Lower class children have been described as engaging in less pretend play than middle class children, although some have argued that these differences are due to differences in the age at which children spend the most time pretending, and the available resources in their play environments (Mcloyd, 1980; Smilansky, 1968). Even within middle-class European-American communities, parents vary in their beliefs and behaviors regarding pretend play according to gender roles (Haight, Parke, & Black, 1997). Haight and Miller (1993) also found significant variation in the degree to which mothers engaged in the pretend play of their children, even in a sample of nine dyads of homogeneous backgrounds. And in places where pretend play is tolerated or discouraged, adult

participation is rare, and often considered inappropriate (Gaskins, 2013). In these places pretend play is solely the arena of children.

Socio-cultural differences continue to affect the choices parents make in their priorities and interactions with their children, despite the belief that parent participation in play is a cultural imperative. There are significant differences in learning priorities for lower class parents, for example, with respect to parent authority and child independence because low resourced environments differ significantly from high-resourced environments (Zilberstein, 2016). On average, class differences highlight important difference in the surrounding context. In low-SES communities, play is the arena of children and children engage in freely organized interactions with peers. The socialization practices in these communities promote obedience and interdependence in families that rely on one another for survival, as well as the skills prioritized in the low-skill labor market such as dependability and compliance. As incomes rise, parents alter their socialization practices to encourage more independence and individual achievement. According to Lareau (2011), middle-class American parents promote higher-income job priorities such as self-promotion and independent thinking by teaching self-advocacy, practicing verbal negotiation, and providing structured activities. This cultivation practice “requires more active involvement of parents than has typically occurred in other cultures or historical times,” (Zilberstein, 2016). Ultimately, the beliefs and behaviors of any parent are the product of the contexts in which they live and the resources, education, dominant and subcultural ideas, communities and economic opportunities which surround them.

2.4 Discussion: Implications for Research

For more than a century, parents in the U.S. have been encouraged by parenting magazines, books and early childhood interventions to get involved in their children’s pretend

play. This advice has been given under the assumption that parent involvement in pretend play will benefit children in multiple ways and that pretend play under the child's direction alone will be lacking, or even potentially harmful to the child's cognitive development. Although the psychological literature has been more ambivalent about children pretending on their own, the popular message, that adult guidance is critical, has intensified. Cultural values have shifted over time regarding the vulnerability of children and the importance of the preschool period for ensuring long-term achievement. This vulnerability, combined with the ideal of a protected childhood separated from adult spheres, elevates the importance of play for children's learning, and places greater pressure on parents to provide stimulation for their children. In communities where a separate, protected childhood is not the norm, children may not need to rely on pretend play and parent stimulation so heavily, because children are not separated from the spaces and activities of the adult spheres of everyday life.

What impact do these cultural expectations have on parent approaches to playing with their children? And what, in turn, will be the effect of these approaches on the benefits of children's play? To conclude this chapter, I describe how the context of play impacts research on the importance of pretend play in children's development, and the questions left outstanding about the participation of parents in pretend play.

Returning to the cognitive outcomes reviewed in this chapter, parent guidance is largely missing from the discussion of how cognitive skills associated with pretend play are impacted, or how adults may be guiding the play. For example, though the relation between pretend play and language has been examined extensively, little prior research has examined the development of language skills within the social context of pretend play over time. Parents who pretend with their child before they demonstrate pretend themselves may influence children's own enactments,

sequences and transformations (Lillard, 2011; P Miller & Garvey, 1984). They may also provoke more other-directed actions and expose their children to more co-speech gestures. This engagement with simple transformations in early pretend play may support more complex transformations and decontextualized language later on (Rowe, 2012). And yet, parent modeling of early pretend may only influence children's language development if the child responds by taking up the pretend play as well. Although parents who produce more co-speech gestures also have children who produce more co-speech gestures, co-speech gestures only predict language development when produced by the child (Goldin-meadow & Alibali, 2013). That is to say the impact of co-speech gesture on language development is mediated by children's production of co-speech gestures. In turn, the influence of parent modeling of pretend play may be mediated by children's own play.

There are similar issues with the study of pretend play and theory of mind, which have been addressed somewhat more directly. As pretend play is sometimes a social activity, it is difficult to establish whether understanding of others' minds is enhanced by pretending itself or the practice of interacting with others. The combination – the practice of interacting with others in the context of pretend – is perhaps the most theoretically compelling explanation because social pretend requires the verbal description of features not present in the here and now, and negotiation of the play activity. The negotiation of “games with rules” described by Piaget invokes similar practice. But this practice of articulation and negotiation does not apply to solo pretend play, and we might expect that play with adults might impact the nature of negotiation and articulation because parents are often anticipating and repairing children's utterances, and are less likely to negotiate in the same way that children do.

It is important to emphasize here that this investigation is specifically concerned with the pretending that occurs at home in the preschool period. I argue that the prescriptions for parent involvement in pretend play at home must be rigorously re-examined. There are two major implications for this research. First, as discussed in this chapter, it has been taken for granted for over a century that pretend play with adults is important, or even vital, for children of this age. However, it has not been established empirically that guiding children to pretend at home ensures developmental advantages or prevents developmental problems prior to school age. The studies that have discussed this have largely conflated the impact of advantaged and disadvantaged environments as well as cultural differences, including the age at which children typically begin pretending in different communities. It is by no means clear that beginning to pretend with peers at five or six years old rather than at two or three constitutes a pathology in those communities. In fact, children in those communities are typically playing with other children, not adults, so it is intuitive that children might require more development before spontaneous pretend play with peers (especially pretend play which is not prompted by toys, play spaces or adult suggestion) can flourish. Second, the developmental advantages of playing with peers at school has been conflated with the developmental advantages of pretending with parents and siblings at home. The home environment is distinct from the school environment, with the available play partners being perhaps the most important variable. If the important features of pretending rely on play with peers, perhaps the prescriptions for adult involvement in pretending at home – particularly the vital nature of adult involvement – should be reconsidered.

As described above, few studies have been conducted with the rigorous methods needed to make causal claims about the effect of participating in pretend play; e.g., sufficient controls, blind experimenters and randomization. These requirements are generally not practical in

naturalistic studies of the early home environment, but I argue that there is much to be learned by observing children in their natural world, where the context in which children spend their everyday lives can be observed and considered alongside outcome measures. As I will demonstrate, many features vary in the pretend play observed in children's homes, and so I will spend considerable time identifying and describing this variation before analyzing the effects of pretend play as a whole, or specific features of pretending, across our sample. In the ensuing chapters In chapter 4, I will examine how much time children spend pretending at home and how often their parents are playing pretend with them. In chapter 5, I will describe the cognitive complexity of pretending at home according to important elements described in the literature. I will examine symbolic transformations, story events and fantasy content; all features associated with degrees of cognitive complexity in children's pretend play. In chapter 6, I will describe how parent involvement is associated with the amount of time and content of children's pretending. I will describe what complex elements we identified in the previous chapter that are the contributions of adults versus children. I will also describe the quality of social interaction within the play serving to communicate parent goals for their children. With a clearer picture of what happens on the ground during pretending at home with parents, in chapter 7 I can then examine the relation between the highlighted features of pretend play and the school-readiness outcomes described earlier in this chapter. My goal is to shed some light on whether the efforts of parents to impact their children's development are well spent by engaging in pretend play at home.

3 Methods for Identifying Pretend Play in the Home

“Play, like Proteus, keeps changing shape.” (Garvey, 1990, p. 2)

3.1 Introduction

How do we recognize when children are pretending? Canonical examples of pretend play describe children performing roles and simulating adult activities (Gaskins, Haight, & Lancy, 2006; Lillard, Pinkham, & Smith, 2010; Piaget, 1952; Vygotsky, 1967). For example, an episode of pretend play might proceed like this:

One participant is playing the grocery store clerk, standing behind a counter, and another is playing the customer.

Customer: How much is this apple? *Customer points to a toy apple.*

Clerk: Let’s see.

The clerk “scans” the apple and looks at the price on an imagined screen.

Clerk: That will be one dollar and twenty-five cents.

Customer: Here you go. *Customer hands over invisible “money.”*

Clerk: Thank you. Have a nice day!

Although the above interaction may appear unremarkable, this example would qualify as a relatively mature specimen of pretend play for a three-year-old, the age historically referred to as the “high season” of pretend play (Garvey, 1990; Garvey & Berndt, 1975; Gaskins, 2013; Mcloyd, 1980). In the example, the players follow a sequence of steps that are logical and coordinated, and also involve details that conform to what is appropriate to the “real-world” context being represented. The dialog extends for several turns, and the players utilize both toys and imagined objects to fulfill the necessary functions in the scene. The players also perform two distinct roles (“vendor” and “customer”) which they reflect clearly in their actions and speech.

In reality, the landscape of pretending at home for very young children often deviates from the canonical example of enacted role play. At and before three years, many children

participate in pretending at home in only brief, fleeting, or truncated examples (Haight & Miller, 1993). Children may perform isolated actions, such as putting a remote control to their ear as though it were a phone, identify themselves as a “princess” with no further action or reference to the role, create a “castle” out of blocks without supplying a story, or discuss plans for a story which they never enact.

The following is an example of such an episode from a 38-month old boy playing alone. He holds a long plastic straw, and touches a juice box sitting on the table. He drops the straw, picks it up, and then appears to be trying to fit the long straw over the small straw that is already in the juice box.

Boy: Good morning. It’s morning where he can see.

(Boy modifies his voice into a high-pitch)

Boy: I can’t see morning!

(Boy returns his voice to a neutral pitch)

Boy: Oh yes you can!

(Boy puts large straw over a small straw in the juice box and tries to drink, then removes the large straw and drinks from small straw already in the juice box).

Needless to say, it is difficult to classify the specific elements of pretend in this episode. The boy does not animate the juice box when he talks (bouncing or moving it as though it is alive), but it seems likely from the speech that there is a dialog between characters. Who are the two characters? Is the juice box or the boy one of them? Is this a dialog he is remembering or making up in the moment? Ambiguous examples such as this are common in our sample.

Another common ambiguous example appears frequently where the story is easy to follow, but the pretending itself is much less clear. In one session with a 50-month-old girl, the play session consists entirely of operating a replica microwave, complete with light and sound activated by buttons that simulate the behavior of a real microwave. The child opens the microwave door and places a real cup containing real popcorn inside. She closes the door, presses a button, and

watches through the transparent door as the lights and sounds of the toy are activated. A few seconds later, she removes the popcorn and eats it. These actions are repeated many times, with no speech and no additional actions. Is the girl, in fact, pretending? She could be indeed, imagining the popcorn popping each time she activates the microwave. It is entirely possible, too, that this sophisticated toy may apply a small amount of heat to the food placed inside by the power of its internal lamp, much like the “easy bake oven.” In this case, what, if anything, is the child actually imagining? Without access to the child’s thoughts, these behaviors remain ambiguous.

In other cases, preschool children may simply not have enough knowledge about the world to understand that what they are playing is not real. Does a mistake in understanding reality constitute pretending? Perhaps it depends on the player. For example, one 50-month-old girl insists that horses can, in fact, fly, and that she has seen them do so. Her father eventually agrees with her, that horses called “Pegasus” can actually fly. The girl and her father never clarify whether they are talking about real or imaginary horses.

In many ways, children’s pretend in the pre-school period represents the greatest challenge for analyzing pretend play at any time because the behaviors young children engage in are so ambiguous (Garvey, 1990; Haight & Miller, 1993; Vygotsky, 1967). And yet, in order to understand how children come to produce the mature specimens we think of as “canonical,” we must attempt to distinguish what does and does not qualify as supportive behavior for the development of pretend play in preschool children across a diverse sample of home environment contexts.

One important feature of pretend play that varies by home environment context and falls outside of our canonical example is the negotiation of the play itself with a play partner

(Bretherton, 1984; Garvey & Berndt, 1975; Howes, 1985). Surrounding the enactment of roles and scripts, children must establish and maintain the shared pretend world through techniques that are brought to bear before, during and after the story has been played out. As they learn to pretend, children learn to create the play “frame”, signaling to play partners with their actions not only that “this is play” but also what actions are and are not part of the imagined story (Bateson, 1972; Garvey & Berndt, 1975; Giffin, 1984). For example, children can make explicit statements about the play (e.g., “Let’s pretend we’re outside,”) and then shift into performing the play (e.g., wraps arms around her body and says “Brrrr!”). But the boundary between what is and is not part of the story is not always clear. Young children travel from in-frame to out-of-frame effortlessly and frequently, sometimes blurring the line between reality and pretend itself. Children can negotiate the pretend from either side of the play frame (e.g., making “what if” proposals, accepting and denying proposals, narrating the story, or giving explicit instructions to players while in or out of character). Although some of these techniques are used outside of the play frame, they are none the less necessary for establishing and sustaining social pretend play for many children (Bretherton, 1984).

When we consider negotiation, we must also consider how different social partners impact how the play is negotiated. As in the above examples, children playing alone do not need to negotiate or make their pretend explicit. As we will see in later chapters, however, adult and child play partners can have distinct priorities and preferences for the scenarios and behaviors that are acceptable as pretend. Young children must not only leverage what knowledge they have about the world to establish the “rules” of the play, but also accommodate their partner’s “rules,” if they wish to continue playing together. Therefore, though it is not apparent in the canonical example, we recognize that much work is being done by players to create the circumstances

under which the participants can pretend together at all. Likewise, we recognize that children are not always situated “inside” the play frame when engaging in pretend play, but that this “out-of-frame” work is so crucial to the activity that it should be considered carefully when analyzing the consequences of early pretending. This is particularly important to consider when we recognize that play partners available to children vary across home contexts.

In this chapter I discuss the variety of pretend play behaviors produced in preschool home environments, many of which depart from the canonical examples. I argue that to understand the impact of adult play partners on the development of children’s pretend play, we must examine the full extent to which children are exposed to pretend behaviors of all types and how they participate in the work of generating pretend interactions from early on. Allowing our definition of pretend to remain broad, and using the context of early pretend environments to shape our methods for identifying and quantifying pretend, early pretend play can be described with respect to the variations in its form over time and with the variety of contributions that adult play partners make across contexts. Consequently, the impact of these variations can be examined holistically and selectively when considering the developmental and educational benefits of pretending at home.

3.2 Defining symbolic play

As described in the previous chapter, the basic criterion for pretend is a transformation of the here and now: a player replaces an element of the real world with an imagined one.

Performing a simple transformation represents the broadest definition of pretend play commonly used in the literature, regardless of how that transformation might be classified (Bretherton, 1984; Garvey, 1990; Lillard, 1993, 2015). Historically pretend play has been identified by its individual symbolic features, such as those of assuming roles or treating objects nonliterally, or

performing precocious actions, such as those that children have observed adults perform, according to predictable sequences or scripts (El'konin, 1966; Fein, 1975; Garvey, 1990; Piaget, 1952; Vygotsky, 1967). These three behaviors have most often been used to identify the boundary between children's "real" behaviors and their pretend ones, although not all researchers defined these behaviors in the same way. Below I review the criteria for identifying each of these categories of pretend play as described in the literature, with some emphasis on the justifications for why these features of each category of transformation are considered important.

3.2.1 Objects

As described in the previous chapter, object pretend play has typically been defined as a *substitution* of one object for another (Fein, 1975; Piaget, 1952; Vygotsky, 1967). Object substitutions were of great interest to early pretend researchers due to their apparent reliance upon symbolic capacities (Fein, 1975; Piaget, 1952; Vygotsky, 1967). In order for a child to substitute one object for another, a child must replace the present object with a mental representation of another object (e.g., using a remote control as a phone). Object substitutions, however, are by no means the only types of object transformations that appear, and may not even be the majority of transformations performed with objects by preschool children. Researchers have recognized the abundance of play objects available to preschool children for the purpose of pretend, many of which are small replicas of the everyday items they represent (Bretherton, 1984; Haight & Miller, 1993; Pellegrini, 2009). Object transformations need only provide some imaginary element; therefore, object transformations can be partially grounded in the concrete objects that children play with, or entirely imaginary. For example, object transformations can include treating a replica toy as if it were real, (e.g., pretending to eat play food or rocking a doll as if it were a real baby), animating toys (e.g., making animal sounds for a toy lion or engine

sounds for a toy car), applying imagined qualities to objects (e.g., pretending a book is “magic” or a tea pot is full of “tea”). Each of these contains a transformation, but they each rely on the existing qualities of the objects (e.g., the book may be “magic” but it is still a book). Object substitutions may have some features in common with the real object, but the function and identity of the object has changed (e.g., a paper towel tube and a trumpet are both long cylinders, but we would not describe them as having the same label or use). Pure pantomime - pretending with imaginary objects - is also a kind of object transformation considered especially mature in the literature because it is not grounded in any concrete feature of the here and now (e.g., wielding an imaginary sword; Mcloyd, 1980). In this conception of object transformations as applying any imagined quality, it is likely that different types of object transformations may be more or less symbolic, perhaps requiring more or less cognitive work than the iconic “substitutions” (Huttenlocher & Higgins, 1978). For this reason, object transformations have been classified according to a hierarchy of symbolic distance, or in terms of material and ideational transformations, to describe their symbolic complexity (Matthews, 1977; McLoyd, 1983; Pellegrini, 2009). It is important to note that not all researchers make such distinctions in their definitions (e.g., “substitutions” could be any type of object transformation) when evaluating of the effects of pretend play with objects on cognitive development (Sachet & Mottweiler, 2013).

3.2.2 Roles

Role play is defined as actions and speech that indicate that a player is taking on another identity. Researchers have identified many behaviors that precede truly symbolic role play, which may not require actual perspective-taking or symbolic representation. Along with increasing “decentration,” children to discover roles first by recognizing others, and begin to

perform actions directed at others (e.g., rock baby doll) and animate the baby doll in response (e.g., make crying sounds for baby). Children also perform a variety of “role enactments,” performing actions associated with roles (e.g., feeding baby, changing diaper) without representing an abstraction of “mother.” As mentioned in the previous chapter, mature role play has been defined specifically as play that makes the symbolic representation of a role clear through explicit speech. This distinction is useful because it allows us to separate simulated actions associated with a role, such as feeding, with the symbolic designation of the behavior of another person, such as when a player says “I’ll be the mommy.” According to Harris (2000), role play can also be identified through explicit perspective-taking which may occur with objects or imaginary characters. For example, when a player speaks in the first person for an object or imaginary character, they can be said to be taking on that role. In addition, Harris (2000) credits descriptions of the thoughts, feelings and desires of other entities important examples of perspective-taking found in pretend play. All of the above examples have been classified under roles in pretend play, although as with object transformations, the distinctions between the different behaviors may be relevant for the level of “cognitive work” they require and have significance for the development of distinct cognitive capacities (Sachet & Mottweiler, 2013).

3.2.3 Scripts

According to early research on the topic, “scripts are composed of a sequence of acts organized around goals and specifying actor roles, props, and scenes,” (Nelson & Seidman, 1984). The general assumption regarding scripts is that they represent familiar sequences of actions and that these sequences are typically well-understood by the players enacting them. Thus, the play can unfold with a mutual understanding of appropriate next steps in the play scenario and requires less talk between players to establish or negotiate the play action. One

difficulty with classifying scripts in preschool play is recognizing whether the action sequences performed by children are familiar or novel. Certainly, the sequences of actions performed in everyday life and repeated by many different children can be recognized (e.g., going to bed, making a phone call, taking a bath) and these are the most common examples described in the literature (Garvey & Berndt, 1975). Another common type of script is composed of fantasy themes. These are also repeated by many different children and typically associated with a fantasy role (e.g., witches casting a spell, pirates looking for treasure). Novel sequences of events may not have been identified as true “scripts” in prior research, as these action sequences, by definition, would not be familiar to the players. The notion of familiar and novel scripts opens up an area of inquiry in our study, to understand how fantastical themes and novel stories are co-constructed in children’s play when the script is not familiar. In the current study we include all story sequences (including at least two logically related story events) in the examination of scripts, including what may appear to be novel sequences of events, in order to understand how frequently such stories appear in solo and social preschool pretend play, and how the length of such stories compares to those structured by familiar scripts, as examined in some prior work (Nelson & Seidman, 1984). In order to classify story scripts, we drew upon the work of Nelson and Seidman (1984) and catalogued story events (logically related story actions) from the speech and actions of players. A more detailed discussion of story events can be found in the next chapter.

3.3 Identifying pretend play in the home environment

In order to capture the development of pretend play from its earliest instantiations to the most mature examples, we began with the broad definition of pretend as *transformation*: any instance where we could identify that a player replaced any element of the present context with

an imagined one (Lillard, 1993, 2015). However, we quickly found that the speech and actions of young children often defied interpretation, and that without insight into the child's thoughts it was often difficult to determine whether a transformation was taking place, let alone what type of transformation category it belonged to. In addition, our sample contained many behaviors that were clearly essential to the pretend activity, but contained no transformations of the here and now at all. In the following section, I outline how our definition of pretend play and the types of transformations we identified were influenced by the examples of pretending that were found in our corpus of spontaneous interactions at home. In the sections below I resolve the questions about what criteria we determined must be met for episodes from the corpus to be included in this study.

3.3.1 Action with replica toys

As described above, identifying when a child is pretending in a naturalistic setting poses a challenge for many reasons, not the least of which is that the essential act of pretending takes place in the child's mind. Without access to their thoughts, observers can only identify a child's pretend by the external behaviors that he or she manifests, that is, in action and speech. To complicate matters further, young children have a limited facility with speech, limited experience with the world, and may have a tenuous grasp on what is real and what is fantasy to begin with.

Because young children have a limited facility with speech, attention to their actions and the surrounding context is particularly important in order to capture some of the earliest examples of pretending. But even under what may seem like ideal conditions, the earliest manifestations of children's play in action can also be difficult to label as pretend. Observers cannot know for certain when a child performs an action, for example with a toy stove, whether the child is actually imagining hot burners and cooking food, or simply performing the

stereotypical actions associated with those objects (El'konin, 1966). As described in the prior chapter, according to El'konin (1966) and others, very young children imitate actions on objects which they have seen performed by adults. The process of symbolization, or separating the object from the action, he posits, is an act of generalization, and can be seen when children begin to perform the same action on a class of objects, in other words, substituting other objects for the original.

When identifying episodes of pretend play in the home environment, we find, as El'konin (1966) suggests, that by performing actions children appear as though they *could be pretending* with replica objects, but that pretending – the cognitive work of transformation – was in many cases not necessary to their play (e.g., a child places a toy bowl in a toy oven). In such cases we cannot assume the child is pretending, despite the fact that the toy is clearly intended to enable pretend play (Haight & Miller, 1993).

Because play with replica objects and mechanical toys is so pervasive, and so closely tied with pretend play, we exercised some caution with these episodes. For such an episode to be included in our investigations, we required that a player must contribute at least one imaginary element to the play, whether it be a description of what was being imagined, making a voice for a toy figure, supplying sound effects for toy objects or embodying other elements of the unseen environment. In later chapters, I discuss the degree to which children's early play was augmented by adult play partners who added, mostly in speech, the necessary elements of transformation that allowed these interactions to be included in our data as pretend. But even without a clear verbal transformation, these object-oriented actions could be considered one step along the path to true symbolic play, and therefore deserved some consideration in our analysis. If anything, our

decision to require apparent transformations in speech or action means that we may have underestimated children's pretend behaviors with replica objects.

The following example demonstrates how children frequently played with replica and mechanical toys throughout the corpus. A child describes the action of a mechanical train which moves on its own, and he calls the train "Thomas," because the train is modeled after the fictional character "Thomas the tank engine." He says that "Thomas is coming down the track," as the battery-operated train moves toward him on a plastic track. So far, the child has not invoked a transformation, because an appropriate label for the train is "Thomas" and the train *is* actually moving toward him. In order for the child's actions to count as pretend, we required that the child *apply his own meaning* to the actions of the toys through transformation – calling the marbles that Thomas carries "coal" (object substitution), describing what Thomas wants or feels, or talking for Thomas "as if" Thomas were human (adopted role), or invoking a script – perhaps referring to the imagined train yard that Thomas came from, or why Thomas is late in delivering his load (story script). Although these transformations did occasionally appear, play sessions such as this one often continued for some time without a transformation being articulated, causing us to consider how much pretend play time in the early years actually required children to do the cognitive work of replacing the here and now with an imagined world. We addressed this issue by identifying periods of time where no clear transformations were taking place, and separated this time from the remaining pretend time as periods of "pause," discussed in detail in a later section.

3.3.2 Pretend in non-play contexts

Particularly during the 18-month visit, children and parents were also observed producing pretend-like behavior outside of the context of play activities. Though pretend play identification

has traditionally been limited to play sessions, we chose to examine everyday behaviors as part of the broader context of pretending at home because we wanted to describe and quantify children's exposure to fantasy content during daily activities, particularly when it was introduced by adults.

We found our dyads producing, particularly at the 18-month observation, subtle departures from reality, such as saying hello to people in photographs, making exaggerated sounds (e.g., "Boom!") when the child or other items fell down, using a ritual of saying "goodbye" to inanimate objects when putting them away, describing children as "eating" objects and objects as "yummy" when children mouthed toys, and encouraging children to treat toys as though they have feelings. Although these behaviors in some cases may not showcase the complexity of canonical pretend play, we included them primarily because the exposure of children to certain ritualized departures from reality was clear.

Often, parents used brief episodes of pretending to manage the child's feelings or behavior. For example, adults would say "boom" in a playful manner when a child fell down but did not necessarily hurt themselves, likely in an effort to distract the child from crying. Saying "goodbye" to objects was often used when parents wanted children to transition between activities, such as during clean up or leaving the house. Although the intent of these behaviors may have been child management rather than play, we included them because they introduced children very early on to the possibility of leaving reality, and this behavior may have impacted children expressly because they were invited to do so by their parent.

3.3.3 Negotiation

A pervasive but often overlooked behavior is the negotiation of the features of the pretend scenario, which, as mentioned above, is notably absent from our canonical pretend play

example of “grocery shopping.” All of the communication between players in that example occurs within the pretend “frame,” (Goffman, 1974); that is, according to what might be said by participants in the real-life scenario of grocery shopping. Working from a pre-existing and shared understanding of what “shopping” entails, the players remain in their roles throughout the episode, and do not shed their pretend identities to talk about how the play should proceed outside of the play scenario itself. In our corpus, players frequently employed techniques to communicate their ideas for how the imagined story might be enacted and to steer the play toward their desired goals, both while enacting the story, and outside of it.

As described by Garvey and Berndt (1975), “A great deal of speech is devoted to creating, clarifying, maintaining or negotiating the social pretend experience.” Participants often over-specify the qualities of the pretend world, describing objects and actions in ways that would not be done in real life. Consider how a player might say “I’m a farmer. I’m feeding my chickens,” while pretending to toss grain on the ground. Although unlikely to be said in a real farm context, such “meta-conversation” is necessary in social pretend play when incorporating elements that are not apparent to the other participants. Young children also have a tendency to over-specify elements even when they may be apparent to others, so this behavior was expected within the episodes of social pretend play in our sample.

Whether as a default behavior, or a deliberate signal to play partners, these statements occupy a liminal space between reality and the pretend frame, and can function to facilitate the negotiation of the imaginary world between participants. According to Holly Giffin’s (1984) work examining the play of children in a preschool context, players utilize a collection of techniques that fall along a continuum of in-frame to out-of-frame communications. Players make subtle suggestions using **ulterior conversation**, in which the player never leaves their role,

but makes clear how the story might proceed. For example, a player playing a “customer at the hairdresser” might say to a play partner “Are you going to wash my hair now?” as a hint to what the player ought to do next in the story. A more removed kind of description includes **narration**, where players will take on the role of storyteller and narrate actions as part of transitions, to skip ahead or describe events that will not be enacted, or to illuminate the internal state of a character. For example, a player moving small figures in a toy bus might state, “...and off they went back to school...” invoking a shift in time and location. Moving further toward the present context, players also often use **explicit negotiation** to set up or make modifications to the pretend play. For example, players may specify “you be the baby,” or “pretend this is my house.” Some players may spend the majority of time narrating or negotiating and comparatively little time enacting the story.

In Garvey and Berndt’s (1975) description of communication about pretend, many common behaviors do not contain explicit statements of pretend transformations at all. Some of these include **negation** (e.g., “That’s not Big Boulder, that’s just a ball,”), signaling “this is play,” (e.g., with smiling or giggling) and procedural behaviors or **preparations** such as the apportionment of objects and **soliciting a play partner** with “will you play with me?” Such meta-communicative devices have been observed in a variety of studies documenting pretend play in naturalistic settings since these initial observations in 1975 by Garvey and Berndt (Haight & Miller, 1993; Nelson & Seidman, 1984).

Based on these detailed descriptions of the give-and-take between preschool children and their play partners, and our observations of the variety of behaviors that surrounded pretend play in the early home environment, we chose to include all metacommunication and negotiation surrounding episodes of pretend play. Our corpus contained many examples of these behaviors

before, during and after pretend enactment, suggesting that these tools of communication were essential to early social pretending and should be included in our analysis as part of the time spent in the activity of pretending.

3.3.4 Fictional Storytelling

Though most pretend play contains a blend of action and speech, some episodes in our corpus contained no action at all. These examples were similar to fictional storytelling, where speech alone was used to describe the imagined world. These examples took on a very different character than the canonical episodes in that they did not necessarily contain the performance of actions, but could rather be a description of past, present or future imagined actions. Because these stories did not always take place in the here and now, we could not define particular “transformations of the here and now” in these episodes. These fictional stories were completely decontextualized, bearing more resemblance to narratives than canonical pretending.

Despite the lack of true “transformation,” these episodes were included because of their apparent relationship with traditional pretending. Children regularly re-tell stories from books and media in their pretend play (Garvey, 1990) and such “storytelling” examples have been included in other studies observing play in the home (Haight & Miller, 1993). Children also distance themselves from enacting the pretend story by narrating the unseen actions that have or will take place (Giffin, 1984). Fictional storytelling contains the same features of pretend play, although physical enactment is notably absent. And yet, pretending with no physical enactment appeared surprisingly often across the corpus, in examples where players simply stated the transformations that they imagined in the third-person. Furthermore, enactment has been argued in other literature as a typical, but not a *necessary* feature of pretend play (Lillard, 2015). Given the narrative similarities between canonical pretend play and fictional storytelling, therefore,

episodes of fictional storytelling were included in our sample as a form of pretending, despite their departure from traditional pretend enactment.

3.3.5 Other ambiguous behaviors

Although we allowed an expansive definition of pretend from nonverbal enactments to spontaneous fictional storytelling, we also decided to restrict certain behaviors which have been identified as pretend play in other coding systems (Demir, Rowe, Heller, Goldin-Meadow, & Levine, 2015; Haight & Miller, 1993; Roggman, Cook, Innocenti, Norman, & Christiansen, 2013; Rowe, 2013).

3.3.5.1 *Book reading*

During book reading, we did not code for pretend play when a parent used exaggerated character voices while reading the text of a book. We required the addition of novel content when coding pretend during book reading, such as treating items depicted in a book as real (e.g., child slaps the page in the book to “swat the flies away”). Young children sometimes told stories spontaneously while looking at and turning pages in books, which we considered to be ambiguous. These instances were coded, categorized separately, and removed from later analyses of symbolic transformations.

3.3.5.2 *Drawing*

Young children would often describe items depicted in their drawings, which we considered insufficient on its own to include as pretend. However, as with book reading, if the child treated the drawing in a non-literal way, such as pretending to eat food they had drawn, the child was credited with pretend. In addition, we credited children with pretend if they engaged in spontaneous storytelling about the drawing. In order to be coded for this behavior, children needed to describe the *actions* of the characters or items they had drawn.

3.3.5.3 *Media talk*

Spontaneous fictional storytelling often included the characters and scripts from the media that surround children in their everyday lives, including stories from books, movies and television. If children began spontaneously describing the actions of fictional characters, their stories were included as pretend. However, if the subject of the fictional story was currently on the television, or the book was open during book reading, these descriptions were not included, as they were considered simply describing the media in the here and now. All instances of spontaneous fictional storytelling were categorized separately, and removed from later analyses of symbolic transformations.

3.3.5.4 *Play with sounds*

Parents and children often engaged in play with familiar or nonsense sounds, such as (particularly with very young children) animal sounds. We excluded from our pretend identifications any animal sounds that did not contain any accompanying action, or sounds that repeated or imitated sounds being made in the environment. For example, a parent could manipulate a toy sheep and say “Baaa,” and we would identify this behavior as pretend because the animal sound was accompanied by animating the toy. Or, a parent might swing their elbows up and down while saying “Quack, quack,” which we would identify as pretend because the parent made the sound with an “flapping wings” action signifying “being a duck.” Otherwise, if a parent or child made animal sounds but did not provide any additional action, the behavior was not included. Likewise, if a child made nonsense sounds with no clear accompanying pretend action (e.g., repeating “Beep, beep, beep!” while rolling on the couch), the behavior was not included as pretend.

3.3.5.5 *Additional exclusion criteria*

In addition to the above descriptions of behaviors that did not qualify as pretend for our purposes, we followed the exclusion criteria described in Haight and Miller (1993), Appendix B. They described ambiguous behaviors that were considered insufficient for pretend play on their own, such as labeling and arranging replica toys, construction play, sports play, ritual hiding games and decontextualized demonstrations. In these cases, additional transformational content would need to appear in order for the episode to be considered pretend play for this project.

We depart from Haight and Miller by including literacy activities (e.g., reading, drawing) in some of our analyses, as opposed to excluding them outright because the degree to which children and parents rely on media to structure their pretend play has not been described. We also include pretend behavior that is observed outside of the context of play, as outlined above, to describe children's exposure to everyday pretending initiated by adults. We chose to be more generous in our inclusion criteria for identifying pretend play in order to capture the full breadth and diversity of socializing children's pretend play across contexts in the early home environment, and to understand how these everyday behaviors shaped children's later play.

3.4 Quantifying pretend play in the home environment

It should be evident by now that there are many behaviors that make up pretend play beyond the explicit enactment of roles and scripts. Our opening example of prototypical pretend play only includes these features, but we posit that the work of pretend play, in order to be examined in its entirety, must include all the various forms produced by young children and their play partners. These choices inevitably impact our description of "how much" children pretend in the early years. In the following sections I describe how we chose to quantify pretend play activity in the home environment.

3.4.1 Counting pretend play by speech

Quantitative researchers have chosen to “count” pretend play in a variety of ways based on their theoretical frameworks, methodological constraints and research interests. Experimental work simplified quantification because it solicited target behaviors, and those targeted behaviors could easily be identified and counted. For example, Fein (1975) examined how many transformations children were capable of using in a simple, structured scenario led by an adult experimenter. Naturalistic observation of pretend play poses a challenge, though, in that the activity can take on many forms depending upon the items present, the available play partners, the age of the participants and their ability to communicate verbally or nonverbally, or to concentrate for a sufficient length of time (Haight, Wang, Fung, Williams, & Mintz, 1999). Without the constraints of an experiment, consequently, researchers have chosen to limit their analyses to certain specific, overt behaviors to help in the process of counting spontaneous pretend play behavior, most frequently through the use of language (Miller & Garvey, 1984).

Because speech is a critical tool in the communication of pretend ideas to social partners, researchers have quantified naturalistic pretend play by the number of speech utterances produced (Mcloyd, 1980; Rowe, 2013). This method was also used to examine the current corpus in previous work because the researchers were interested in how types of decontextualized language used by parents contributed to outcomes for children such as vocabulary growth (see further discussion in chapters 2\6).

Given the features of pretending at home already described, however, speech utterances alone do not serve our purpose in capturing all of the ways in which children participate in pretend play, particularly in the early years. First, when pretend play first emerges, it does not contain a large amount, or a great variety of speech by children. Speech by adult play partners is

certainly relevant, but the participation of children in give-and-take pretend interaction is not captured if the child is not sufficiently verbal when pretend emerges. In addition, much of the speech in early pretend play may be considered not sufficiently linguistic (e.g., vocal sound effects) to be transcribed as utterances, or too grounded in reality to be counted as pretend. Often coding for pretend speech is done using transcripts, which can omit the contextual information that reveals when a transformation is occurring. Finally, though children often over-specify their actions, children do not always articulate in speech what may be a transformation that is displayed in action alone. These examples can be particularly salient in the early period, but would be omitted from a coding system that limits analyses to speech utterances.

Quantifying pretend in terms of speech is also not sufficient to capture children's early interactions with adults that may shape when and how much they pretend in later years. Importantly, although speech is one vehicle for pretend interaction, it is not the only resource. Gesture and nonverbal action also serve to promote a give-and-take between children and adults that may foster other pretend behaviors earlier in life, such as the incorporation of other-directed actions (Bretherton, 1984). In addition, omitting the nonverbal elements of pretend play overlooks crucial information about who may be initiating play, particularly in the early years. We might expect, based on Haight and Miller's (1993) work, that the majority of the initiation of symbolic play would be performed by the parent, partly because children are still very much in the early period of developing symbolic capacities when parents were first introducing pretend at 12 months. However, Morford and Goldin-Meadow (1997) found that children initiated interactions invoking displaced referents, an early symbolic indicator, far more often than expected when a detailed analysis of gestures was performed. Therefore, since our purpose is to examine not only how much children pretend, but also how their pretend is affected by adult

participation, we chose to identify pretend episodes from video data directly (rather than prepared transcripts) and to quantify pretend activity by the amount of time children spend pretending.

3.4.2 Counting pretend play by time

In prior work, pretend play time has been divided into episodes or “bouts” (Garvey, 1990). Following the methods used in Haight and Miller’s (1993) examination of nine families across the preschool period, we divided time spent pretending into episodes containing the same pretend theme or activity. Episodes began with the first act of transformation offered in speech or action and ended with the last act before a “digression” occurred, such as extended manipulation of an object unrelated to the play (e.g., a shoe; see further discussion below). Measuring the total length of time children spend in pretend play, and how the length of an episode might change over time, we can record how children’s play matures during the preschool period. We expect that over time children will develop increasing cognitive capacity to sustain attention for longer periods of time, and that they may demonstrate that capacity through longer play bouts. In addition, we anticipate that adult participation will impact the length of pretend episodes, as shown in prior work (Haight & Miller, 1993; Lillard, 2011).

In the current study, we examine how much pretend play occurs in a sample of families that is six-times larger and more demographically diverse than Haight and Miller’s (1993) study. By applying similar methods for quantifying how much pretend play behavior occurs, we can compare quantity of pretend play across the samples and begin to understand whether the features of play described in the smaller sample are representative of the larger population, or whether some features or practices, such as adults spending significant time pretending with children, vary more in a more diverse American sample.

3.4.3 Continuity of pretend play episodes

As mentioned above, length of pretend play episodes was affected by occasional “digressions.” Episodes were constructed based on the play activity, but when a change in the pretend activity occurred, we had to determine whether the change constituted an end to the episode or merely a brief “pause.” If a new pretend activity was abruptly introduced, the original episode was ended and a new episode was begun. If the dyad left the pretend activity and did not return to it for a significant period of time while engaging in unrelated activities, the episode was ended and a new episode was begun after the interlude.

Alternatively, some episodes of pretend play were allowed to continue despite occasional “pauses” in the play. For example, a parent may interrupt the play of a young child for caregiving (e.g., to ask if they need to use the bathroom or want a snack). This brief disruption in the play was not considered an end to an otherwise continuous episode, often because the players would pick up right where they left off before the interruption. Likewise, a child might get distracted by a noise in the environment and comment on it before returning to the play. These types of pauses were subtracted from the total time of play, but did not disrupt the continuity of the pretend episode. For the purposes of establishing reliability, we allowed an interruption lasting less than one minute to take place without breaking up an otherwise continuous episode of pretend.

For longer interruptions that were **unrelated** to the pretend, we ended the episode when the interruption began. If the players continued where they left off after the interruption, we counted the new but separate episode as *related* to the prior episode. For example, a child might be engaged in a grocery store script, and then get distracted by a pile of bowling pins. The child might play with the bowling pins for a minute or two, and then return to the grocery store script. Since the bowling pin activity was not related in any way to the grocery store play, the first

grocery store episode was ended, and a new grocery store episode was begun when the child returned to that activity.

Players also interrupted play with interactions **related** to the play themes or activities. In these cases, we determined whether a pretend episode should remain continuous based on the content of the interruption. In one category of interruptions, parents used pretend play content to initiate a conversation about past or future events, or to teach children relevant concepts. For example, a parent introduced the idea of poison into a pretend pirate story, and the child interrupted the play to ask questions about the nature of poison and where poisonous snakes might live. The dyad discussed poison, snakes and dangerous animals for approximately four minutes before returning to the pirate story. Since the content of the discussion did not impact the ensuing pretend play, the first pirate episode was ended when the discussion began, and a new, related pirate pretend episode was begun when the play resumed.

In another common category of related interruptions, players leave the pretend story in order to focus on the more practical or mundane features of the here and now, such as the mechanics of a toy. When players began to discuss the features of the toys they were playing with, rather than continuing the story, this time was also subtracted from the total pretend play time for the episode. However, if the features of the toys were directly related to the play, the episode could still be considered continuous with occasional “pauses.” For example, players might discuss the best place to put the railroad tracks that Thomas the Tank Engine would use to go to town. The discussion of where to put the pieces of track, and what shape or how many were needed contained no pretend content, but once the track was built the pretend story continued where it had left off. In these cases, the building of the track was *in service* of the pretend, even though the pretend story was never invoked during the time that the players built

the track. The pretend episode was considered continuous because the players never abandoned the original purpose established in the pretend play, and the building time was considered a “pause” in the time spent pretending.

From the point of view of the child, the story about Thomas and the placement of the track were meaningfully related, and the content of the pause impacted the ensuing play (building the track for Thomas). In the case of narrative or teaching about the real world, such narratives rarely impacted the ensuing play, and were treated as a break in the play episode. Therefore, rather than choosing an arbitrary amount of time to determine whether an episode should be considered continuous, we chose to evaluate continuity more qualitatively, based on the focus of the child, and the meaning he or she applied to the activities as described through action and speech during the digression.

In distinguishing play with breaks and pauses, we can describe in a nuanced fashion how children and their play partners divide their time in pretend play activities. Capturing pauses allows us to characterize when children are doing the cognitive “work” of generating and manipulating symbolic materials, and when they might be engaging in related, but perhaps non-symbolic behavior which may not have a direct relationship with the development of symbolic capacities.

3.5 Coding and reliability

Seven coders participated in the process of identifying episodes of pretend play according to the principles described above. Inter-coder agreement was assessed by comparing coders to a master coder. Coders were not familiar with the hypotheses proposed in this dissertation. Coders coded videos for each construct as they were found in each time point separately. Reliability was

analyzed across at least 20% of the transcripts at each time point after training (see appendix for specific quantities by construct and time point).

Multiple reliability metrics were used to analyze each of the constructs of interest to demonstrate sufficient inter-coder agreement. In the following chapter we report descriptive statistics on the total pretend play time, the number of episodes, and the average length of episodes for each session, as well as the frequency with which adults or children initiated episodes and the modality (speech or action) in which they were initiated. Below I describe how the reliability of these measures were established.

3.5.1 Time, episode length and continuity

We used multiple methods to determine whether coders were identifying the same behaviors within a given session. We used two different methods to divide sessions into regions where coding could be compared. In the first method, a partial interval approach, sessions were divided into one-minute intervals and the amount of time coded as pretend within each interval was compared both numerically (how much pretend in each minute) and categorically (was there pretend during this minute or not) (Haccou & Meelis, 1992).

In the second method, we used an algorithm to create numbered intervals for each episode that was coded across all coders (an interval began when any coder identified the beginning of pretend). These coded intervals were separated by spaces where no pretend was coded by any coder. The empty spaces were ignored. We then compared how much the coders' episodes overlapped within each interval and compared the coders' episode lengths within each interval.

Using the coded interval approach, we examined the proportion of time that coders' episodes overlapped and the total length of identified episodes. For example, suppose two coders are identifying when pretend occurs in the same 90-minute session. If one coder begins an episode at 4.0 minutes, coded interval 1 begins at 4.0 minutes. If a second coder begins coding at 4.10s, and the first coder's episode continues, the second coder's episode is also classified as part of coded interval 1. If coder 1 ends the episode at 5.0 minutes, and coder 2 ends the episode at 5.02 minutes, then coded interval 1 begins at 4.0 minutes and ends at 5.02 minutes. The coders' episodes overlap from 4.10 to 5.0, a total of 50 seconds. The length of coded interval 1 is 62 seconds, so the coders overlap for 80% of coded interval 1.

Using the partial interval approach, applying the above example, we compare the amount of pretend coded by both coders between time 4.0 minutes and time 5.0 minutes and 5.0 minutes to 6.0 minutes in the session. The value of 50s coded by coder 1 is compared to 60s coded by coder 2 for the interval 4.0-5.0 minutes, and the value of 0 seconds for coder 1 and 2 seconds for coder 2 is compared for the interval 5.0-6.0 minutes (assuming no new episodes were started in that minute). All values for each coder across each of the 90 minutes would then be analyzed using a ratio reliability statistic (krippendorff's alpha). For the nominal analysis, both coder 1 and coder 2 would have a score of 1 for the interval 4.0-5.0 minutes, and coder 1 would score 0 whereas coder 2 would score 1 for the interval 5.0-6.0 minutes in this example. These binary values were compared for the entire session using krippendorff's alpha (KA) for nominal data.

Interval Reliability Metrics				
	Partial Interval		Coded Interval	
Visit	Ratio (KA)	Nominal (KA)	Ratio (ICC)	Ratio (KA)
18-months	0.74	0.77	0.93	0.81
38-months	0.78	0.83	0.84	0.77
50-months	0.79	0.84	0.97	0.84

Table 3-1: Interval Reliability Metrics

In a second coding pass, coders determined where pauses in the play began and ended during pretend episodes. Pauses were subtracted from the total time of each episode, and total episode lengths were compared again. To evaluate reliability in determining episode continuity, the total number of distinct episodes per session was compared across all sessions for all coders using the intra-class correlation (ICC) and krippendorf’s alpha for ratio data.

Interval Reliability Metrics for Continuity of Episodes						
	Partial Interval		Coded Interval		Number of Episodes	
	KA		ICC	KA	ICC	KA
Continuity	0.85	0.89	0.97	0.86	0.91	0.89

Table 3-2: Interval Reliability Metrics for Continuity of Episodes

3.5.2 Episode beginnings and endings

Inter-coder agreement on the beginning of pretend episodes was evaluated in two ways: using speech utterance lines and episode begin times. Coders identified the speech utterance line that began the pretend play episode, or the next utterance line following a nonverbal behavior that began the episode. Coders also noted the first utterance line after the pretend play episode ended. In addition, the timestamps identified as the beginning and ending times of the episodes were compared separately. These markers of episode beginnings and endings were evaluated using intra-class correlations (ICC) and Krippendorf’s alpha (KA) for ratio data.

Reliability Metrics for Episode Beginnings and Endings								
	Episode Begin Line		Episode End Line		Onset Time		Offset Time	
Visit	ICC	KA	ICC	KA	ICC	KA	ICC	KA
18-months	0.99	0.99	0.99	0.99	1.00	0.98	1.00	0.99
38-months	0.98	0.97	0.98	0.88	1.00	0.99	0.99	0.94
50-months	0.90	0.98	0.98	0.98	1.00	1.00	0.98	0.97
Continuity	1.00	0.99	0.97	0.93	1.00	1.00	0.98	0.98

Table 3-3: Reliability Metrics for Episode Beginnings and Endings

3.5.3 Episode initiation and modality

To assess inter-coder agreement in identifying the participant that initiated the episode, we compared the initiators of each episode across all sessions. We also compared the modality in which the initiator began the episode (using speech or action). Inter-code agreement was evaluated using Cohen's Kappa and Krippendorff's alpha for nominal data. Modality of initiation suffered from imbalance in the marginal distributions of speech and action: speech was overwhelmingly preferred for initiating episodes, and where action was clearly important in initiating many pretend activities, it was rarely separated from speech. As a result, analyses of differences in the modality of pretend initiation were discontinued.

Visit	Initiation		Modality	
	Kappa	KBBC	Kappa	KBBC
18-months	0.77	0.79	0.55	0.69
38-months	0.74	0.76	0.14	0.71
50-months	0.97	0.97	0.54	0.83
Continuity	0.74	0.74	0.37	0.78

Table 3-4: Reliability Metrics for Initiation and Modality

3.6 Conclusion

This chapter describes the methods of identification and quantification of the pretend play behaviors in this corpus that will be used in the analyses in this dissertation. In later chapters, I describe the additional methods used for categorizing pretend behaviors by those features commonly identified as fundamental to the activity (object substitution, role play, plans or scripts) and those less commonly described (qualities of fantasy content). In addition, in later chapters I discuss the context in which these behaviors take place, including how often pretend play is structured by literacy materials and media. In each subsequent chapter I will describe the methods used to define and interpret children's behaviors according to the selected categories,

and the degree to which those behaviors could be reliably distinguished across the landscape of pretending at home. Importantly, the conclusions we can make regarding the developmental benefits of pretend play in the early home environment depends heavily upon the confidence with which we can say that pretend play itself is recognizable and distinguishable from other activities. I have attempted to describe in detail the complexity and ambiguity inherent in the behaviors of very young children pretending at home so that we may bear this in mind, as I, like many researchers before me, attempt to organize children's pretend play into important features and predict their impact on children's development.

4 Investing Time in Pretending at Home

“The belief that pretending has a salutary effect on development, as well as specific theoretical claims about the role of play in development, rest on the assumption that pretending is a major occupation of young children.” (Haight & Miller, 1993, p.19)

4.1 Introduction

The seminal study by Wendy Haight and Peggy Miller (1993) offered the most detailed and ecologically valid description to date of children’s pretending at home. They observed 9 children during visits lasting up to 4 hours across 4 annual time points throughout the preschool period. These children were all born into white, middle class American families that were highly educated. From their sample, the investment in pretending at home could be described in detail, both quantitatively and qualitatively. Based on their data, the authors concluded that children spend a significant amount of their time pretending, confirming claims by others (Piaget, 1952; K. Rubin, Fein, & Vandenberg, 1983) that pretending increases in frequency and duration over the preschool period and is supported by the adults in children’s lives. How does pretending at home in a large, representative sample compare to their small, homogeneous one? In the current chapter, we compare preschool children in our large, representative sample to those in the small, homogeneous sample from the seminal study by Haight and Miller (1993), and report new data to answer these questions.

4.1.1 How much time do children spend pretending at home?

As quoted above, the literature has assumed a significant investment by children in time pretending at home, and this claim has implications for the importance of pretend play in children’s learning and development. Although pretending may arguably be a universal activity because it has been observed across all cultures (Gosso et al., 2005; Lancy, 1996; Schwartzman,

1978), causal claims regarding the impact of pretending have been difficult to support. Recent reviews have argued that pretend is more likely to function by “equifinality,” offering just one of many different paths to achieve certain types of learning (Lillard et al., 2012; P. K. Smith, 1988). If typically developing children do not make pretending a “major occupation” at home, the “critical” role of pretend play in children’s development becomes uncertain. In this chapter, we will investigate the amount of time the 60 children in our sample dedicate to pretending at home and compare our results with the 9 children observed in Haight and Miller’s (1993) study.

4.1.2 What is the developmental trajectory of the amount of pretending at home across ages?

As mentioned earlier, multiple studies (Haight & Miller, 1993; Katz, 2001; K. Rubin et al., 1983) have proposed an increasing trajectory of pretend time over the preschool period. According to these studies, children begin to pretend more as they age because they develop the capacities to engage in pretend play, such as abstract thinking and decontextualized speech. However, once children develop capacities for pretending, they also have capacities to engage in other social activities such as formal games, to spend more time without direction from parents, and to choose their own activities. In Haight and Miller’s (1993) study, 6 out of 9 children had increasing trajectories of pretending through age 48 months. If we increase the size and diversity of the sample, will we see a majority of children continue to increase the amount of time they spend pretending at home at each subsequent time point? Or will some children prefer other activities over pretending at home?

4.1.3 How much do individual children and families vary in the time they spend pretending at home?

Variation across individuals in the American population is difficult to infer with a small, homogeneous sample. However, we expect that children’s preferences for pretending vary and

that parents vary in their support for and participation in pretend play. Haight and Miller (1993) described variation in the enjoyment of pretending with children among parents even in their small, homogeneous sample of white, middle-class Americans. With a larger sample we can describe with greater precision the individual differences among children and families in their investment in pretending at home.

4.1.4 How much of children's pretending at home is social? With whom are children pretending?

Children's home environments will affect the people, places and objects available for pretending at home, and with greater diversity in our sample we expect greater variation in the contexts in which children engage in pretending. In later chapters, we aim to describe in particular the role of parents in promoting or discouraging pretending at home, and the immediate and deferred impact of these interactions with adults during pretend play. In the current chapter, we describe how much of pretending at home is social and within social play, how much time are adults and siblings spending participating in pretending at home.

4.2 Child Pretend Play Time

As described in chapter 2, in the American cultural context there is a general assumption that pretend play occupies a great deal of children's time. Nearly all of children's activities outside of caregiving (and even some inside of caregiving, such as bathing) can be described as containing play. This cultural emphasis on childhood as a time of play makes identifying activities which are not play somewhat difficult, but we can assume that children do spend time in other activities including feeding, sleeping, washing, reading or watching television, etc. All other time is potentially play time, and the pretending that has been described in the literature conjures an image of extended sessions of elaborated pretend activities in preschool, particularly

with peers. However, observations of pretending at home suggest that the home environment is distinct from preschool playrooms in important ways (Haight & Miller, 1993; Haight, Wang, Fung, Williams, & Mintz, 1999; Youngblade & Dunn, 1995). Most notably, children are less likely to have peer partners available for play at home. Does the actual amount of time spent pretending in the home environment reflect the cultural impression that children invest a great deal of time in pretending in the preschool years? To answer this question, we describe the pretend play time observed at home in the following ways: 1) Overall proportion of observed time; 2) Rate of pretending per hour; and 3) Duration of pretend episodes.

4.2.1 Methods for Counting Pretend Play Time

As described in Chapter 3, we defined pretend play based on broad criteria that included any behavior that could be identified as a transformation of the present context into something imagined, including fictional storytelling or negotiation of transformational play. Children were considered participating in pretend play if they were producing the transformational content or exposed to pretend content directed at them while interacting with a play partner. Children were considered interacting with a play partner if they were looking at or touching the person producing the pretend behavior. These definitions closely followed Haight and Miller's (1993), with some minor exceptions (see chapter 3).

The amount of time spent engaged in pretending at home was coded using Datavyu software (DatavyuTeam, 2014). 90-minute sessions were coded at each of three time points: child age 18-months, 38-months and 50-months. 60 families were included in the sample because video data was available for at least two of the three time points for these families. One family did not have a visit at 50-months, and a second family did not have complete video data at

the 50-month visit due to equipment error, but the remaining data for earlier time points for these families were retained.

Our study benefits from a variety of methodological advantages. First, our sample is large by comparison, roughly 6 times larger than Haight and Miller's (1993) study. Our sample is also demographically representative of a large urban center, whereas Haight and Miller's (1993) study explicitly observed children of highly educated, white, middle-class families in a university community. In addition, an advantage for both studies is that the data were collected by observers naïve to the hypotheses because the observations were part of a larger study on child language development. In addition to establishing high inter-coder reliability, our coding was executed in multiple stages examining the same observation sessions so that multiple coders reviewed and confirmed the validity of each selection and the boundaries of each episode. These advantages allow our study to represent the diversity of pretend practices with significantly lower risk of confirmatory bias.

4.2.1.1 Pretend Play Time

Proportion of total time. The proportion of time is reported using the total time spent pretending divided by the total observed time. This measure allows us to understand how much of children's time is spent in pretend play at home on average and across children during the preschool period. It also provides a value to compare our pretend time results with the overall proportion of time spent by children in Haight and Miller's (1993) study. Most children were observed at three time points for approximately 90 minutes, resulting in about 270 minutes (4.5 hours) of observed time for each child. In Haight and Miller's (1993) study, the observation time was greater for each child, but the proportions are comparable for overall time and the range of proportions observed across individual children.

Pretend Rate – Minutes per hour. Observation times did vary slightly across sessions. To account for differences in the opportunity to pretend based on differences in observation time, we created a measure of pretend rate which is calculated by dividing the total time spent pretending in minutes by the total hours observed. This measure is not constrained to values between 0 and 1, and allows us to analyze on a continuous scale the amount of pretending that children engage in across ages, individuals and groups (e.g., comparing group means) and the relation between pretend time and outcome variables. It also provides a second measure by which to compare results with Haight and Miller's (1993) study.

Episode Duration – Minutes per episode. As described in the previous chapter, pretend play time was divided into episodes sharing the same story content.¹ With this measure we can examine how long children sustain pretend play activities across ages and individual children (discussed in the next chapter). Identifying episodes also allows us to examine how pretending begins and ends, and who is responsible for initiating the pretend interaction (discussed in part two of this chapter). Episodes represent thematically consistent pretend content (related characters and activities). If players abruptly changed from one pretend activity to another, a new episode was begun when the new activity began. An episode began with the first transformation of the here and now produced by a player through action or speech, or the first description of the actions of fictional characters. To allow for the limited abilities of very young children to articulate transformations, we also allowed an episode to begin with a bid for pretend play by children which was articulated nonverbally, and may not be fully transformational. For example, a young child may solicit the participation of an adult by handing them a toy which the adult then

¹ Episodes could include pauses of up to 1 minute of unrelated behavior or up to 5 minutes of related behavior, with the goal of maximizing an accurate representation of the thematic continuity of children's episodes (discussed in chapter3).

animates. In these cases, we considered the child's action as the beginning of the episode time because the child is initiating the interaction. Episodes ended with the last transformation produced by a player before the participants moved on to unrelated activities and did not return to the pretend play.

4.2.2 Summary of Haight and Miller's (1993) Findings

As a result of Haight and Miller's (1993) study, two major findings regarding investment in time pretending were endorsed. 1) Children pretend for a significant portion of their time during the preschool period (about 11% of the time observed at home). This data was derived from observations of nine children lasting from 3 to 4 hours per session across four time points spanning ages 12 months to 48 months. 2) Pretend play increases as children age. This increase is said to reflect the developing social and cognitive capacities that children acquire during the preschool period, which makes pretend play an increasingly preferred activity. Extrapolating from their data, Haight and Miller (1993) estimated that children pretended on average during the day for 30 minutes at 24 months, more than 1 hour at 36 months and approximately two hours per day at 48 months. As stated above, the children's family backgrounds were homogeneous: they were born into highly educated, middle- to upper-class white families. If Haight and Miller's findings hold for a large, representative sample, we would expect to see children in our sample pretending on average for roughly 11% of their time (ranging from 5% to 15%), and increasing their pretending over the preschool period. In addition, Haight and Miller (1993) found that the duration of children's episodes of pretend play increased across the preschool period. Episodes increased in minutes per episode from 54 second at 24 months, 1 minute 30 seconds at 36 months and 2minutes 48 seconds at 48 months. This data, in

combination with the other findings from their study, supported Piaget’s original observations that pretend play increases over the preschool period (Piaget, 1952; K. Rubin et al., 1983).

4.2.3 Current Results – Child Pretend Play Time

4.2.3.1 *Proportion of Observed Time*

In 263.9 hours of observation time, children were observed pretending for a total of 28.1 hours², approximately 10.7% of the total observation time. Among children in the sample, the overall percentage of time ranged across children from 1% to 35%.

² A total of 36.1 hours (13.8%) contained pretend activity, of which 7.97 hours (22%) was considered “pause” time, where participants took brief breaks from pretend play for caregiving, or were engaged in extended periods of pretend-related play (such as building or arranging toys intended for pretend or describing the actions of replica and mechanical toys) without producing any pretend transformations (described in detail in chapter 3).

4.2.3.2 Variation across ages

4.2.4 Although all children were recorded engaging in pretend during at least one observation, the amount of pretend play time varied by family and by time point, with children engaging in as little as no pretend play for an entire observation to children engaging in as much as 55 minutes of pretend play in one 90-minute observation. The histogram below describes the variation in proportions of pretend play time to observed time by child age, so we can understand how variable the sample is and how many children are displaying patterns above and below the average at each time point.

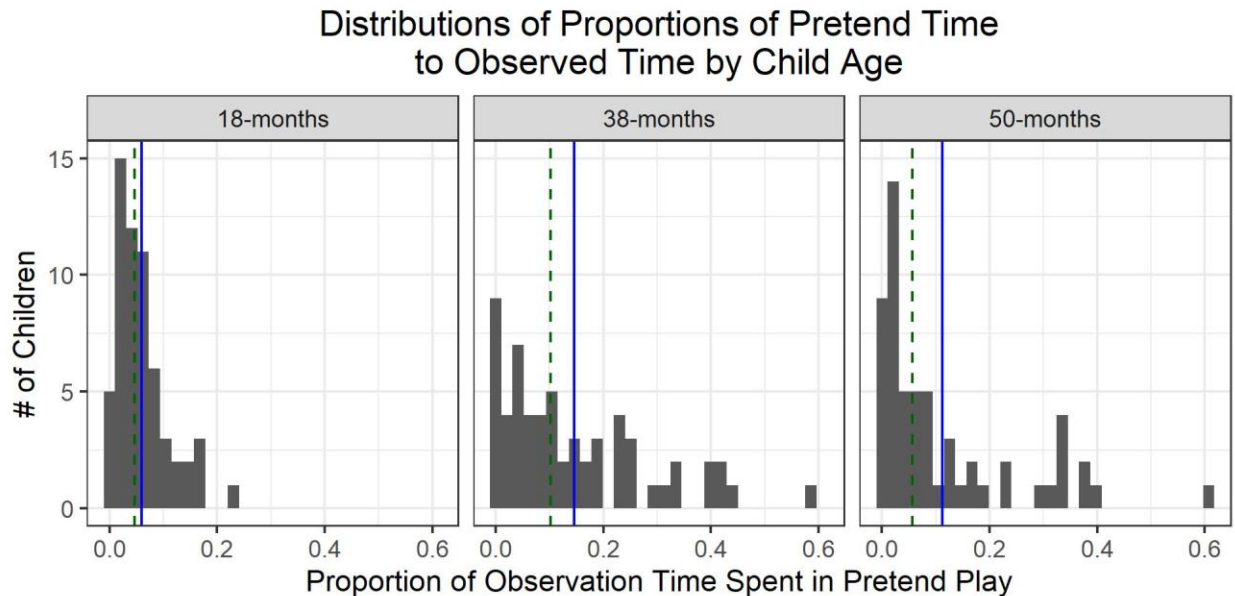


Figure 4-1: Distributions of Proportions of Pretend Time

At 18-months, children displayed less variation in the ratio of pretend play time to observed time compared to other time points, engaging in pretend on average for 6% of the 90-minute session, with a standard deviation of 4.9%. At 38-months, pretend play occupied 14.6% of session time on average, with a standard deviation of 13.8%. At 50-months, children *decreased* their pretend time to 11.3% of observed time on average, with a standard deviation of

13.6%. Because the data are skewed, we note that average values (solid blue line: 18 months=6.0%, 38 months=14.6%, 50 months=11.3%) are larger than the median values (dashed green line: 18 months=4.7%, 38 months=10.2%, 50 months=5.6%). The distance increases noticeably from 18-months to 50-months, indicating that the extreme values for older children may indeed be influencing the means.

The overall rate of pretending was 6.35 minutes per hour on average across the entire period. The graph below displays the average trajectory of pretend rate in minutes per hour as it changes across our three time points. The rate increases from 3.6 minutes per hour at 18-months to 8.8 minutes per hour at 38-months, and then declines to 6.8 minutes per hour at 50-months. Rather than a linearly increasing pattern, we have something more akin to a u-shaped curve.

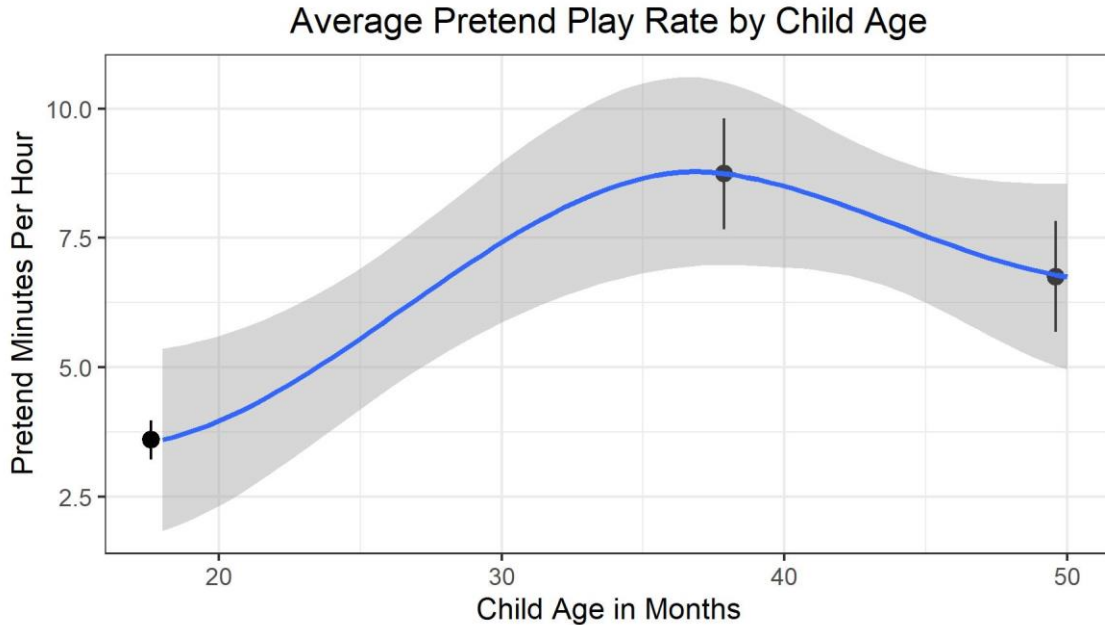


Figure 4-2: Average Pretend Play Rate by Age

4.2.4.1 Episode Duration

Another expectation from the literature is that children will develop the capacity to pretend for longer periods at a time as they age. One reason for this is that children develop the capacity to sustain their attention for more time as they develop. But another assumption from some of the literature is that children will choose to pretend more as they become more capable. We've seen already that our data do not show an increasing trajectory on average in overall pretend time. In the figure below we show a similar trajectory: the change in average episode duration over time.

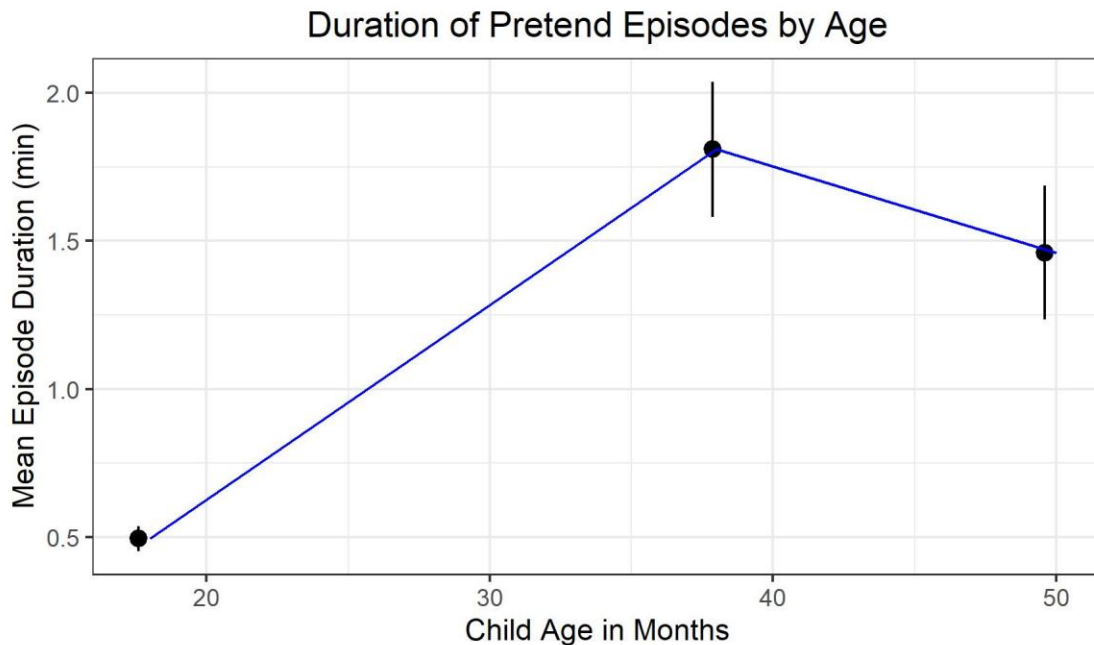


Figure 4-3: Duration of Pretend Episodes by Age

In these data we also see a decrease in episode duration at 50 months. On average children in our sample pretend for 18 seconds at 18 months, 1 minute 49 seconds at 38 months, and 1 minute 28 seconds at 50 months.

4.2.4.2 Comparison with Haight and Miller's (1993) Study

Compared to a small homogeneous sample, our large representative sample confirms the first finding – overall time spent – and contrasts with the second – increasing pretend time as children age. We found that children pretend approximately 10% of the time over the preschool period. Our average proportion of time reflects the same average as Haight and Miller's (1993) study: they captured pretend play during 11% of total observed time. However, our range was broader than theirs; for Haight & Miller, the percentage across children ranged from 5% to 15%, whereas ours ranged from 1% to 35%.

We did not find that preschool children increase their pretend time as they age. Our average rates of pretending per hour at 18- and 38-months (3.6 to 8.8, respectively) are consistent with Haight & Miller's sample at 24 months (3.3 minutes per hour) and 36 months (7.8 minutes per hour). Our average episode duration at 18 months (29 seconds) and 38 months (1 minute 48 seconds) is also similar to theirs at 24 months (30 second) and 36 months (1 minute 30 seconds). In contrast to Haight & Miller's study, where pretend time steadily increased with age, in our sample, children's pretend play time *decreased* on average at 50 months. The average episode duration also decreased at 50 months (1 minute 28 seconds) compared to Haight and Miller's (1993) findings (2 minutes 48 seconds). In Haight and Miller's (1993) study, six out of nine children (66%) increased their pretending from 36 to 48 months. In the current study, 29 children (47 %) increased pretend from 38 to 50 months. We will consider individuals and groups of children more specifically in the following section. But so far, these findings sit in striking contrast with traditional expectations, originally put forward by Piaget (1952) and followed by many others (K. Rubin et al., 1983), that children's pretend play increases in a linear fashion

over time. According to our observations, more than half the sample pretended for less (or much less) than 10% of the observation time at 50 months.

These results are important because, in both studies, the overall time children spend pretending violates the cultural assumption that pretend play is a dominant activity in children's lives. Haight and Miller interpreted their average result as a significant amount of time, extrapolating that on average children spend one to two hours a day in pretend play at three and four years old. But the variation in the proportion of time spent in our sample is so wide that the interpretation of the average result in a statement about the population becomes difficult. Although the amount of time may be significant by extrapolating from the average, this may not be a fitting description for a significant number of children.

In addition, we find that as children age and become more capable of producing pretend play, pretending at home declines. This result challenges the prevailing assumptions once more, suggesting that pretending may not be a dominant activity for four-year-old children, an age which is traditionally considered part of the "high season" of pretend play (D. G. Singer & Singer, 1990). But does this decline reflect the majority of children, or do some children display a different pattern? Once again, these results underscore the importance of describing not only the main effect, but also the variation in behavior, which offers more information when drawn from a large sample.

Our data suggest so far, however, that pretending is not a priority for all children. For some, pretending occupies little to none of their time, and for others, it is a "major occupation." And so, the characterization in the literature of the importance of pretending, while accurate for some children, is perhaps not accurate for all children. This variation will be used in the outcomes chapter to further evaluate the importance of pretend play for children's development.

In the following section, we examine how the trajectory of time spent pretending at home varies across individual children.

4.2.4.3 Variation across individuals

Based on the large standard deviations in pretend play proportions at each time point, it is suggested that pretend play time varies significantly by individual in our sample. In addition, there appears to be a larger range of proportions of pretend time by individual children in our sample (1% to 35%) compared to Haight & Miller's (5% to 15%). Since Haight and Miller's sample was just 9 children, variation in player behavior is difficult to interpret because only a few children deviated from the average pattern. With our comparatively large sample, we can begin to examine this variation quantitatively by including the pretend play rates for subsets of children. This allows us to see patterns across groups of children which may deviate from the average player, and helps us to understand what proportions of children might display alternate patterns. Using this information in the final chapter on child outcomes, we can associate performance on school readiness measures accounting for different profiles of play behavior rather than focusing solely on the main effect.

As described in the previous chapter, we created groups based on the sum of pretend time in minutes at 38 and 50 months divided by the total observed time in hours at those timepoints, and grouped individuals in the low, medium-low, medium-high and highest quartiles of this combined pretend time. The pretend time of children at 38 and 50 months reflects behavior at ages when the child has more agency in directing their own play (as compared to 18 months), and therefore serves as a better indicator of child investment in pretend. Grouping by quartiles, we can examine how children who become avid players, for example, behave across the timepoints – how their rates compared to the other children's rates at 18-months and whether

their rates of pretending increase or decrease. In the following figure we plot the group averages over time with the sample average to compare the shape of the group trajectories.

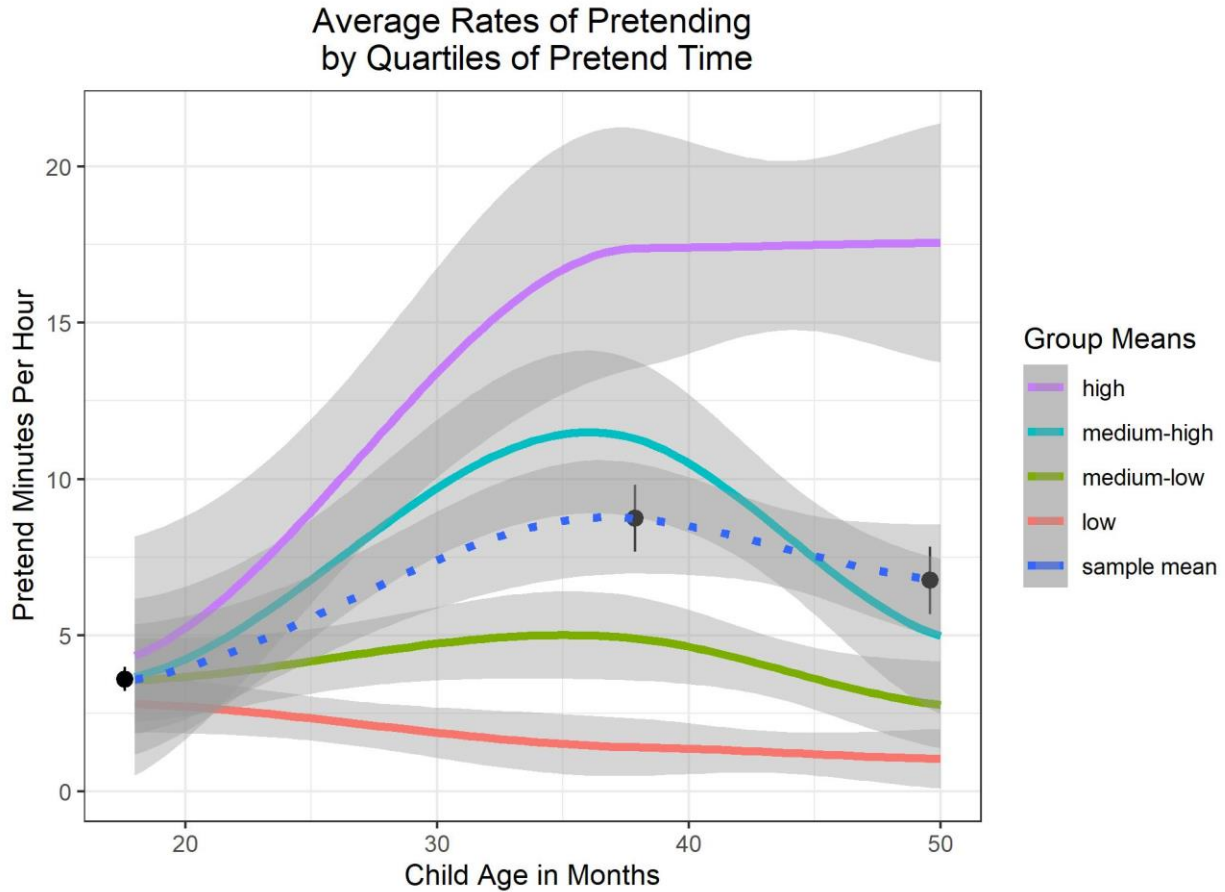


Figure 4-4: Average Rates of Pretending by Quartiles of Pretend Time

Comparing groups over time, distinct patterns emerge. First, the middle two quartiles display the u-shaped curve pattern that describes the sample as a whole, with lower rates at 50 months than at 38 months, but the pattern is much flatter for the medium-low quartile. The low quartile shows a different pattern: they pretend most at 18-months, and decrease over time. In fact, three of four quartiles – that is, 75% of the children – have average rates of pretending at 50 months that are approximately the same or less than their average rates at 18 months. The high

quartile group displays yet another pattern: a very sharp increase from 18 to 38 months, and then pretend at 38 and 50 months effectively remains constant. The investment in pretend for most of the children appears quite different from the sample mean; none of these groups on average, not even the high pretend group, display the linearly increasing average pattern of the nine children in Haight and Miller's (1993) study. In fact, three of the four groups show a distinct decline at some point along the curve.

Even though the group average trajectories do not mirror the expected increase over time, it may be that some individuals do. When we examine the individual data graphically, we can see how clusters of child trajectories relate to the average trajectory. This depiction gives us a window into the patterns of the individual children that make up each of the quartile groups.

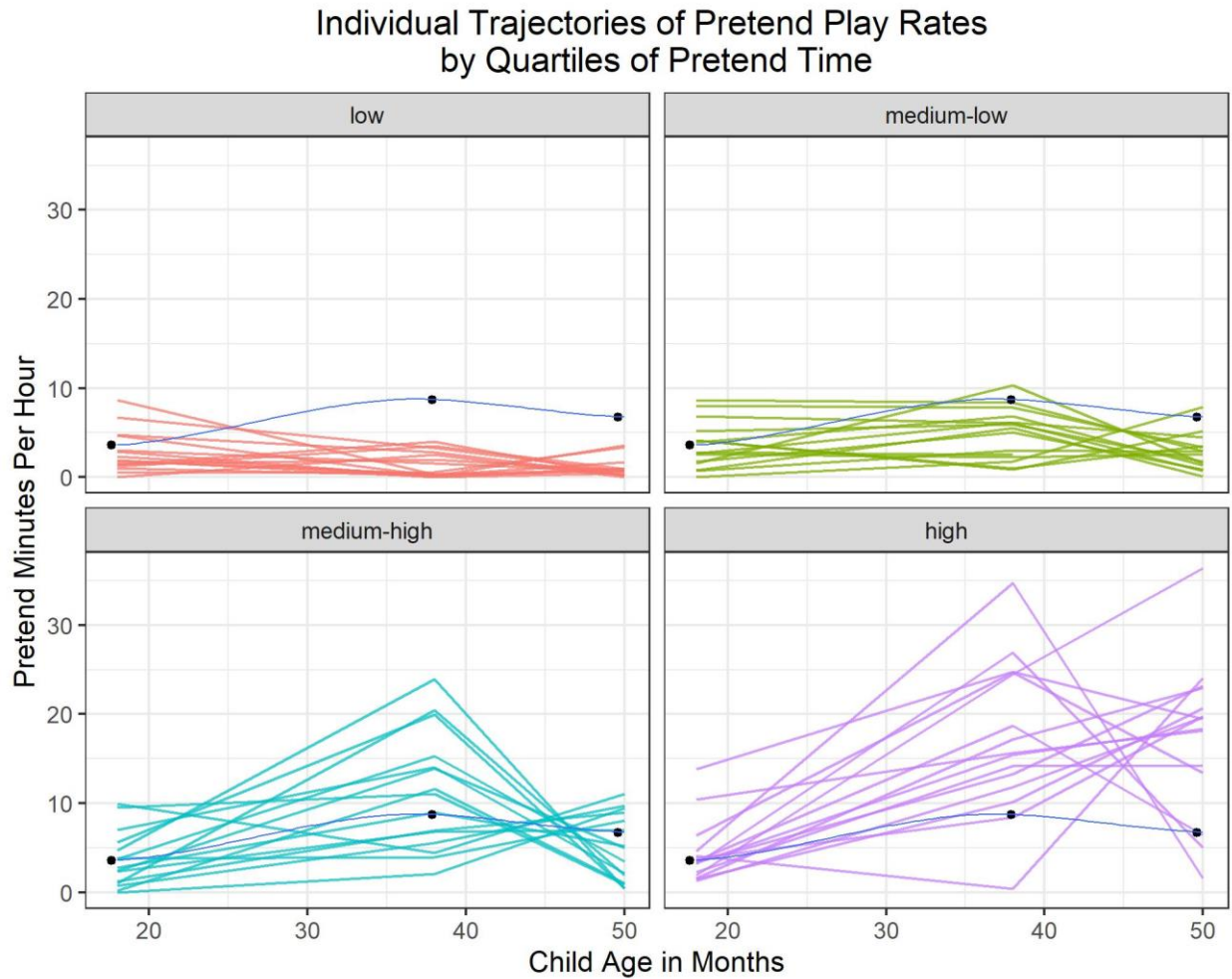


Figure 4-5: Individual Trajectories of Pretend Play Rates by Quartiles of Pretend Time

From these plots of individual trajectories, we can see that some individuals do show a steady increase in pretend play over the preschool period. In fact, the group with the most trajectories that are increasing across the three time points is the group that pretends the most on average (quartile 4 - high). But the flat or u-shaped pattern appears to be more common, appearing in some children across all groups.

Increasing episode duration was also expected over time. Much like with overall pretend rate, on average episode duration increased from 18 months to 38 months, but then decreased on average between 38 and 50 months. This pattern holds true for three out of four groups of

players, but diverges for the high pretend group. So, it appears that children who pretend more overall also sustain their pretending for longer bouts at 50 months. The high pretend group once again displays the increasing pattern from 38 to 50 months, whereas the other groups do not.

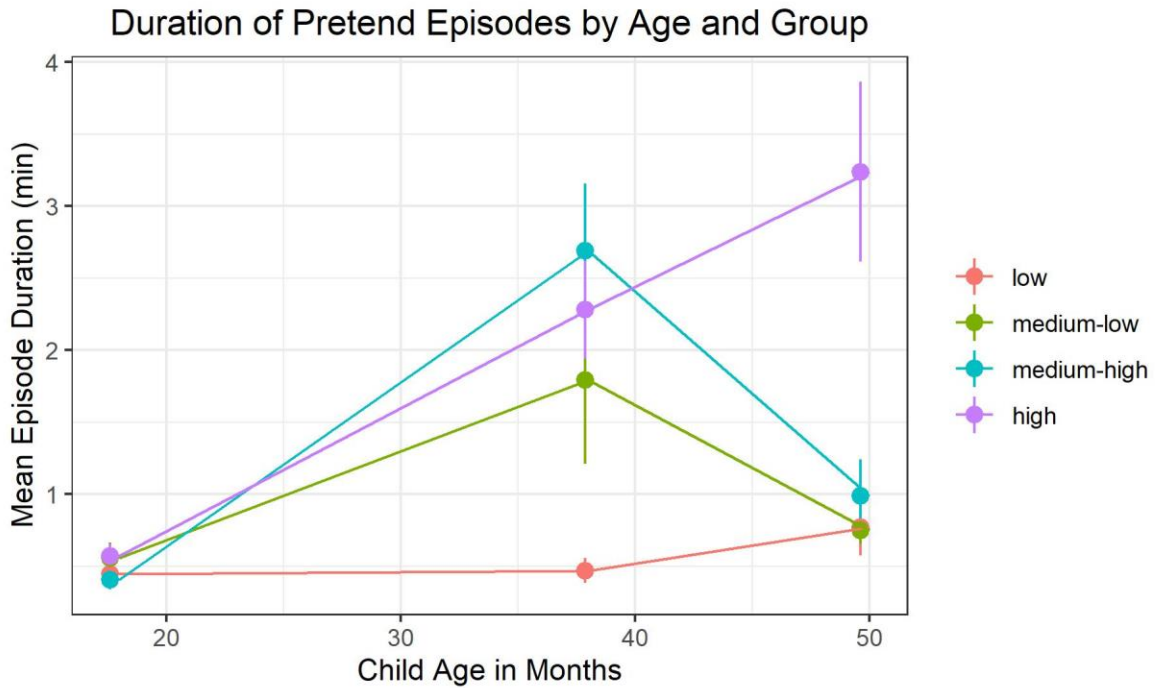


Figure 4-6: Duration of Pretend Episodes by Age and Group

To describe increasing trajectories more precisely, we examined the number of children in our sample that had increasing trajectories for the entire period; e.g., their pretend rate was less at 18-months than 38 months, and these rates were less than the rate of pretend at 50 months. Below we display the number and proportion of children with increasing trajectories across our sample.

Number and Proportion of Children with Increasing Pretend Rates
Over Time by Quartile

	n	Number of Children	% of Quartile Group
low	15	1	7%
medium-low	15	1	7%
medium-high	15	5	33%
high	15	9	60%
Total	60	16	27%

Table 4-1: Number and Proportion of Children with Increasing Pretend Rates Over Time by Quartile

The table shows a clear relationship between overall pretend rate and likelihood of an increasing trajectory. According to these data, only 27% of children in our sample followed a consistently increasing trajectory. These children were more likely to pretend at higher rates overall than children who did not follow an increasing pattern. This finding is to some degree logical, because children who pretend more at each time point are likely to land in the higher quartile group. However, there are some children who are in the highest group overall that do not increase their pretend over time. Likewise, there are some children who pretend less overall, but pretend more over time. Based on our sample we cannot conclude that pretending steadily increases across the preschool period; at least it did not for most children in our sample. Those children who do show increasing rates of pretend from 18 to 50 months are most likely to belong to the 4th quartile, those who display the highest rates of pretend across the entire period.

4.2.5 Interim Summary

Our data display some distinct and some similar characteristics to Haight and Miller's (1993) study. We confirmed with our sample that children pretended about 11% of the time on average. But with a sample six times as large, we found more variation, not less. Our children overall did not display an ever-increasing pretend play practice over the years. This represents a major deviation from existing assumptions.

Haight and Miller (1993) did note some deviations from the increasing pattern as well, although with such a small sample, the findings understandably focused on the average pattern. In Haight and Miller's study, three children did not increase their pretend time between 36 and 48 months, and only one child pretended less at 48 months than at 24 months. In other words, 44% deviated from the increasing pattern at each time point, and 33% did not increase pretend time from 36 to 48 months. In our sample, 72% (42 children) did not increase pretending at each time point, and 53% (31 children) did not increase pretend time from 36 to 48 months. Perhaps most the striking result is that half of our sample (30 children) pretended an equal or smaller amount of time at 50 months than at 18 months. In the current sample, only 9 children in the high pretend group match the received wisdom of the field. Taken together, these details emphasize the most significant finding shared across the studies: the importance of moving beyond the means and considering the variation. From these data it is clear that children pretend according to different patterns across the preschool years, demonstrating different levels of investment and different developmental trajectories for pretending at home over time.

4.3 Parent Participation in Child Pretend Play

In this section, we explore the associations between a child's social environment and the investment in time pretending at home. We recorded the social context in which the pretend

behaviors took place in order to describe what the social environment – i.e., available play partners – might be contributing to the amount of child pretend play time. As described in chapter two, the participation of parents in children’s pretend play has prompted much debate. The literature has argued both that parent modeling is not related to child pretending, and that parents significantly influence early pretending. We have also argued that pretend play with adults is distinct from child-only play in the kind of behaviors it promotes (see chapter 2). To examine these questions with our data, first we aim to understand how much of children’s pretending at home consists of adult interaction or is conducted as a child-only activity. In addition, we recorded how often parents are initiating pretend play, which will help us describe the immediate and deferred impact of adults on the amount of child pretend play time.

4.3.1 Counting Parent Pretend Play

Coding for parent pretend was similar to the procedure for coding child pretend, although with adults there were many fewer ambiguous examples because parents were motivated to make their pretend communications very explicit for their children. As with child pretend, parent pretend is reported in overall proportion of time, rate of pretend per hour, and duration of pretend episodes. The parent participation proportion was calculated as the total time parents pretended with children (during identified child-pretend episodes) divided by the total time children spent pretending. In order for adults to be included as participants in an episode, the adult needed to engage with the child’s pretend by acknowledging, adding to or altering the pretend. Adults were considered participating in the pretend episode so long as they continued to interact with the pretend or remained focused on the pretend activity while observing (not engaged in other tasks). As with child pretend, pause time was subtracted from parent pretend time.

Parents also performed pretend transformations where children were not considered “exposed” to the pretend because the child was engaged in another activity and did not acknowledge the pretend. These “parent-only” episodes were relatively few and were always directed to the child. The parent rate of pretend was calculated by dividing the total pretend time identified for parents by the total observed time. This value offers a slightly more precise estimate of the parent’s investment in pretend, whether or not the interaction with the child succeeded. This value is useful as a continuous variable, which is not constrained between zero and one, to predict the deferred impact of parent pretend time at 18-months on child pretend time at later timepoints (see chapter 7).

4.3.2 Results – Parent Pretend Play

Parents varied significantly in their participation in children’s pretend play across families and across time points. We used the proportion of parent time to child pretend time to examine the variation in parents’ commitment to pretending with children in the preschool period. The distribution of proportions depicted below shows how pretend with parents varies across ages.

Distributions of Proportions of Parent Participation in Pretend by Child Age

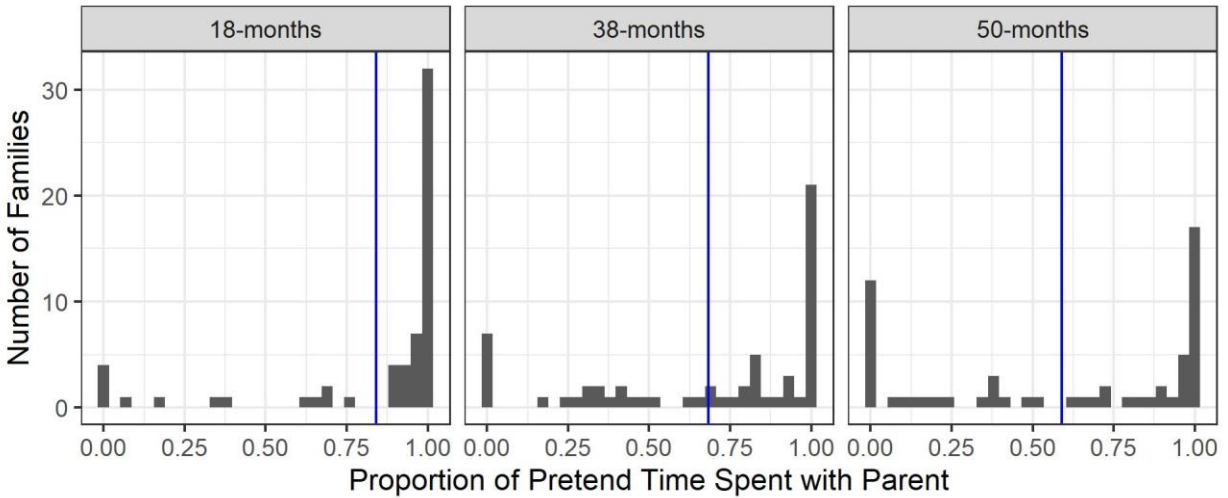


Figure 4-7: Distributions of Proportions of Parent Participation in Pretend by Age

At 18-months, the vast majority of pretend play time involved an adult participant. It is not surprising that most pretend play occurred with parents at this age, as children are more likely to be in the company of parents at this age rather than playing alone, and children are less likely to spontaneously engage in pretend at this age than they are later on. This result is also a function of the frequency with which parents initiate pretend play episodes with their children at 18 months. At 38 months, parent participation varied much more than at 18 months, with the most common values in the sample becoming either 0 or 100%. Half of the sample parents continued to participate in over 80% of their child’s pretend at 38 months. At the same time, a quarter of the sample participated in less than a third of their children’s pretend play. At 50-months, fewer parents showed significant commitment to participating in children’s pretend than at earlier time points, although a large group of parents (19 families, 33%) still continued to participate in more than 90% of children’s pretend play time at this time point.

This data makes clear that some children are rarely or never pretending without an adult present. On average, parents participate in less of children’s pretending as children get older and some stop participating entirely. In contrast, a third of the sample remains strongly invested in pretending with their child at all timepoints. With the most common proportions being 0 and 1, there appears to be two contrasting approaches to pretending at home with preschool children: either all in or all out. The contrast is especially strong at 50 months.

How does the proportion of parent participation impact child pretend? We will discuss this in detail in later chapters, but here we can describe the relation between proportion of parent participation and child pretend rate. The plot below describes this relation within the same time point, with lines of best fit (linear regression, blue) and standard error regions (gray).

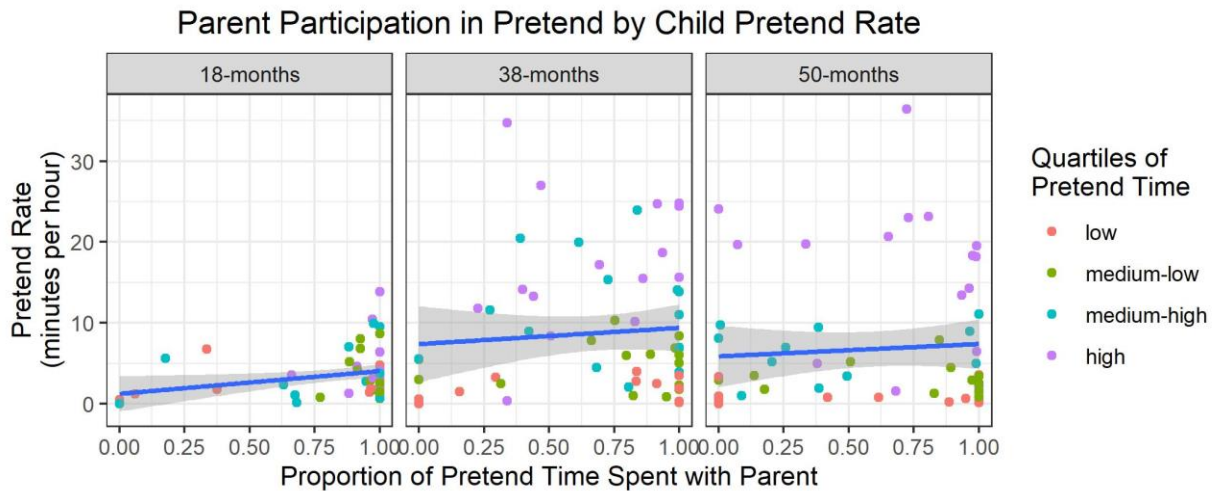


Figure 4-8: Parent Participation in Pretend by Child Pretend Rate

These plots make clear that proportion of parent participation does not relate to child pretend rate at any concurrent time point. For example, we can see how the high quartile children (in purple) are distributed horizontally across the graph at all levels of parent participation, and the lines of best fit are virtually flat at every time point. Parent proportion does not appear to be

associated with child pretend concurrently. Patterns of parent participation across groups and over time, however, describe different levels of investment which are perhaps easier to see when the data are summarized by group. In the data below we present the average proportion participation and the average rate of pretend per hour for each of the groups based on the same data displayed in the scatterplot.

Proportions of Parent Participation in Pretend by Quartiles of Pretend Time				
% Parent Participation -- Pretend Minutes per hour				
	low	medium-low	medium-high	high
18-months	71%--2.82	89%--3.57	80%--3.68	96%--4.34
38-months	60%--1.42	75%--4.89	72%--11.26	66%--17.39
50-months	56%--1.05	60%--2.78	52%--4.97	68%--17.56

Figure 4-9: Proportions of Parent Participation in Pretend by Quartiles of Pretend Time

As we can see from the table, on average parent proportion of participation consistently decreases from 18 months to 38 months, and decreases again from 38 months to 50 months in 3 out of 4 groups. It is also striking to note that the average amount of participation is 52% or more across all quartiles and time points. These data certainly underscore the idea that most American parents invest time in pretending with children. It is also striking to note that parent participation drops off most precipitously in the medium-low and medium-high groups, when child rates also fall. At 50 months, the high pretend group stands out as unique, as it did in the child time data, with a pattern of parent participation that remains high at 38 and 50 months.

Noting the pattern of lower parent participation in the low quartile, especially at 18 and 38 months, and higher parent participation in the high quartile especially at 18 and 50 months, this table might suggest that parents participate more with children who pretend more in the preschool period. On the other hand, the proportion of time that parents participate in pretend may not be a good predictor of child pretend rates, but rather be an indicator of other features of the social environment, such as a parent's beliefs about the importance of engaging in pretend play with preschool children. Both of these interpretations will be addressed in chapter 7.

4.3.3 Parent-initiated Episodes

Another variable of parent participation in pretend play is the propensity of parents to initiate pretend with children. As mentioned above, parent initiation of pretend could be an indicator of a parent's attitudes about the importance of pretend play. The more a parent introduces pretending, the more a child may learn that pretending is of value to the parent and therefore pursue more opportunities to engage with them in pretend. The proportion of initiation may change over time as well, describing the relative level of investment in pretending that children and adults may have. It may be that adults who model pretend by initiating often at 18 months have children who offer more reciprocal initiation later on, making the relative proportions of initiation more balanced between parent and child. It may also be that some parents initiate often, but children do not take up the suggestion for pretend play. These behaviors could represent two different profiles of how children respond to pretend initiation from adults, or the degree to which a parent is skilled in engaging the child in pretend interactions. Regardless, parent initiation offers us another avenue to explore parent investment in pretending at home. In the following section I describe the likelihood of parents to initiate pretend play with children during the preschool period.

4.3.4 Results – Parent-Initiated Episodes

In the histogram below we show the distribution of proportions of pretend episodes initiated by parents by time point. Although parent initiation is varied, the histograms show a clear reduction in parent initiation of pretend over time. At 50-months, a third of the sample parents do not initiate any pretend episodes. Unsurprisingly, the highest proportions of parent-initiated pretend occur at 18 months. At this age, participation of parents is highest, and children have comparatively limited communicative capacity. The major takeaway from these data is that parents decline in their tendency to prompt pretend play with their children as their children age.

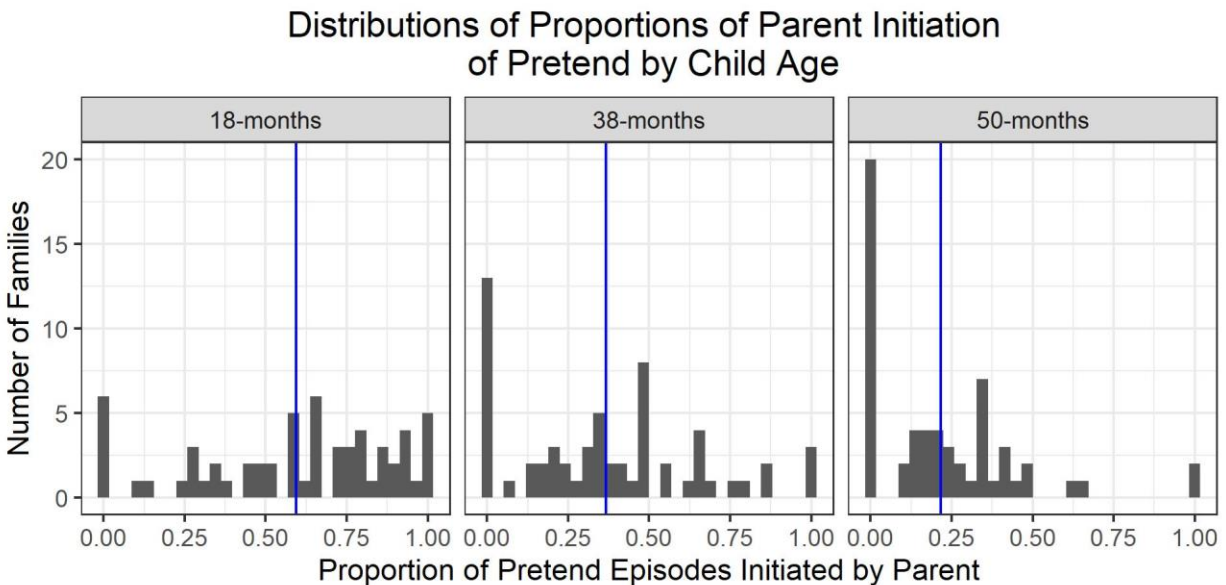


Figure 4-10: Distributions of Proportions of Parent Initiation of Pretend by Age

One explanation for the reduction in parent initiation over time is that children are more capable of initiating pretend on their own at 50 months compared to 18 months, and they may no longer rely on their parents to do so. For those parents who value pretend play, initiation at 18-months may signal overall support for pretend play as an activity for children, and children may learn to reciprocate and initiate with their parents as they get older. Alternatively, as parents

reduce the amount of pretend they initiate over time, children may take up the responsibility of initiating, or they may not, in which case pretending may decline overall.

We expect that both parent participation and parent-initiated episodes also vary by children’s overall pretend behavior. Adults and children influence one another, and parents who initiate more may have children that pretend more. The reverse could also be true – children could affect the participation of parents, and affect the proportions of parent initiation, by initiating themselves more often. Below we examine parent initiation in pretend play by the quartiles of overall pretend rates introduced earlier.

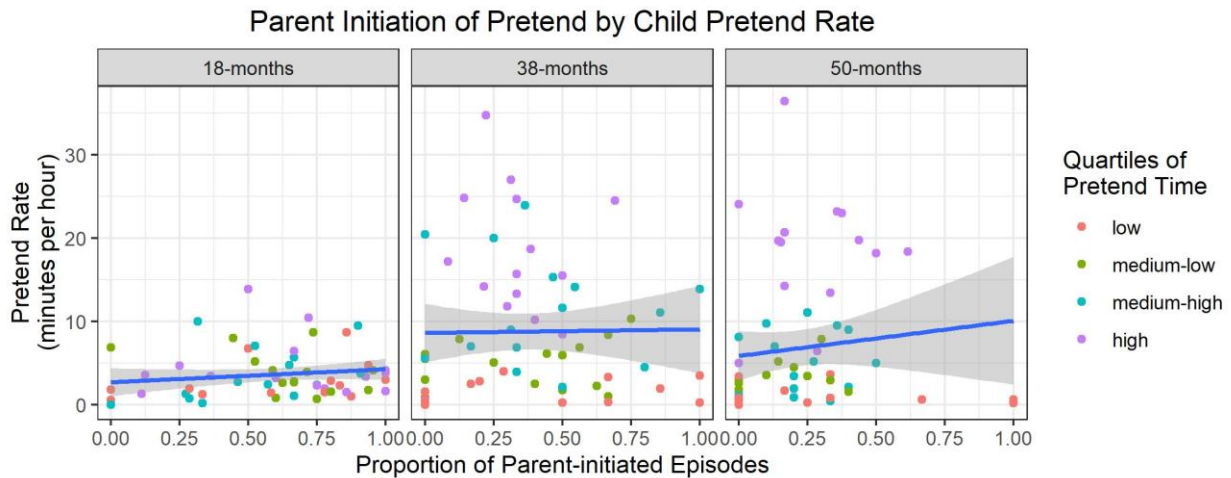


Figure 4-11: Parent Initiation of Pretend by Child Pretend Rate

Once again, the plot suggests that there is no correlation between parent initiation of pretend episodes and child pretend rate. Children in the high pretend quartile (in purple) are distributed across the graph at 18 months, indicating that the group contains at this time point both parents that initiate a lot, and parents that do not. But parent proportion of initiation mostly falls below 50% for this group at 38 and 50 months. In fact, the great majority of parents across the sample initiate 50% of episodes or less at 50 months. So, it appears that children who pretend a lot may be prompting the play more often at 38 months, and potentially inviting parents to

participate. At 50 months, children across the board appear to initiate more often than parents. In the following graph we place participation and initiation side by side by quartile to examine how these behaviors change together.

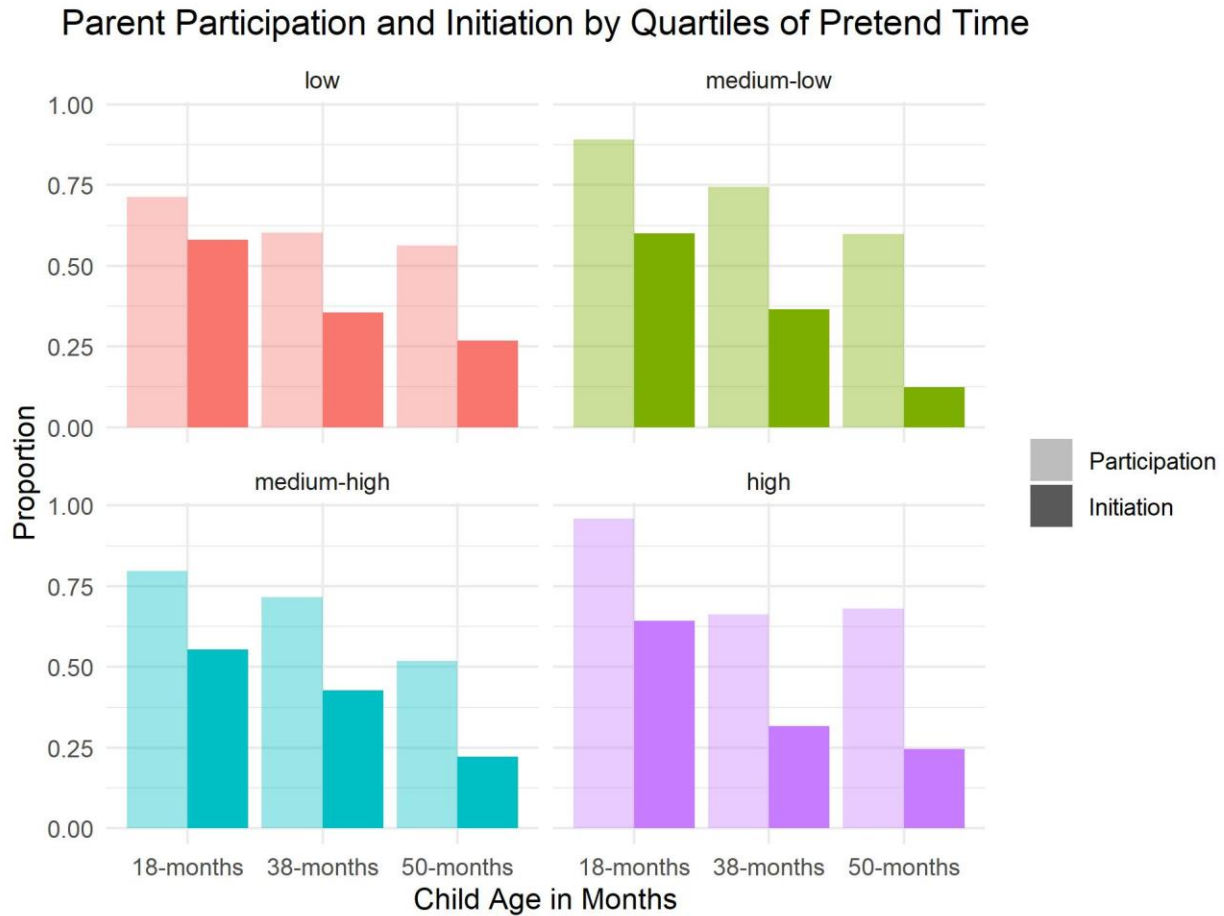


Figure 4-12: Parent Participation and Initiation by Quartiles of Pretend Time

So far, we have established that parent behaviors supporting pretend play decline over time for most families. This figure reinforces that conclusion, and also depicts how similar parent participation and initiation patterns are across quartiles. Parent participation and initiation of pretend play is highest at 18-months and declines as children age, but parent participation never dips below 50% in any group. From this data it is clear that parents are present for most of the

pretend play that children perform at 18 months and remain a consistent presence during pretend play for all groups throughout the preschool period.

Some of these results are consistent with Haight and Miller's (1993) findings. The proportion of pretend play with mothers in their study declined from 24 to 48 months, from approximately 85% of social play to approximately 55% of social play. These values are consistent with our average values for this sample, although here we report the proportions of parent participation to all child pretend play, not just social play. In the next section we will compare solo and social play with adults and children.

4.3.5 Solo and Social Pretend

As described in chapter two, pretend play has been implicated in both individual and social learning, and the field has been ambivalent about the primacy of solo versus social pretend play for the development of cognitive skills. Despite the common assumption in the early literature that children's pretend is self-motivated (Fein, 1975; Piaget, 1952), adults featured prominently in naturalistic observations of children's pretending at home (Dunn & Wooding, 1977; El'konin, 1966; Haight & Miller, 1993; P Miller & Garvey, 1984). As described in chapter 2, the involvement of adults in children's play is influenced by social class and cultural communities (Dunn & Wooding, 1977; Gaskins et al., 2006; Heath, 1983; McLoyd, 1982). In the United States, parents are particularly supportive of pretending overall compared to other communities and are encouraged through media and educators to engage with children in pretending in service of children's learning and development (Toub et al., 2018; Zigler & Bishop-Josef, 2006). As a result, parents are likely to be found engaging in pretend play with young children at home, but the degree to which they do so has not been described in a

representative sample. In the following section, we describe just how often pretending at home is practiced as a parent-child activity.

4.3.5.1 Play Partners

The presence of adult or child play partners engaging in pretend play was recorded by episode. Although we do not have precise time data for child play partners who entered or exited the play in the midst of the episode, the majority of child play partners engaged throughout recorded child episodes. These codes allow us to provide a general estimate and comparison of pretend time spent with adults and other children or performed solo over time. Haight and Miller's (1993) study also considered preference for play with children versus adults and will serve as a basis for comparison. Using the presence of play partners coded by episode, we will compare the proportions of episodes containing adult play partners with those containing child play partners or performed solo.

4.3.6 Results – Solo and Social Pretend

As in Haight and Miller's (1993) study, most pretend play in our sample is social. Unlike the prior findings, the proportions of social pretend play do not remain constant in our sample but rather fall as children age, and they decrease more dramatically for the lower quartiles. Social play is certainly impacted by the availability of social partners, so this decrease in social pretend could be related to the relative willingness of adults to participate in pretend, and whether there are other children available to recruit as play partners.

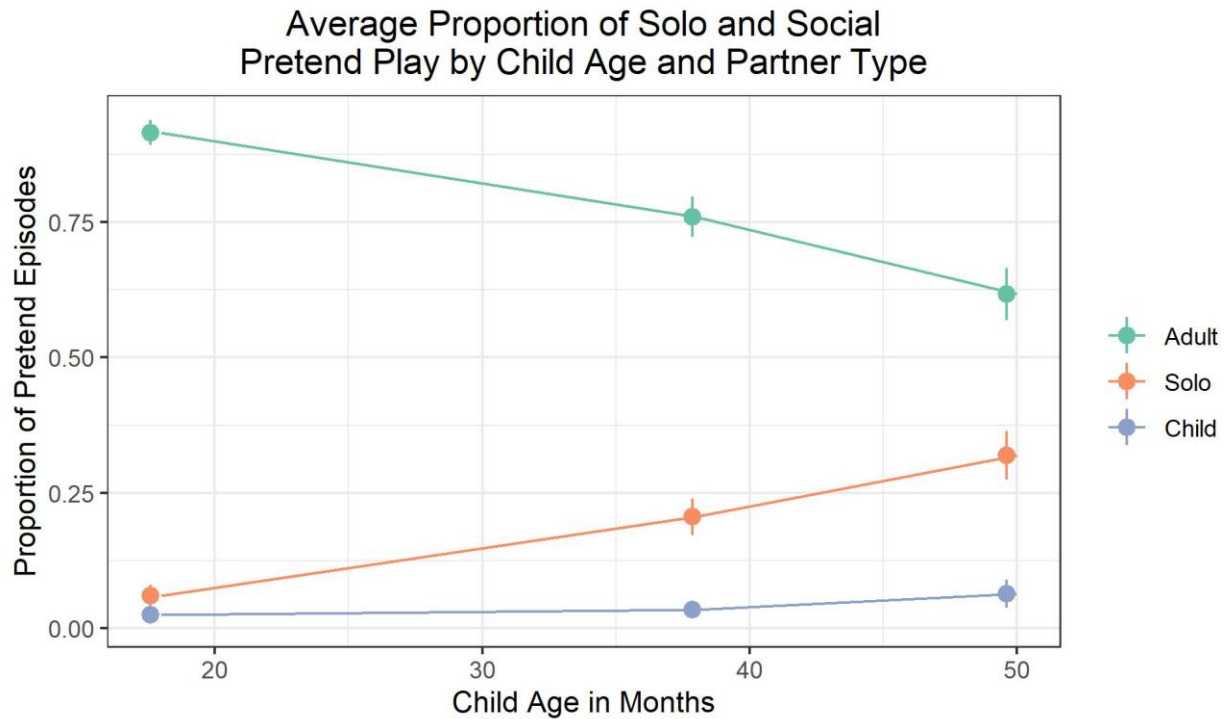


Figure 4-13: Average Proportion of Solo and Social Pretend Play by Age and Partner Type

When we examine social play alone, the vast majority of episodes were performed with adult play partners (86% on average, range 96% at 18 months to 73% at 50 months), including some episodes with both child and adult players (8% on average). Pretend with other child participants (without adults) increases as children get older (6% on average, range 3% at 18 months to 11% at 50 months), as proportions of play with adult participants decrease. However, the increase in pretend with other children does not match the decrease in pretend with adults as it did in Haight and Miller’s (1993) study. In that study, the proportion of pretend with adults and children was about evenly split (50% each) at 48 months. In our data, visible on the line plot, solo pretend play increases much more than play with other children at home, and our proportion of play with other children is significantly lower.

Since all but one of the children in Haight & Miller’s (1993) study had either older or younger siblings, proportions of children living with siblings or with other children in the home

were not the same across the two studies. In the present study, 63% of children did not have siblings at 18 months, 30% had one older sibling and 7% had two or more older siblings. At 38 months, 38% of children had no siblings, 50% had one sibling and 12% had two or more. At 50 months, 35% had no sibling, 50% had one sibling and 15% had two or more siblings. At each of our time points, the proportion of children without siblings was always greater than Haight and Miller's (1993) 11%.

However, if we break out the line graph above by households with siblings or other children living in the home (a child within 7 years of the age of the target child), the results of partner data do not change dramatically. In the 18-months visit, the proportions of child episodes and solo episodes reverse when siblings are present, and all children with siblings at 18 months had older siblings. The proportion of solo episodes increases at 38 and 50 months in households with no siblings. Perhaps somewhat surprisingly, the proportion of episodes with adults is higher in households with siblings at 50 months compared to households without siblings. In the end, however, the presence of siblings does not appear to influence the frequency of pretending with other children (without adults). In our data, even when we only consider households with siblings, episodes with children are much less common than as seen in Haight & Miller's (1993) study.

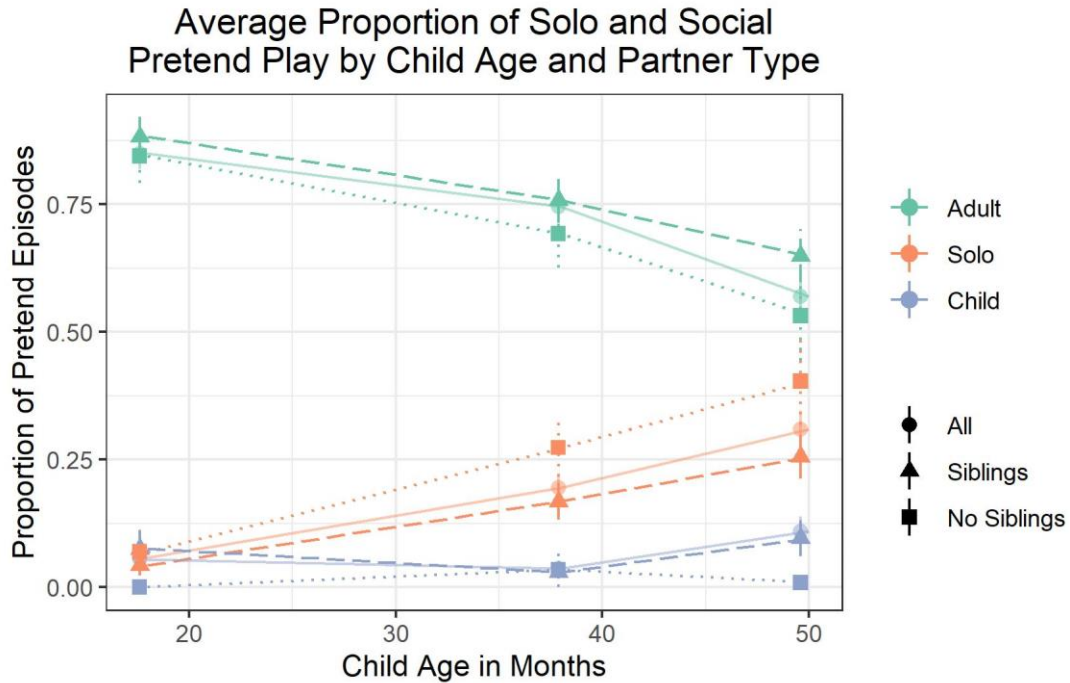


Figure 4-14: Average Proportions of Solo and Social Pretend Play by Age and Partner

One of the concerns addressed by Haight and Miller (1993) regarding these proportions is that the child proportion is biased by the availability of child play partners during the observation time. In our study, as in theirs, at least one parent was consistently accessible during home observations, but even children with siblings may not have had access to other children during the visit (e.g., if they were at school, daycare, etc.). Likewise, children without siblings living in the home were not necessarily without child play partners living nearby or visiting frequently. So, it is difficult to evaluate whether children prefer to pretend with adults or other children, or on their own. Regardless of their preferences, however, the vast majority in our sample appear to be pretending with adults most of the time.

In the next table, we examine these proportions by quartiles of overall pretend, where we can see how the proportion of solo, social play with adults, and social play with other children (without adults) varies by child investment in pretending.

Solo and Social Pretend Play by Quartiles of Pretend Time

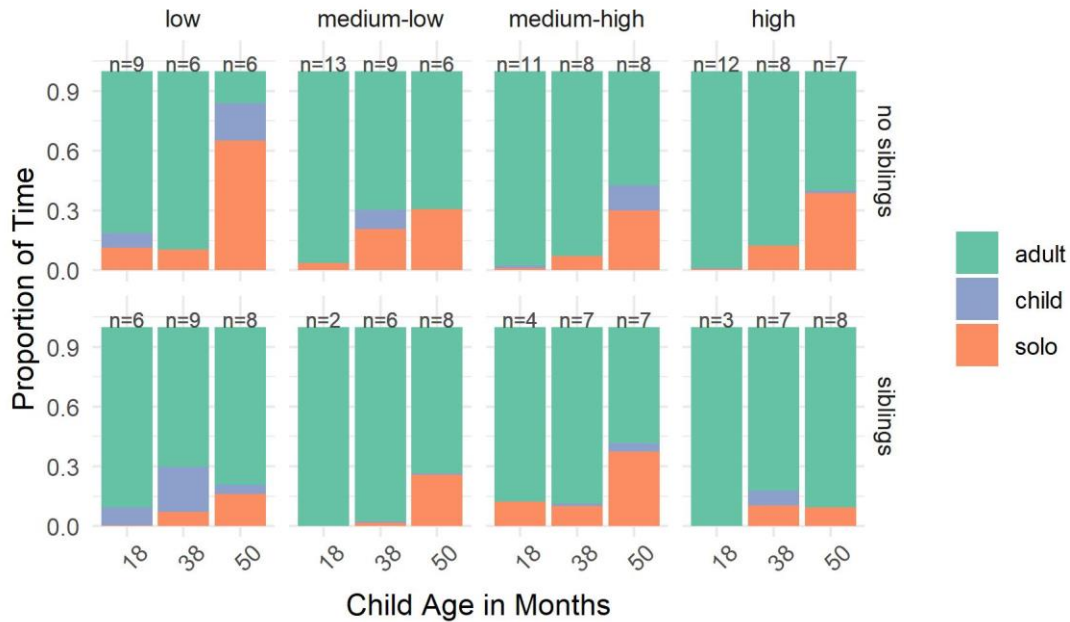


Figure 4-15: Solo and Social Pretend Play by Quartiles of Pretend Time

Each quartile group follows a slightly different pattern of play with children and adults across these time points, but the groups become quite small when we separate them into children with and without siblings. It should be noted that children remain in the same quartile but move from the “no sibling” to “sibling” groups as younger siblings are born. In every quartile, solo play increases as parent participation declines, and much less pretending is done with other children than with adults, with the exception of the low quartile with no siblings. There we see a higher proportion of solo pretend than either pretend with adults or children at 50 months. This may not be surprising, given that the investment in pretending by parents is lower in this group across the board, and siblings are not available. Other children are, however, available play partners for some of these children. We note that the low quartile group (with and without siblings) has a higher proportion of pretend with children (without adults) overall, which may indicate something about how the social context affects pretend play. Recall that children in the

low quartile spend significantly less time pretending than children in the other three quartiles. If siblings or other child participants are available, are some children choosing to spend more time in other activities than in pretend? It can be difficult for children in the preschool years to coordinate socially, and pretend play requires a great deal of shared knowledge and communication. Perhaps there is a combined influence of less robust parent investment in pretend play and access to other children that makes pretend play less of a priority during preschool.

In fact, the average proportions of solo play and play with children (without adults) are unlikely to be significantly different between groups. The average proportions for solo play and play with other children (without adults) for each group are well within the same confidence intervals at all three ages. All groups invest more time in solo play as children age, and little time in play with other children across the board. The proportions of parent participation are not significantly different across quartile groups at 18 months, but we do begin to see differences between groups at 38 and 50 months. The most significant differences we detect are between the high pretend group, where parent participation remains constant at 50 months, and the other three quartile groups, where parent participation declines at 50 months.

To summarize, our average results for the quantity of social (versus solo) play match with Haight and Miller's (1993) study, but the details – in this case the proportions of social play with other children – do not. Our takeaway here is that these children, in the contexts in which they grow up, are much less likely to engage in pretend play with other children at home during the preschool period, and much more likely to be pretending with an adult participant.

4.3.6.1 Episode Duration

Another key finding of Haight and Miller's (1993) study was that children's episodes of pretend play were longer when children pretended with their mother. Several other studies have made similar suggestions that parents elaborate and sustain pretend play for children (Lillard, 2006; P Miller & Garvey, 1984; Slade, 1987). In the following section I describe how the duration of pretend play episodes with parents compare to episodes with children pretending alone or with other child partners (without adults).

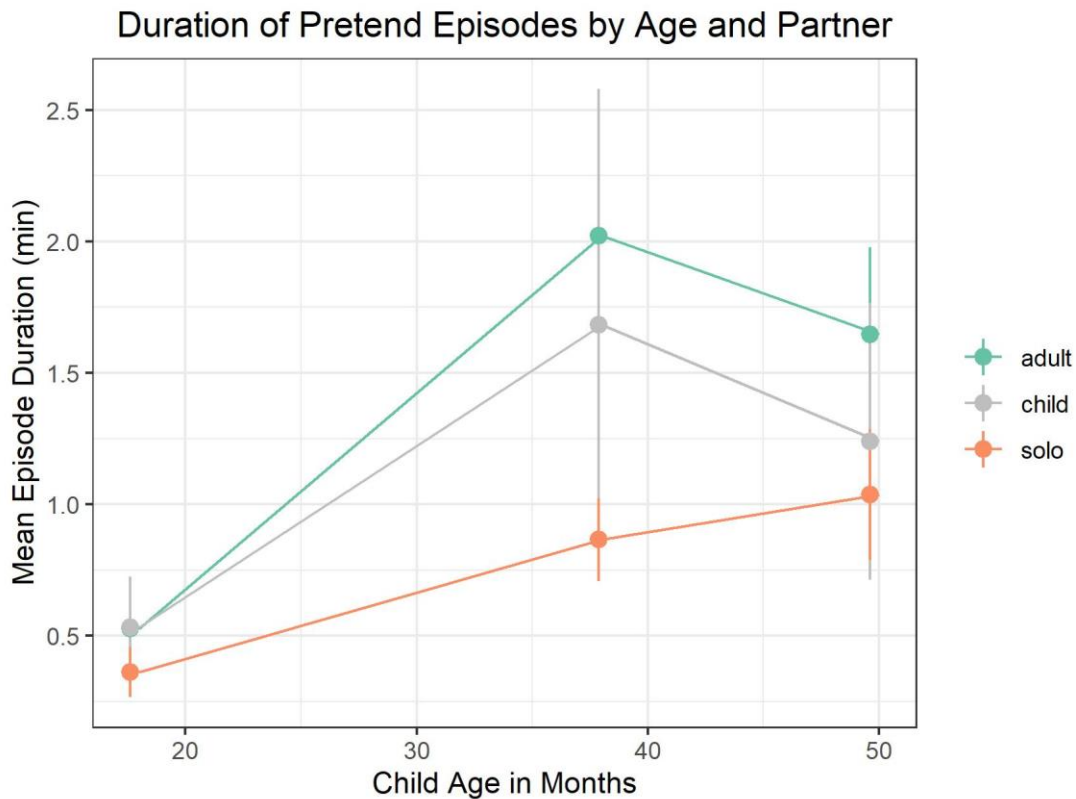


Figure 4-16: Duration of Pretend Episodes by Age and Partner

As expected, we found that episodes of pretend play lasted longer with adult partners when compared to solo episodes, specifically at 38 and 50 months. At 18 months, duration of episodes across partner types are similarly brief (Adult mean=0.53 minutes, sd=0.37; Solo mean=0.36 minutes, sd=0.38). At 38 months, we see the expected increase in duration from 18

months (Adult mean=2.0 minutes, sd=1.93; Solo mean=0.87 minutes, sd=0.94). At 50 months, however, the trajectory differs for solo episodes, which increase in duration at this time point while the average duration of episodes with adults decreases (Adult mean=1.65 minutes, sd=2.29; Solo mean=1.04 minutes, sd=1.57).

Importantly, when comparing solo episodes to episodes with adults, we should consider how episode duration could be extended by just having a partner to play with at all. In the figure above, the confidence intervals for average duration with adult partners and with child partners (without adults) do overlap. However, it is difficult to interpret this result, as the sample of episodes with child partners (without adults) is so small in this corpus. It remains unclear whether social pretend episodes with child play partners, but without adults, might be significantly different in duration from pretend episodes with adults. But what we can say is that in this context, where children are most likely to be pretending either with an adult or on their own, pretend episodes with adults on average last longer than children's solo episodes.

Does this pattern remain consistent across all groups, despite different levels of investment in pretending overall? In the figure below we plot the average episode duration for solo episodes and episodes with adults across the four quartile groups (social pretend episodes with child partners but without adults are omitted for ease of interpretation of the figure). These results help us understand how children might vary in the duration of their solo pretend play episodes over time, and consider what impact adults may be having on episode duration in these distinct contexts. It is important to keep in mind, however, that the number of solo episodes available to analyze differs across groups because some children rarely pretend with adults (particularly in the low quartile group) and some children rarely pretend without them

(particularly in the high quartile group). The table below lists the number of children producing solo and social pretend episodes with adults across the four groups.

Number of Children Producing Pretend Episodes by Group and Partner Type				
	Number of Children (# Episodes)			
	low	medium-low	medium-high	high
18 months				
adult	13 (128)	14 (144)	14 (163)	15 (161)
solo	5 (8)	6 (7)	3 (5)	2 (3)
38 months				
adult	11 (40)	14 (69)	14 (93)	15 (140)
solo	7 (9)	10 (16)	9 (22)	10 (30)
50 months				
adult	9 (22)	12 (45)	13 (63)	14 (106)
solo	6 (7)	9 (29)	12 (52)	13 (32)

Figure 4-17: Number of Children Producing Pretend Episodes by Age, Group and Partner Type

Plotting the average duration of episodes across partner types and groups reveals another potentially important difference between the high quartile group and the other three groups. Although all groups have longer episodes with adults at 38 months, some distinct patterns emerge at 50 months. Notably, children in the low pretend group increase the duration of solo pretend episodes from 38 to 50 months, pretending longer on their own than with adults at this time point. It is important to keep in mind, however, that these children have fewer episodes

where adults are participating in general. Perhaps most striking is that solo episodes in the high quartile group appear to be significantly longer than solo episodes for any other group. This suggests that these children are more motivated to sustain pretending on their own at this time point, even when adults are not involved. This may indicate that children at this time point are driving the extension of pretend play, perhaps as much or more so than the adults in this group.

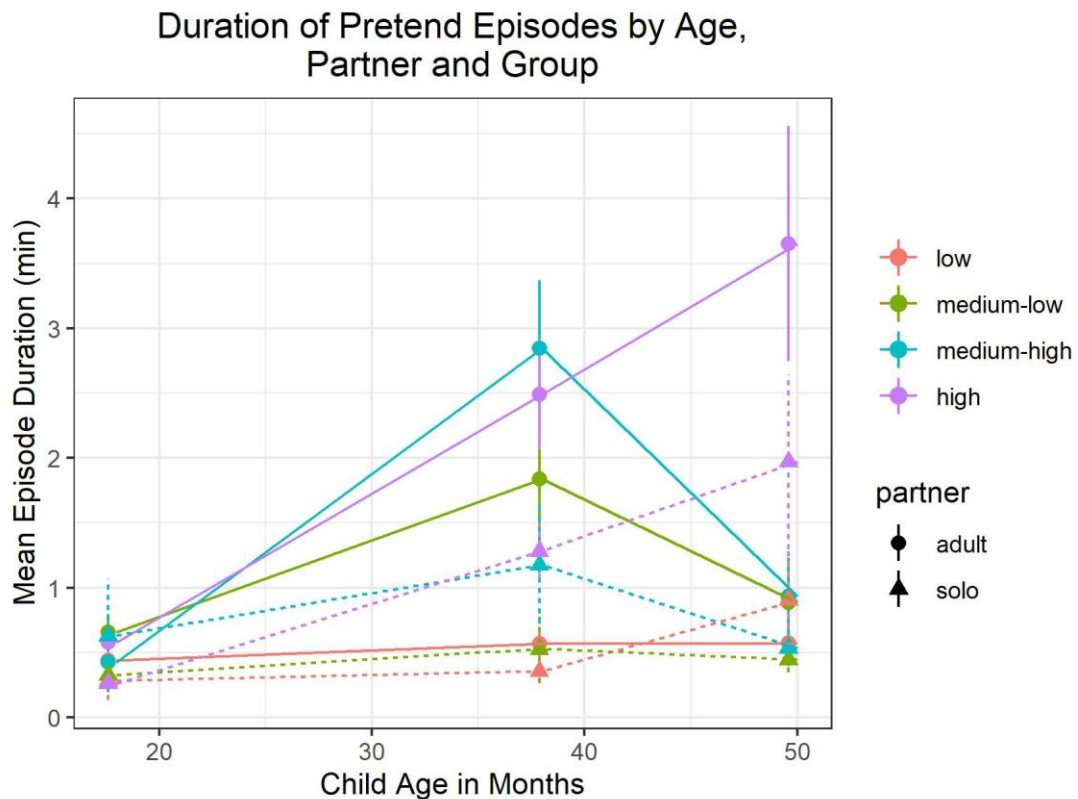


Figure 4-18: Duration of Pretend Episodes by Age, Group and Partner

These data offer an interesting comparison to Haight and Miller’s (1993) results for solo and social pretend episode duration. In their study, pretend episodes with mothers lasted twice as long as solo episodes at 24 months (Adult mean=0.85 minutes, Solo mean=0.40 minutes) and 36 months (Adult mean=1.85 minutes, Solo mean= .8 minutes). At 48 months, this pattern reversed, and children’s solo episodes became twice as long as episodes with mothers (Adult mean=0.85 minutes, Solo mean=2.06 minutes). Our data mirror Haight and Miller’s (1993) results at 38

months, in that parent episodes are longer across the board. But our results do not align with the reverse pattern for adult and solo episodes at 50 months in three out of four groups. The one exception is in the low pretend group, where duration of solo episodes does overtake duration of episodes with adults, though the solo episodes are not quite twice as long (Adult mean=0.56, Solo mean=0.91). For the rest of the sample, solo episodes do not approach the duration of parent episodes at 38 months, and remain lower in duration than parent episodes at 50 months, though the difference between them decreases. It is striking to see that in the two medium groups, both parent and solo episode duration decreases or remains flat from 38 to 50 months.

Despite the difference in patterns, in the high pretend group alone, the duration of solo episodes at 50 months matches the duration of solo episodes in Haight and Miller's sample at 48 months almost exactly (Solo mean = 1.97 minutes). The durations of parent episodes for the medium-high and medium-low groups at 50 months also match with Haight and Miller (Adult mean=0.93, 0.88 respectively). So, the differences between the studies appear to be centered on the behavior of the parents in the high pretend group, who pretend much longer than expected, and the behavior of the children in the medium and low pretend groups, who pretend much less than expected based on Haight and Miller's (1993) study.

4.4 General Discussion

In comparing a large representative sample with a small homogeneous one, we find very similar results to Haight and Miller's (1993) study on average, despite differences in when data was collected, sample size, and sample diversity. But a larger sample affords us the opportunity to explore variation in ways that were not possible with Haight and Miller's (1993) data. What we learn from examining this variation is that there are many different patterns of behavior with

regard to preschool pretending at home, and a sizeable portion of the sample does not follow the average pattern reported by Haight and Miller (1993).

First, it is striking that the data in our representative sample are so comparable on average with the sample of 9 children from upper and middle-class white families described by Haight and Miller (1993). According to Haight and Miller (1993), prior to their study little evidence was provided in the literature about how much time children actually spend pretending at home. Our data confirm that children pretend approximately 10% of the time on average across the preschool period.

Second, our results add to the existing literature by describing how pretend play in a representative sample varies among families and over time. In our sample pretending is a “major occupation” for some preschool children, but not for others. When we examine the variation in pretending across families, we see that some families are exceptionally committed to pretending, and these outliers pull the average pretend play time to higher values than the medians at all three time points. Compared to other studies of children pretending at home, many children in our sample engage in far less pretend play than has previously been suggested.

Third, the pattern of steadily increasing pretend over the preschool period, reported by Haight and Miller (1993) among others (K. Rubin et al., 1983), more closely represents the behavior of children with the strongest commitment to pretend. Most children in our sample display a modest increase in pretend play rate from 18 to 38 months and then decline in pretend play rate from 38 to 50 months. This pattern holds on average and for 75% of the children in our sample, which is a significant difference between the two studies.

Finally, parents are participating in the vast majority of children's pretend play at home. Our findings match Haight and Miller's (1993) conclusion that the majority of preschool pretend play is social, but the proportion of play with other children (without adults) is much smaller in our study. This pattern holds across the board, regardless of how much time children spend pretending. In addition, although parent involvement declines for 75% of the sample as children get older, parent involvement remains strongest for parents whose children pretend the most. As discussed in chapter 2, we are certainly not the first to report that American parents encourage pretending (Gaskins et al., 2006) but our data show that pretending is a parent-child activity much more often than it is a child-only activity. We confirm Haight and Miller's (1993) findings showing that pretend play develops more often in a social context and then becomes solo, rather than the opposite trajectory, as suggested by Piaget and many researchers who followed him.

The variation in pretend play behavior identified in this chapter offers us an opportunity to understand how pretend play impacts children's development. With this data we can examine whether the amount of time children spend in pretend play serves to bolster children's cognition, speed up the development of cognitive capacities, or simply offer another pathway to develop the capacities children would otherwise acquire through other activities. For claims that rest on pretend as a major occupation of children, our data may not support such conclusions. Instead, we highlight the variation in pretend play behavior as a feature we can exploit to understand the impact of pretend play in an ecologically valid setting. In the ensuing chapters we will further explore how pretend play varies among the children in our sample. In the next chapter (chapter 5), I will describe the symbolic content of children's play (e.g., symbolic transformations, story events and fantasy). In the following chapter (chapter 6), I will describe what symbolic content is contributed by adults. With these data in combination, we better understand the different patterns

of play we see in the variation in our sample by time spent, content explored, and parent contributions to pretending at home. Finally, we will use these patterns in the final chapter (chapter 7) to evaluate how pretend play impacts children's outcomes.

5 Telling Stories through Pretend Play

“It may be that in order to create coherent fantasy one has first to gain a coherent understanding of everyday reality.” (Bretherton, 1984, p. 34)

5.1 Introduction

As described in the previous chapter, this study suggests that the time children spend pretending at home varies significantly across households. But time spent is only one measure cited in the literature to justify the importance of pretend play in children’s lives. In this chapter, we examine features of pretend play that have been credited with offering developmental benefits; specifically, the content of play that is considered symbolic, cognitively challenging for children, and therefore promoting cognitive growth. It is the symbolic nature of pretend play that first attracted developmental psychologists to consider pretend play as an important behavior of childhood. But as we have discussed, not all symbolic features of pretend play are considered equally complex. If the importance of pretend play in development rests on the development of symbolic capacities, how much are children exercising these capacities when pretending at home? We address this by answering the following questions:

5.1.1 How much symbolic complexity is present in children’s pretend **transformations**?

As described in chapter 2, pretend play researchers have suggested that developmental advantages may be connected to certain specific behaviors that are unique to pretend play: i.e., the use of symbolic transformations. Hierarchies of transformations have been created to describe the relative importance of these behaviors for symbolic thinking. According to Harris (2000), role play and object substitution could potentially provide distinct benefits for children, and future research should consider relations between the distinct types of play, such as role

play, and the development of specific cognitive skills such as theory of mind. Ideational transformations (e.g., role play, pantomime) are considered more complex than concrete (object) transformations because they are not scaffolded by elements in the here and now (Matthews, 1977; McLoyd, 1980). Although there is a general assumption that children engaging in pretend are activating the symbolic function, it remains to be seen how much symbolic complexity is actually present in children's transformations. How often do children make **complex transformations** when pretending at home?

5.1.2 How complex are children's **stories** in pretend play?

Storytelling is a fundamental feature of pretend play. When children engage in a pretend scenario they are able to adopt the point of view of the story's protagonist. According to Nicolopoulou (2018), "this imaginative immersion into the story world when constructing or comprehending stories is one of the features of pretend play that highlights the close affinities between play and narrative." To tell a coherent story, children must also link together a series of logical events. It has been suggested in the literature that story enactment in pretend play predicts narrative skills at kindergarten (Engel, 2005; Nicolopoulou, 2006). In particular, narrative production can be measured in terms of the number of events produced when telling (or re-telling) a story (Pellegrini, 1985; Pellegrini & Galda, 1991). The connection between pretend and narrative implies that children practice creating complex stories during pretend play. To what degree are children creating complex stories with many **related events** when pretending at home?

5.1.3 How much do children pretend about **fantasy and reality**?

When children engage in fantasy play, they imagine people and places unlike their own, traversing a "cognitive distance" between what is familiar and what is imagined (Müller, Yeung,

& Hutchison, 2013; Werner & Kaplan, 1963). Fantasy play (in contrast to play about reality) has therefore been considered to be particularly cognitively challenging, and therefore particularly beneficial for children (Thibodeau-Nielsen, Gilpin, Nancarrow, Pierucci, & Brown, 2020; Thibodeau et al., 2016). But as we know, not all pretend is composed of fantasy themes. In fact, much pretend play around the world is devoted to the simulation of reality (Gaskins, 2013), and even in the U.S., a significant portion of pretend toys are designed to promote play about reality (e.g., toy food, toy kitchens, etc.). Given this context, how much do children play about **fantasy ideas** and themes when pretending at home?

5.2 Transformations

The number of transformations produced is an initial indicator of the complexity of an episode. A single transformation can be considered less cognitively taxing than holding multiple imaginary elements in mind at a time, and the evidence to support this is present both in experimental work (Fein, 1975) and in longitudinal observations of children's transformations (Bretherton, 1984). Therefore, we begin to analyze complexity using the number of transformations present in a pretend episode.

As we detailed in chapter 3, however, not all of these transformations are considered equal in terms of the cognitive work they require. Transformations have been categorized according to levels of symbolic distance; that is, how separated they are from the here and now. For example, transformations require less cognitive work when they rely on concrete features of the real world (e.g., pretending there is "tea" in a toy teapot; pretending a toy phone can "make a call"). These "material" transformations often involve objects and may facilitate earlier preschool pretending. Transformations require more cognitive work when they are not connected to concrete features of the real world (e.g., bouncing an imaginary ball; imagining being "outside

in the rain”). These “ideational” transformations are said to appear later in the development of preschool pretending and require greater cognitive capacity to imagine more features of the play (Matthews, 1977; McLoyd, 1980).

As a first step in understanding the cognitive complexity of pretending at home, in this section we describe how much cognitive work is demonstrated in the transformations produced during pretend episodes. By distinguishing between types of transformations, we can begin to understand how pretending at home exercises the symbolic capacities, and how the cognitive work of pretending changes over time. We can also describe how children vary in the frequency and types of transformations they produce and therefore gain insight into how much pretending at home varies in cognitive complexity by child and context. The variation in cognitive complexity may be a critical factor in understanding whether and how pretend play encourages the development of cognitive capacities in preschool children.

5.2.1 Methods for Identifying Complexity in Pretend Transformations

5.2.1.1 *Number of Transformations*

The number of pretend transformations per episode is used as an initial measure of complexity, and is important to understand for interpreting the transformation results. An episode with a single transformation contains one pretend element only. For example, animating a toy car (object), declaring “I’m the mommy” (role) or simply saying “Pretend we’re outside” (setting). These episodes are usually truncated because after a single transformation the play does not continue. Alternatively, the episode continues but remains focused on a single idea and often contains repetitions of the same transformation. For example, a child can make car sounds while

rolling a car along the floor, which constitutes one object transformation (the car is real).³ If the child rolls the car off the table and screams as the car goes over the cliff, indicating a person is inside, the child has now created two transformations: 1) the car is real and 2) there is a person in it. In the role play example, if the child who said “I’m the mommy” then picks up and rocks a baby doll, two transformations have now occurred: 1) child is mommy and 2) baby is real. Episodes with two to four transformations can also be relatively simple stories, although there is more room for complexity in this category. In an episode with five or more transformations, multiple imaginary elements are being activated simultaneously, and the episode is likely to have a more developed story. Inter-rater reliability for determining the number of events was strong (average Kappa=.95; range=.89-.96).

5.2.1.2 Transformation Types and Subtypes - Objects, Roles, Settings and Ideational

Transformations

Episodes were further categorized by whether they contained *at least one* of the canonical transformation types: a **role** transformation, an **object** transformation, or a **setting** transformation. In addition, these transformation types were further divided into two categories: **concrete** (transformations anchored by real features of the here and now) and **ideational** (transformations which are not anchored by features of the here and now).

Object transformations were coded when any object was endowed with an imaginary feature.⁴ Object transformations were also identified when objects were pantomimed (e.g., bouncing an imaginary ball). Pantomimed object transformations were considered ideational

³ We did not assume that a child imagined a driver inside an animated car unless specific indications were made by the child. Likewise, we could not assume that the child was endowing the car with human qualities unless specific indications were made. For many children, animated, human-like vehicles were a typical feature of their play.

⁴ Transformations of players’ own body parts were included as object transformations.

transformations, and all other types of object transformations were considered concrete because they were anchored in a concrete element of the real world. Inter-rater reliability for identifying object transformations was strong (average kappa=.88, range=.84-.90).

Role transformations were identified according to whether the player took on a distinct identity or perspective of another. Role play could be performed with the player's own body or projected onto an animated toy or other object. As described in chapters 2 and 3, role play was required to be explicit. We used first-person language as a requirement in ambiguous situations. For example, it was not sufficient for players to perform actions associated with a specific human role (e.g., putting a baby to bed) without articulating that there was a role transformation (e.g., "I'm the mommy"). Limiting the criteria in this way ensured that the child was cognizant of a role shift (Huttenlocher & Higgins, 1978; P Miller & Garvey, 1984). Role play could also be coded when a player spoke for or described the perspective of an object or imaginary character (e.g., imaginary companions). For example, when a player states that a doll "wants to go outside" she is taking the doll's perspective and articulating the doll's thoughts and feelings. These criteria all reflect behaviors that demonstrate explicit perspective-taking (Harris, 2000). Embodied role play, role assignment (e.g., "I'll be the princess and you be the queen,") and role play with imagined characters were considered ideational. Inter-rater reliability for identifying role transformations was strong (average kappa=.84, range=.74-.90).

Setting transformations were identified when players described or enacted behaviors in imagined environments. These environments were required to be made explicit through speech or action, have features distinct from the environment players currently occupied, and could not be wholly described by labeling the real objects in the environment. For example, when playing with a toy farmer in a toy farm set (e.g., with toy-sized barn and farmhouse), "farm" was not

considered a setting transformation when describing the features of the farm was equivalent to describing the objects being played with, requiring no imaginary elements. Where additional imaginary elements were applied, a setting transformation was coded (e.g., a toy pirate ship lands at an *imaginary island*, and the toy pirates *dig for buried treasure*). All setting transformations were considered ideational. Inter-rater reliability for identifying setting transformations was strong (average kappa=.91, range=.89-.94).

Ideational transformations were distinguished within the role, object and setting categories as transformations requiring a higher level of cognitive effort. In this framework, transformations that rely on the features of the here and now are considered concrete, such as pretending with replica objects. Concrete was the default category, as most transformations were based in elements of the here and now (e.g., drinking “tea” from a real cup). Transformations that are not based in the tangible features of the here and now are considered ideational, requiring the imagination to provide the stimulus without a scaffold in the real world. Although some have classified these types into further hierarchies (Matthews, 1977; McLoyd, 1983), we relied on any “ideational” transformation as an indicator of additional cognitive effort. Transformations considered ideational included object pantomime (e.g., swinging an imaginary sword), embodied role play (e.g., “I’m the cook”), and role assignment (e.g., “You’re the customer”), pretending with imagined characters (not represented by objects; e.g., “the monster wants to eat you!”) and setting transformations (e.g., “Now we’re at the park”). Below we report the proportions of pretend episodes containing ideational transformations at each time point. Inter-rater reliability for ideational transformations was based on reliability for subtypes of object, role, and setting transformations. Reliability was strong (average kappa=.89, range=.82-.96, see appendices for further detail on individual constructs).

5.2.2 Results – Transformations

5.2.2.1 Number of Transformations

The number of transformations per episode provides an initial indicator of cognitive complexity, and our data are consistent with the claim that children show greater capacity for producing multiple transformations in an episode at three years old than they do at 18 months. As we saw in chapter 4, the number of episodes is highest at 18 months, where much of children’s pretending occurs in short bouts. Likewise, the majority of episodes at this age contain only one transformation. Children’s pretend episodes contained more transformations as children aged from 18 months to 38 months and then remained relatively constant from 38 to 50 months.

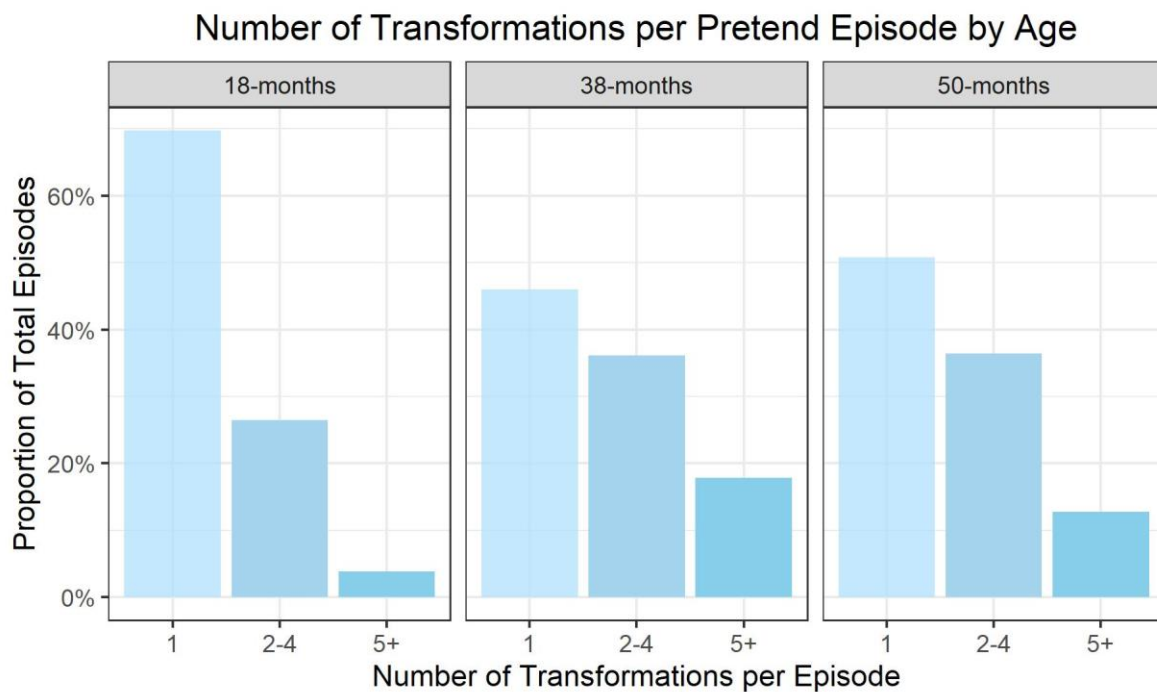


Figure 5-1: Number of Transformations per Pretend Episode

It is important to note, as discussed in chapter 4, that there is an overall decrease in pretending for most children from 38 to 50 months and that pretend episodes become shorter on average. These results follow that pattern, in that the number of transformations per episode

increases from 18 to 38 months and then remains relatively flat. It is also striking to observe that single transformation episodes are the most common episodes across the board (58% of all episodes). At 50 months, over half of the episodes recorded contained only one transformation. As described above, these episodes were either truncated because pretending was abandoned in favor of other activities, or they were composed of repetitions of the same single transformation.

5.2.2.2 Types of Transformations

We examined which of the possible transformation types were present in each episode. Importantly, transformation type categories were not mutually exclusive. Where episodes had more than one transformation, multiple types may also be found, as different types of transformations tended to appear together. For example, object transformations were the most common across episodes, but some episodes with object transformations also contained related role transformations (e.g., saying “I’m a mommy,” while rocking a baby doll).

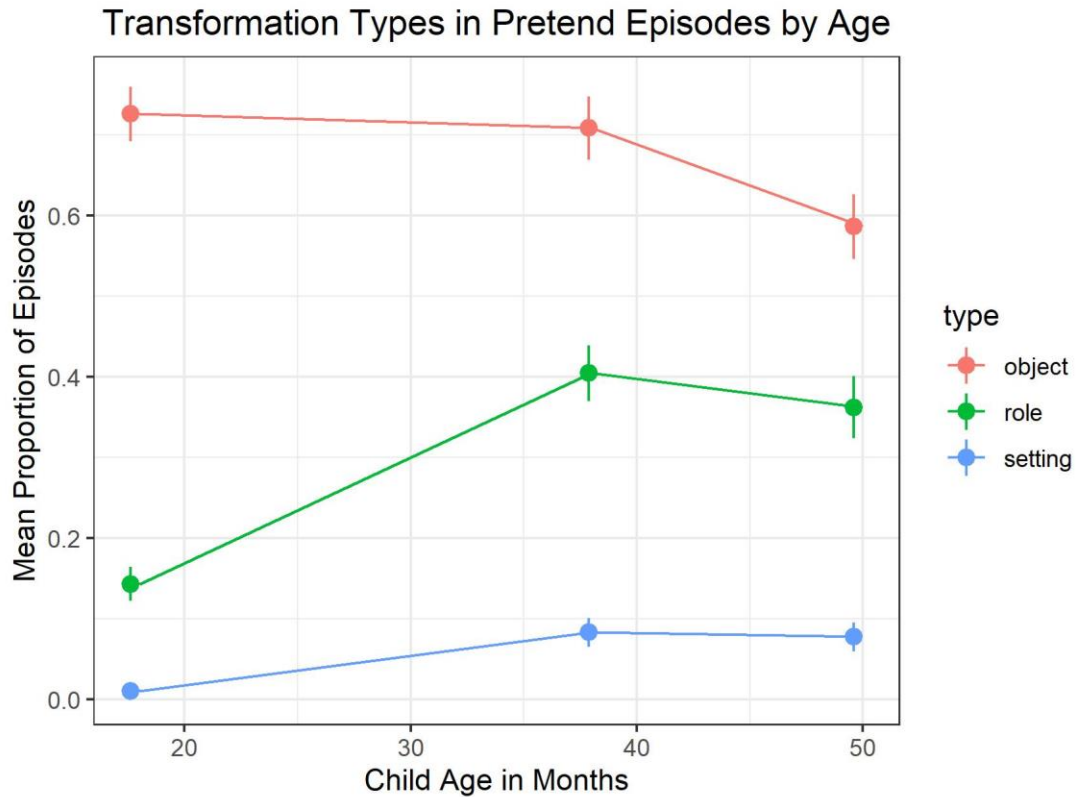


Figure 5-2: Proportion of Episodes containing Transformation Types

Episodes contained more object transformations than any other type at 18-months, when children would be expected to rely more on concrete transformations. In fact, the vast majority of episodes across the sample contained some type of object transformation, whereas very few episodes contained setting transformations. The proportion of episodes containing role and setting transformations did increase at 38 and 50 months compared to 18 months, aligning with the developmental trajectory of increasingly abstract transformations as children approach three years old. However, the increase in role and setting transformations does not appear to have continued between 38 and 50 months in this sample. At 50 months the proportion of episodes containing object transformations falls slightly, suggesting perhaps that more episodes could be supported with role or setting transformations alone (e.g., playing “going to the park” or “going

to the store” without objects). But the proportions of object, role and setting transformations are relatively similar at 50 months to what we find at 38 months.

5.2.2.3 Ideational Transformations

As expected, the proportion of ideational transformations also increased on average from 18 months to 38 months, but the proportion of ideational episodes remained the same between 38 months and 50 months on average. Once again, we see the average pattern shows an increase in behavior from 18 to 38 months and then a leveling off at 38 months, rather than an increasing trajectory across the entire period.

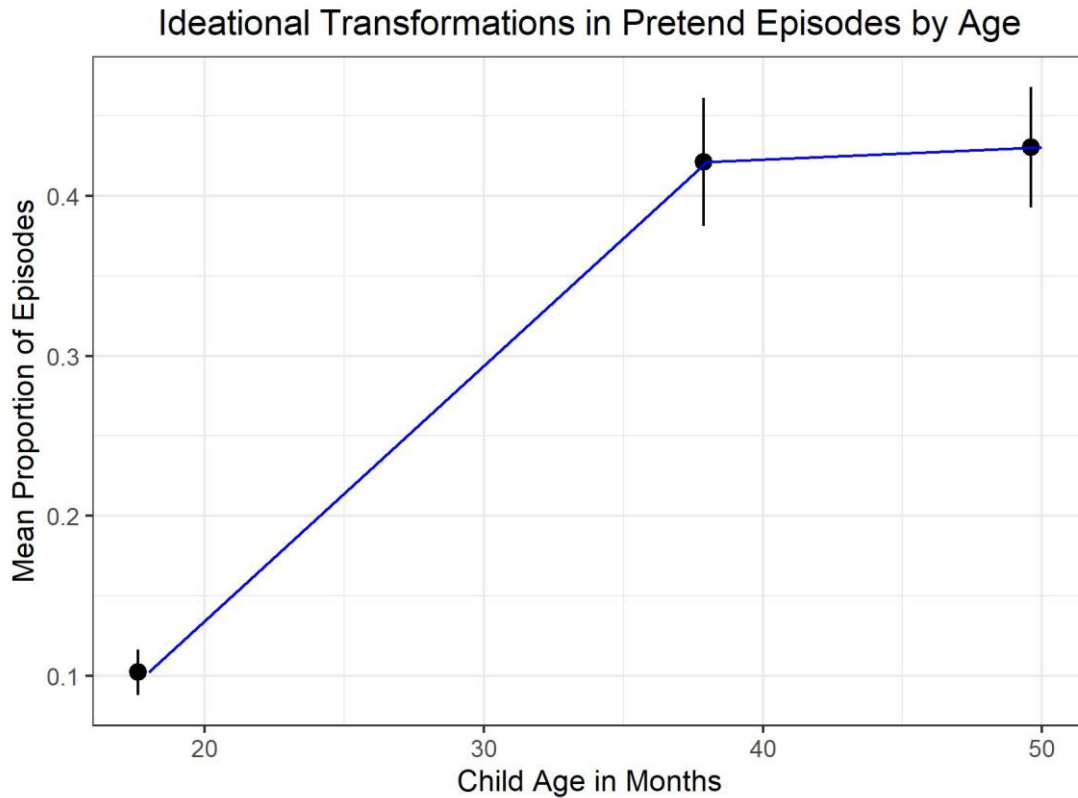


Figure 5-3: Average Proportion of Episodes with Ideational Transformations by Age

5.2.2.4 Patterns across groups of players

Having outlined the appearance of transformations across all pretend episodes, we now examine the variation across players. We might expect that children who pretend for more time have more opportunities to engage in different kinds of pretending and ultimately include a greater quantity, diversity and perhaps complexity in the transformations in their play.

Alternatively, children who prefer different types of stories may be more inclined to produce certain types of transformations, such as role transformations, as suggested by Bretherton and others (Bretherton, 1984; Sachet & Mottweiler, 2013), according to their personal style or individual differences.

Before interpreting the differences between groups of children in episodes with complex transformations, it is important to recall that the individuals and groups vary in the number of episodes that they produced. The high pretend group not only pretended for more time overall, they also generated more episodes, and the reverse is true for the low pretend group. Below we display the number of episodes generated by each group at each time point.

Number and Percent of Episodes by Age and Group				
	Episodes (% Total)			
	low	medium-low	medium-high	high
18-months	142 (23%)	152 (24%)	169 (27%)	165 (26%)
38-months	50 (11%)	96 (22%)	116 (27%)	175 (40%)
50-months	32 (9%)	76 (21%)	120 (33%)	140 (38%)

Table 5-1: Number and Percent of Episodes by Age and Group

The high pretend group produced many more episodes to analyze than the low pretend group at 38 and 50 months. In addition, not all children in each group pretended under the same conditions. As described in the previous chapter, some children in the low pretend group never pretended with adults, and others never pretended solo. We will analyze the impact of adult play partners directly in chapter 6, but as we proceed through this chapter, we will keep in mind that the groups are variable at the baseline, both in terms of how much data they produced for each analysis, but also in the social contexts in which they were pretending.

5.2.2.4.1 Number of transformations per episode

Below we present the **number of children** producing each category of episode complexity by number of transformations per episode. Breaking the sample up in this way allows us to evaluate how often complex pretend episodes tend to be produced as children practice more pretending at home. Noticeably, more children in the high pretend groups produced episodes with at least 5 transformations. In the low pretend group, only one child produced an episode containing at least 5 events at 38 and 50 months. This is in striking contrast with the 13 children in the high group (all but two) who produced such complex episodes.

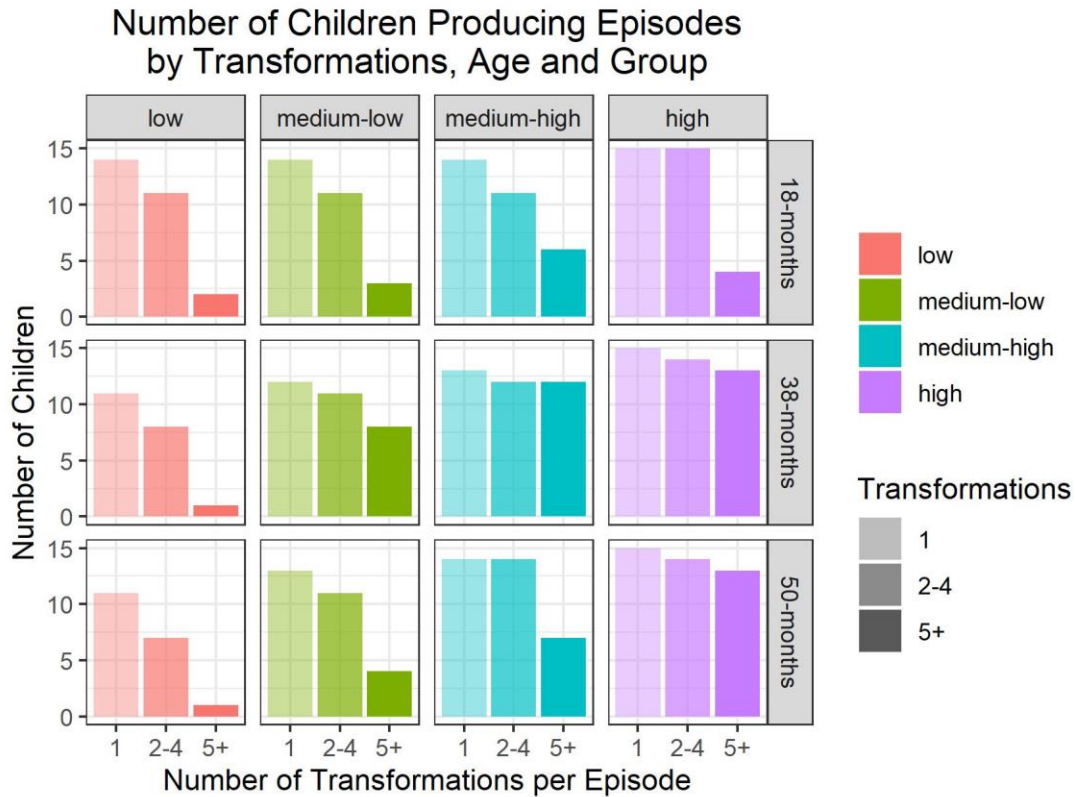


Figure 5-4: Number of Children Producing Episodes by Transformations, Age and Group

The figure above makes clear that not all children produce complex episodes by transformations, and that complexity and total pretend time may be related. Only one or two children are producing complex episodes with five or more transformations in the low pretend group across the entire observation period. In contrast, all but one or two of the high pretend group members are contributing episodes with 5 or more transformations at 38 and 50 months. In the two medium groups, more children produce episodes with 5 or more transformations at 38 months than at 50 months, following the general pattern of declining pretend play practice we see on average from 38 to 50 months. The major drop between these time points appears to be in the number of children producing the most complex episodes. In the next figure, we present the **number of episodes** produced by these children in each category of transformation complexity.

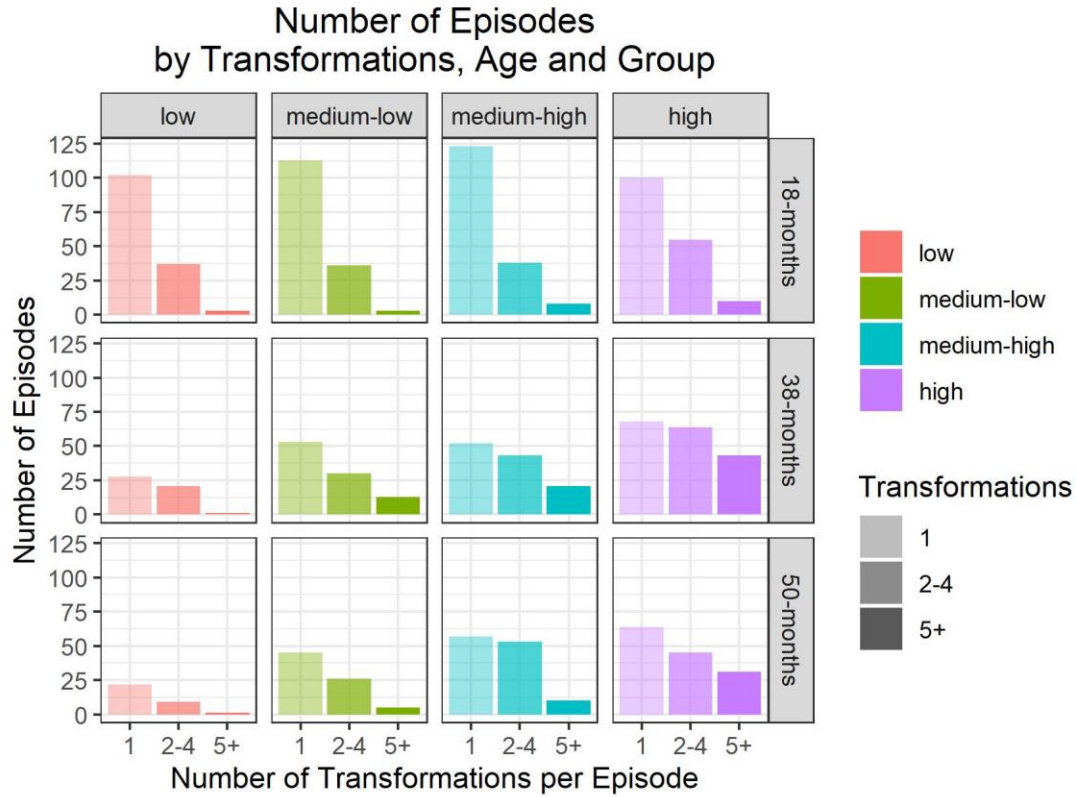


Figure 5-5: Number of Episodes by Transformations, Age and Group

From the figure above we see that the pattern of episodes containing one to five or more transformations is similar across quartile groups at 18 months, but changes dramatically at 38 months. For all groups single transformation episodes are the most frequent and episodes with at least five events are the least frequent. But at 38 months, in the medium-high and high groups, the number of episodes with one or two to four transformations become more similar to one another and the proportions of episodes with at least five transformations increases. At 50 months, episodes with five or more transformations fall across the board, although they remain highest in the high pretend group.

The raw episode numbers displayed in the second figure reflect the baseline differences in number of episodes produced by each group. But from these two figures together we can also see that the relative frequencies of complex episodes, and the numbers of children producing

them, distinguish the groups in terms of transformation complexity. To examine transformation complexity according to patterns across individuals within groups, we take the average proportion of each category of episode complexity for each of the quartile groups. This way of summarizing the data helps us distinguish patterns according to the children producing them – accounting for children who may be producing more episodes, but ultimately are producing the same proportion of episodes of each category, as other children in their group. The figure below plots the **mean proportion of episodes** of each complexity category produced by the individuals in each group.

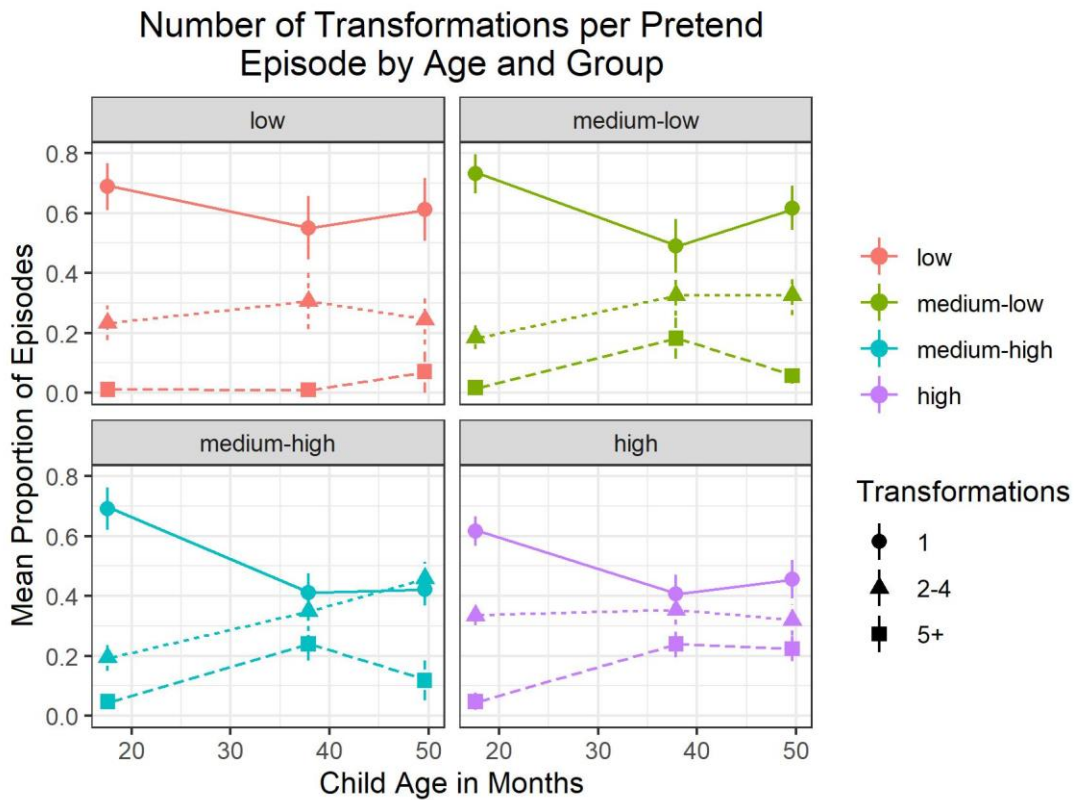


Figure 5-6: Number of Transformations per Pretend Episode by Age and Group

This figure highlights how the groups differ in producing complex episodes over time. All groups have high average proportions of simple episodes at 18 months, but the high pretend group has a slightly higher average proportion of moderately complex episodes (2-4

transformations) at this time point. At 38 months, all groups reduce in the average proportion of simple episodes, but the medium high and high groups have a more equal distribution of simple and complex episodes. At 50 months, the more equal distribution of simple and complex episodes is maintained by the high pretend group only. The medium-high pretend group increases in moderately complex episodes from 38 to 50 months, but the average proportion of the most complex episodes decreases for this group.

5.2.2.4.2 Transformation Types

Next, we present the types of transformations present in the episodes produced by our four groups. Here we again utilize the **mean proportion of episodes** containing each transformation type produced by the individuals in each group. We keep in mind here that episodes may contain multiple transformation types, so the categories are not mutually exclusive.

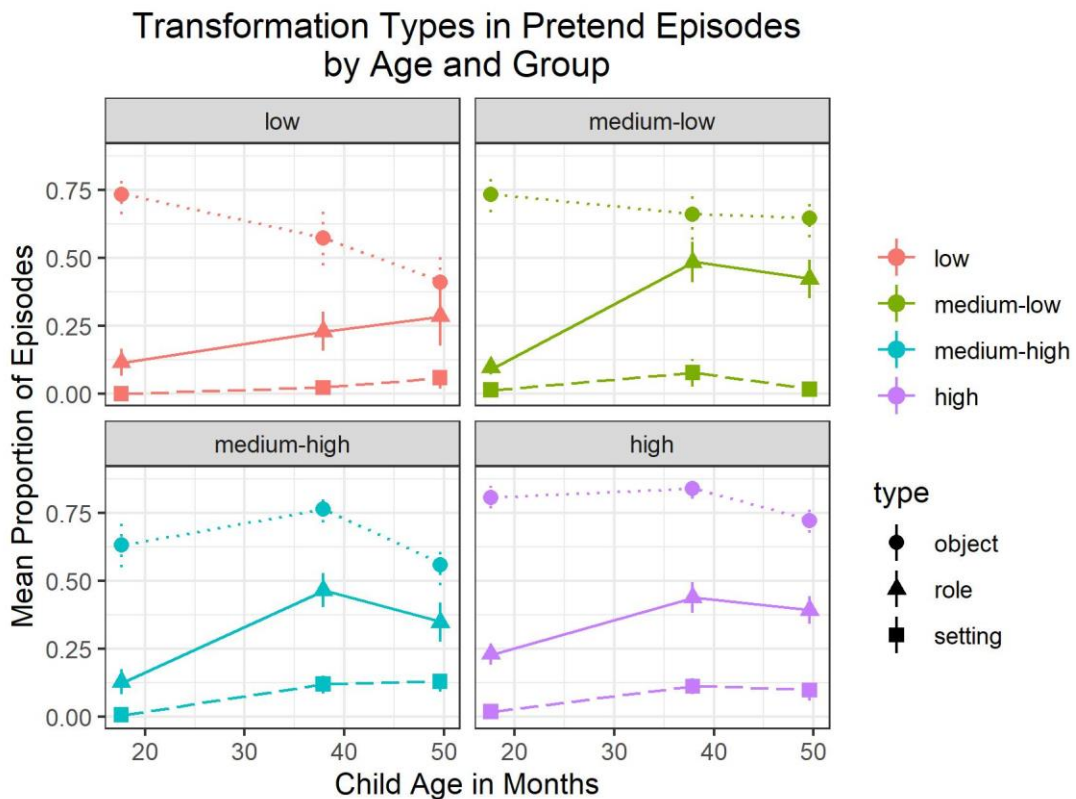


Figure 5-7: Transformation Types in Pretend Episodes by Age and Group

Once again, the trajectories of the four groups reveal what could be important differences. Episodes are most likely to contain object transformations across the board, but the reliance on object transformations changes over time for the low pretend group, where role transformations increase to meet object transformations over time. But the low pretend group maintains the lowest average proportion of role transformations, which are considered typically more complex than object transformations, across the board. Setting transformations are rare across all groups as well, although the average proportions of setting transformations are slightly higher in the high pretend and medium-high pretend groups at 38 and 50 months. Considering role and setting transformations to be more complex, we might argue based on this figure that there is further evidence that children who pretend for more time are also engaging in more complex pretend as measured by transformations. But to examine the complexity of transformation types more specifically, we describe in the next section how children produce episodes with ideational transformations, which are specifically selected for their complex structure, across the three time points.

5.2.2.4.3 Ideational Transformations

As with transformation number, we can examine complexity of episodes by the presence of at least one ideational transformation. We saw with that analysis that not all children produced all levels of complexity in pretend episodes. The same is true for ideational transformations. Below we present the **number of children** in each group that produced episodes with ideational transformations at each time point.

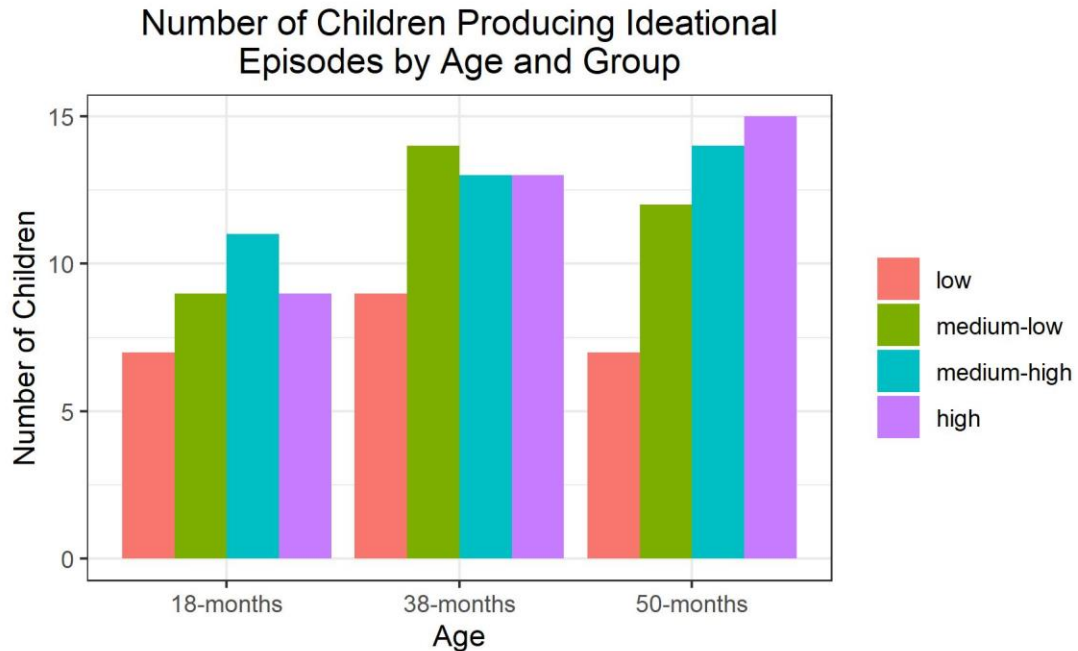


Figure 5-8: Number of Children Producing Ideational Episodes by Age and Group

As we saw with complexity by number of transformations, fewer children in the low pretend group produce complex episodes by transformation type (containing ideational transformations). We also see that the number of children producing ideational episodes increases from 18 to 38 months for all groups, but for the low and medium low groups, the number of children producing ideational episodes *decreases* from 38 to 50 months. Again, there is potential evidence here that amount of pretend time and pretend complexity are related, most especially in the low pretend group.

In the figure below we display the raw **number of episodes** with ideational transformations produced by each group. We can see from the figure that fewer ideational episodes are produced by the children in the low and medium-low groups. So, not only do we see fewer complex episodes produced by the low pretend groups, we also know that fewer children produce these complex episodes.

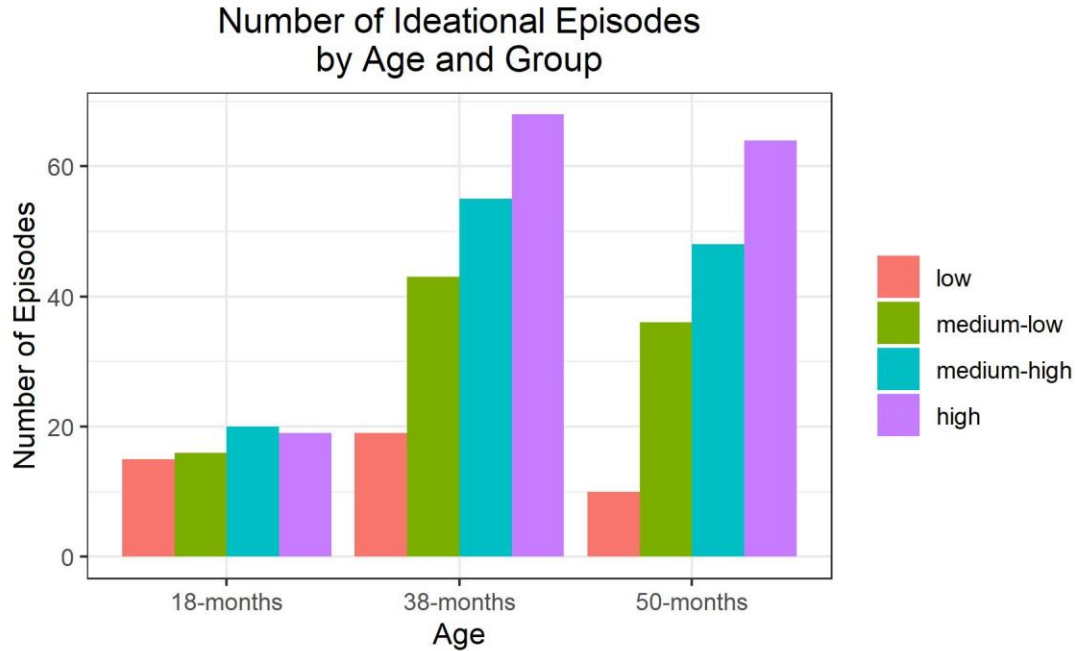


Figure 5-9: Number of Ideational Episodes by Age and Group

Perhaps what is most striking about the figure above is that the low pretend group has such a significantly lower number of ideational episodes at 38 and 50 months than the other three groups. The number of ideational episodes produced by this group at 50 months is also less than the number of ideational episodes produced at 18 months. For the whole sample, the number of complex episodes appears to be related to the amount of pretend time. The high pretend group produces the most complex episodes, and the remaining groups produce complex episodes according to their rank in amount of time they spend pretending.

Once again, these numbers reflect the overall differences in production of pretend play episodes across groups. To account for differences in production by individuals, we present the average proportion of episodes with ideational transformations. The figure below describes the **mean proportion of episodes** with ideational transformations produced by each child within each of the four groups.

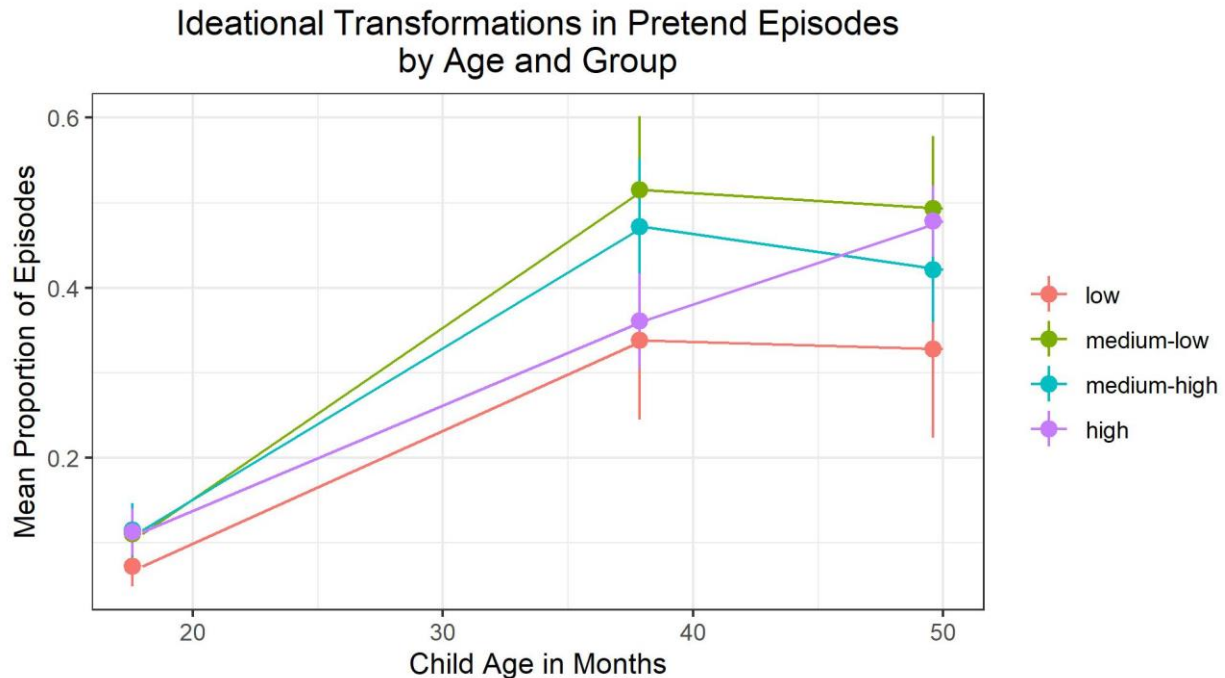


Figure 5-10: Average Proportion of Episodes with Ideational Transformations by Age and Group

The average proportion of episodes with ideational transformations is similar across all four groups of players at 18 months, although the low pretend group clearly makes up the bottom of the distribution. Given the similarity across groups at this time point, the data supports the idea that ideational transformations are more difficult and subsequently rarer for children of this age. At 38 months, the medium pretend groups produce the highest proportion of ideational transformations, and the low pretend group remains at the bottom of the spread, although its average proportion of ideational episodes does not appear to be significantly different from the high pretend group at this time point. The medium-low and medium-high groups produce fewer episodes than the high pretend group overall, so the total number of episodes produced by each group may help explain the average proportions we see at this time point. It may be that despite the higher number of ideational episodes produced by the high pretend group at 38 months, the proportion is driven down for this group because they produce more episodes overall. At 50

months, the high pretend group has increased its proportion of episodes with ideational transformations, catching up to the medium-low group, whereas all the other groups remain constant or decline slightly in the production of complex episodes from 38 to 50 months.

5.2.3 Discussion

Patterns of pretend transformations over time suggest that complexity of play and amount of play may be related, at least for some children. Certainly, children who produce more pretend episodes have more opportunities to add transformations and to have more play episodes with more complex transformation types, such as role play and ideational transformations. But when we examine the behaviors of children in each of the four quartile groups of pretend time, we see that children who pretend the least are also less likely to produce the most complex episodes in terms of number and types of transformations per episode. Many more of the children in the high pretend group (all but one or two members of this group) produce at least one of each of the most complex episodes with transformations by 50 months.

When we look at the episodes produced by each group, patterns among children in each group diverge. Although there is a consistent increase in transformation complexity from 18 to 38 months, the patterns from 38 to 50 months are not always in the direction of increasing complexity. For number of transformations per episode, complexity decreases in all groups by the decline in episodes with five or more transformations at 50 months, for all groups except the high pretend group. For transformation types, complexity increases with more episodes containing role play and setting transformations at 38 months, but the average proportions of these transformation types either remain steady (and low, in the case of setting transformations) at 50 months, or they decline, except in the low pretend group where they increase (albeit from lower average proportions than those shown by the other three groups). Ideational

transformations increase at 38 months, but then also decline overall from 38 to 50 months, with the exception of the high pretend group, which increases just to the level of the medium-low group, and within the confidence interval of the medium-high group). So, it is not the case that pretend play typically increases in complexity over time, but rather that pretend play increases in complexity from 18 to 38 months, and then generally remains flat or decreases for most children on most measures of transformation complexity.

Importantly, the data thus far have been inclusive of all players involved in the pretend episode. In this sample, a majority of pretend episodes include at least one adult play partner. So far, we have not distinguished between the contributions of adults and children in the types of play behaviors described here. If we examine the developmental trajectory of transformations by initiator (e.g., whether the transformations were produced first by an adult or child) a new story may emerge with regard to the developmental trajectory of pretend behavior and the contribution of parents. We take this question up in the next chapter.

5.3 Story Events

The sophistication of a pretend story is another measure of episode complexity we use to describe the cognitive achievements displayed during pretend play. As described previously, pretend play research has historically associated the storytelling nature of pretend with children's developing literacy skills. Early research on the topic proposed structures for evaluating the complexity of pretend stories by identifying sequences of pretend actions related to a goal or script (Nelson & Seidman, 1984; Wolf & Grollman, 1982). A script is a symbolic representation of behaviors related to a theme, such as "making a call" or "caring for baby." A simple sequence might involve putting a pacifier in a doll's mouth and covering it with a blanket, whereas a complex sequence might involve multiple simple sequences linked together (e.g., after covering

the doll with a blanket, saying goodnight and turning out lights, then returning to comfort the baby when it “cries,” etc.). It is expected that children improve their ability to link logically related events together as they age, but it is also expected that the physical ecology may impact the likelihood of children to create complex stories. For example, objects related to familiar activities (e.g., toy plates and cups) and high-structure replica objects (i.e., a life-like baby doll) in contrast to low-structure toys (i.e., blocks) facilitate longer sequences of events (Pellegrini, 1985). How then do children change in their capacity to create complex stories over time, and how does the complexity of pretend stories produced by children at home vary across households?

For the remaining analyses in this chapter, only episodes produced at 38 and 50 months are considered. Episodes produced at 18 months were short in duration and simple in terms of transformations, and were also narratively simple on the whole. For this reason, we chose to focus on episodes at timepoints where more variation in story complexity would be visible. In addition, episodes at 18 months are dominated by the presence of adults, even more so than at 38 and 50 months. Children at 18 months are less likely to initiate behaviors and less capable of performing the complex behaviors of interest in this chapter. Therefore, we chose to focus these analyses on the time points where more of the content in story events could be identified as contributions made by children as compared with adults. We will analyze these contributions more directly in the following chapter, but for the remainder of this chapter we describe how episodes produced vary by the complexity of the story being constructed (the current section) and how the subject matter is drawn from reality or fantasy ideas (the following section).

5.3.1 Methods for Counting Story Events

The **number of events** within an episode were counted to produce a second general representation of story complexity. Events were defined as story *actions*. Therefore, pretend episodes containing no story actions were considered to have zero events. Instead of story actions, episodes with zero events contained only pretend object, role or setting transformations with no related action or speech. For example, a player might say “pretend we’re outside,” to propose a play setting, but then perform no further related actions because they became distracted with another activity, or were offered a different proposal for play, etc. Episodes with zero or one events were typically truncated episodes, focusing on a single action with no elaboration (e.g., “I’m eating ice cream,” a single action), or there was a transformation without an event (commonly episodes with single proposals that were negated or abandoned, e.g., “you be the sheriff,” a role assignment that was refused by the play partner). Episodes were categorized according to whether they contained 0-1, 2-4, or at least 5 events. Episodes with at least 5 events were considered the most complex stories likely to be produced by preschool age children based on prior research observing sequences of events in pretend stories of four- and five-year-old children (Pellegrini, 1985). Inter-rater reliability for identifying story events was strong ($\kappa=.85$).

5.3.2 Results – Story Events

Children produced a total of 805 pretend play episodes at 38 and 50 months. The majority of these episodes contained 0-4 related events.

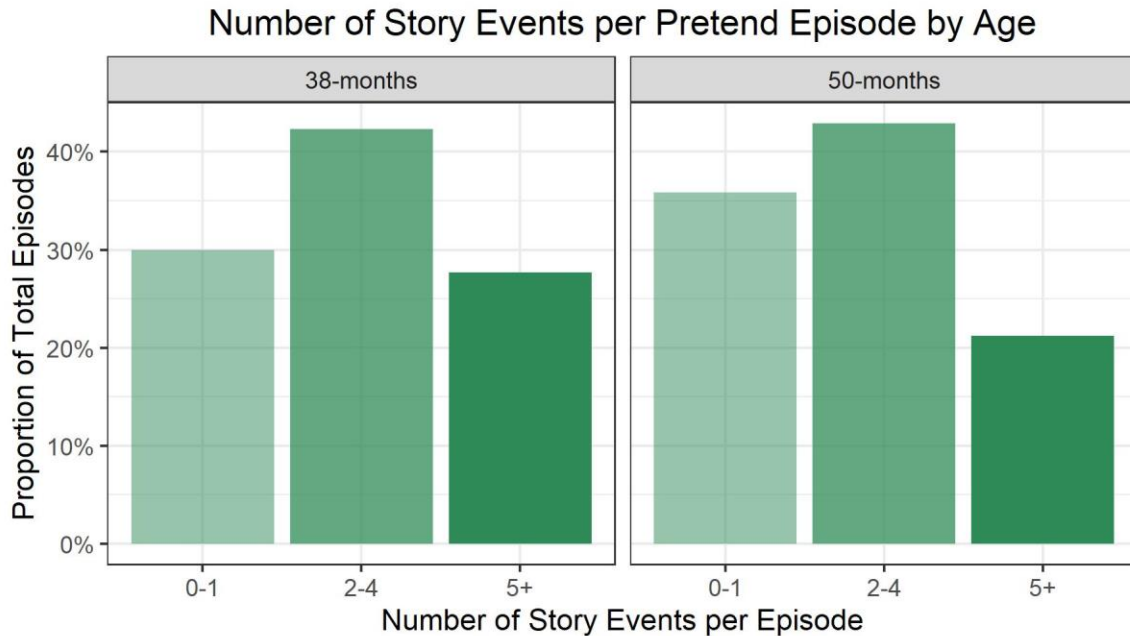


Figure 5-11: Story Events by Child Age

The proportion of episodes in each category of story complexity does not change dramatically between 38 and 50 months, which is consistent with our findings thus far. If anything, the proportion of the simplest stories (0-1 events) increases from 38 to 50 months as the proportion of the most complex stories (at least 5 events) falls. Importantly, story events highlight a story’s complexity in ways that only analyzing transformations does not. Whereas a story with one transformation could potentially contain multiple events (e.g., rock baby, tell baby a story, bring baby a stuffed animal, say goodnight, etc.) an episode with zero or one events can only contain one action, or potentially the same action repeated multiple times (e.g., ride horse). To distinguish these types of stories, below we represent the proportions of stories in each category of story complexity by the number of transformations they contain.

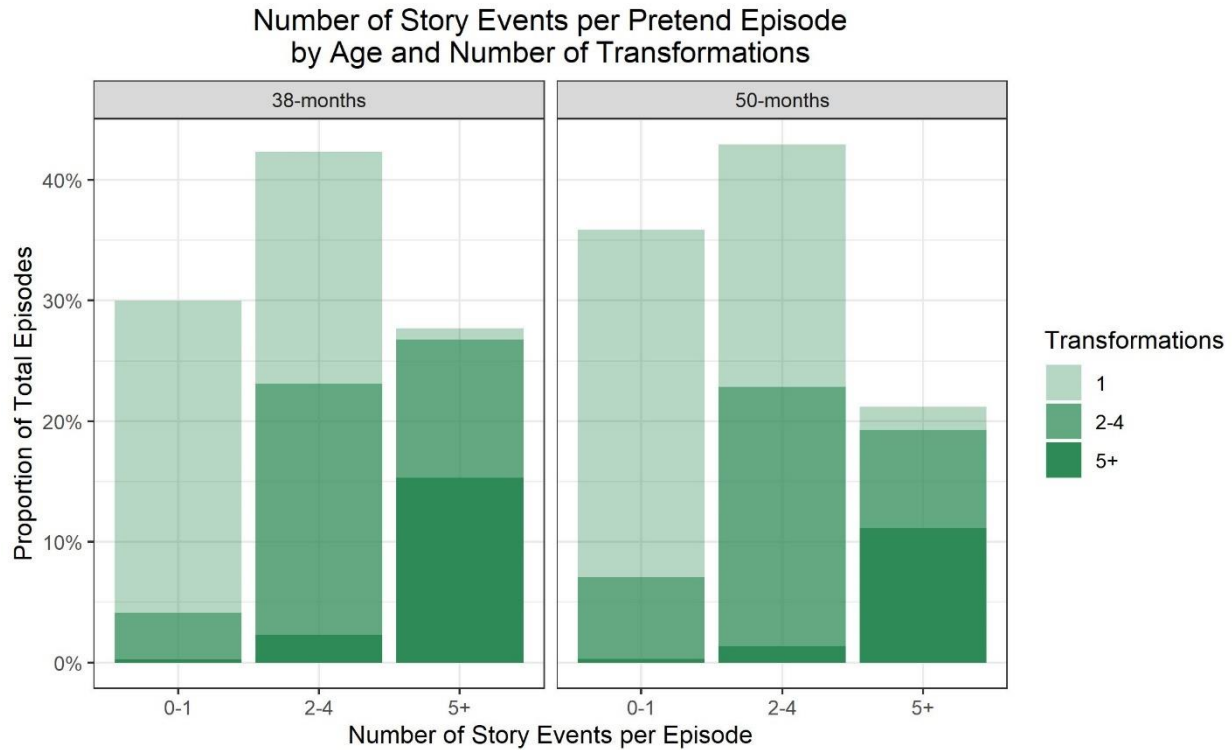


Figure 5-12: Number of Story Events per Episode by Age and Number of Transformations

The pattern of story complexity and transformation complexity are similar across the two time points. Most of the stories with one story event only contain one transformation, but a few of the single event stories have multiple transformations. For example, a child declares “I’m a surveyor surveying the land,” and pretends to look through imaginary binoculars, simultaneously producing a role transformation and an object transformation, but only one action. Single event stories with single transformations – the simplest form of pretend story – represent approximately 26% of stories at 38 months and 29% of stories at 50 months, approximately 27% of all the stories produced at these time points. The most complex stories – at least 5 events and at least 5 transformations – represent 15% of the stories at 38 months and 11% of the stories at 50 months; approximately 13% of all stories at these time points. Episodes containing short sequences of two to four events make up the majority of stories at 38 months and 50 months,

approximately 54% of the stories at these two timepoints. Most of these episodes also have two to four transformations.

According to these data, preschool pretending is typically composed of at least two sources of symbolic complexity: children produce 1-4 transformations and link together two to four actions of a simple script. Based on prior literature drawn from children in preschool, it is expected that children's preschool pretend play exists largely at this simple stage, with a mix of more or less complex episodes. However, the iconic image of children pretending for multiple hours at a time in early childhood creates a tension with these data. If children's pretend stories are typically no longer than 4 events, how are children spending their pretend time if not in the generation of more events to elaborate their stories? In the next section we investigate this question, adding duration as another feature of pretend episodes which may shed further light on story complexity.

5.3.2.1 Story Events by Episode Duration

Across development, children improve their ability to focus and control their own attention. The time children spend in a pretend episode may signal the degree to which they are both willing and able to stay focused on a single task. In the following section we review story events in pretend episodes with the duration of those episodes (in minutes). We can expect that longer episodes offer more opportunities for transformation and story events, allowing them to be both symbolically complex in transformations and narratively complex in terms of story events. But duration also suggests a degree of commitment to the play in which the child holds her own attention on the same task for significant time. In the section below we analyze pretend complexity through the combination of story events and episode duration.

As we described in chapter 4, children’s pretend episodes in our sample lasted on average approximately one minute and 15 seconds per episode across all three time points. The average duration of episodes increased from approximately 30 seconds at 18 months to 1 minute 49 seconds at 38 months. Following the decreasing trend from 38 to 50 months across our data, episode duration fell to 1 minute 28 seconds on average at 50 months. So, the data on average set expectations for short stories (less than two minutes) across the board. With this in mind, we might expect the shortest episodes in duration to be the stories with only one event.

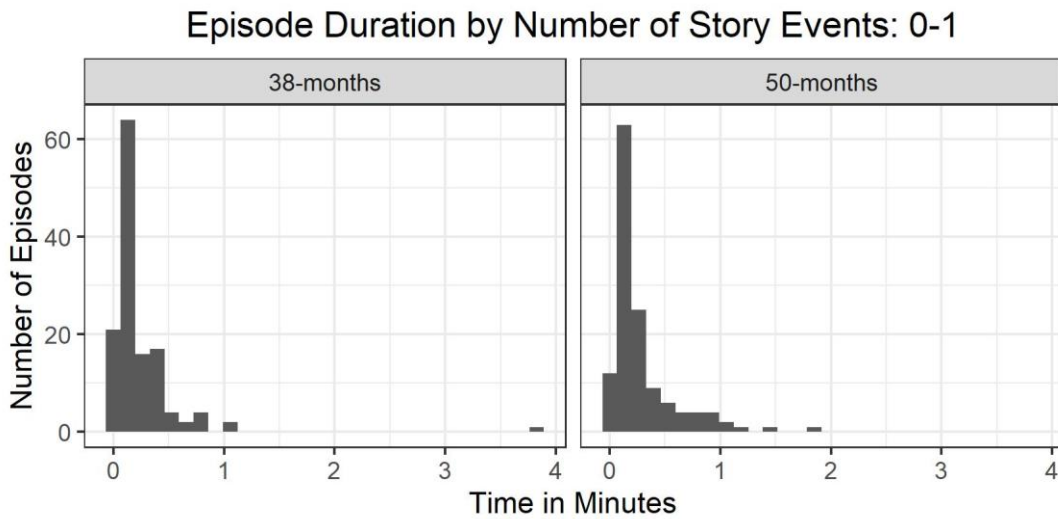


Figure 5-13: Episode Duration by Number of Events (0-1)

Indeed, few of the single-event stories (3%) lasted longer than one minute. However, it is interesting to note what transpires when the story is sustained for more than a few seconds and contains only one pretend event. The nearly 4-minute outlier we find at 38-months consists of a boy pretending to be a duck by quacking. He spends several minutes running around the house saying “quack!”, and is joined by his mother and baby brother in quacking happily to one another. The same boy produces a nearly two-minute episode containing a single event at 50-months. In this episode, the boy announces, “this train goes ‘clickety clack’,” and proceeds to

slowly move a toy train along a toy track, saying “clickety clack” each time the train wheels make a full revolution. He commits to this activity without pausing for a full one minute and 53 seconds. In this example and in several other episodes with only one story event, the play is sustained through repetition without further elaboration on the story.

Stories lasting 30-60 seconds contain similarly sustained single actions and repetitions. For example, one child spends approximately 60 seconds “mowing the lawn” with a toy lawn mower. Another child spends approximately 30 seconds pretending to fly. Some of the episodes in this category are extended merely because the single activity takes a prescribed amount of time or involves the child attempting to manipulate objects in a precise manner. For example, one child “makes a taco” by carefully folding a blanket, and another child “transforms” a toy giraffe into Spiderman by dressing it in a Spiderman costume, singing the Spiderman theme song throughout the transformation. In these episodes, the play is sustained through continuous action which is satisfying to the player, but does not add new elements to the story itself.

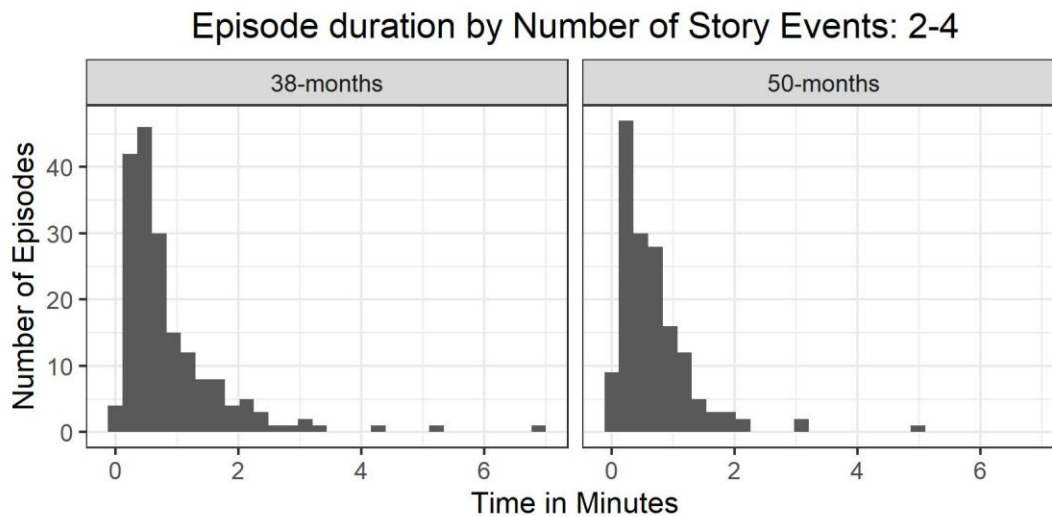


Figure 5-14: Episode Duration by Number of Events (2-4)

How do the single event stories compare to the stories with 2-4 events? As anticipated, 93% of the pretend stories containing two to four events lasted no more than two minutes and 76% of the stories with 2-4 events lasted no more than one minute. As with the single-event stories, many of the longest episodes in this category are extended by the repetition of short sequences of events. One child at 50-months repeats a sequence of actions in which he climbs up a pretend ladder, reaches for an imaginary ledge, then pretends to fall over the ledge, shouting “no!” This sequence is repeated exactly, without pauses, for approximately two minutes, with a total of 10 repetitions. Another child, at 38-months, beeps for a dump truck as it drives to a pile of toy cars, fills up with the cars, takes those cars away and dumps them out at a specific location in the next room. This sequence is repeated for nearly seven minutes. A similar episode is performed by another child at 50 months during a 13-minute period of rolling toy cars and trains along the floor. Within this period, we identified approximately 5 minutes of clear pretend action (marking the remaining 8 minutes as pauses, during which we could not be sure that the child was pretending that the car was animate or just engaging in tactile play). The clear pretend events consisted of multiple car crashes with accompanying car sounds, and a sequence of events with a train “driving off a cliff” with sound effects of screaming followed by a “crash!”. This last sequence was repeated eighteen times. It appears that children can extend the duration of pretend episodes significantly by repeating the same short sequence of story actions many times.

The shortest episodes with 2-4 events consist of simple actions that form basic narratives, but unlike the longer episodes, they don’t have extended actions or repetitions. For example, a child manipulates a toy figure wearing roller skates, makes the figure slip and fall, and then says “Ow!” The entire sequence lasts 7 seconds. A child may also just respond to a toy as though it is alive, with no elaboration; e.g., a child says “Hello, Thomas” and makes the toy reply “Toot!

Toot!” So, it is clear that for the stories with few events, duration and narrative complexity are not necessarily related.

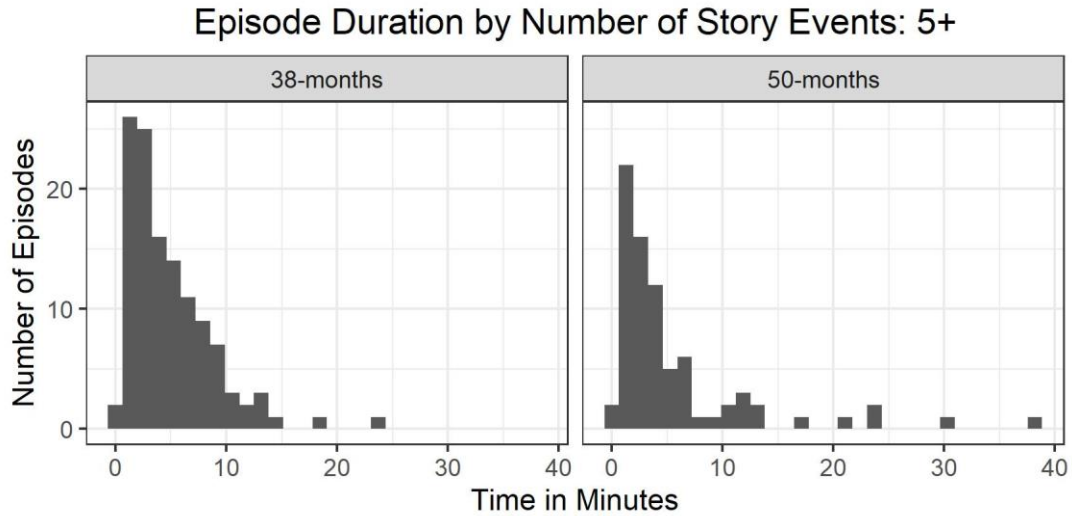


Figure 5-15: Story Duration by Number of Events (5+)

Stories with at least five events represent the most mature examples of stories in our sample. This category also represents the fewest episodes in our sample at 38 and 50 months (25%). These stories do tend to be longer on average than stories with 0-1 or 2-4 story events, but this category of stories also contains the greatest variation in episode duration.

In this category, 28% of stories last less than two minutes, including 11% lasting less than one minute. Stories lasting between two and five minutes (72 stories) make up 36% of stories in this category, much more than stories of this length in the first two categories described. Finally, 37% of the stories in this category last over 5 minutes (73 stories). Stories lasting over five minutes make up just 10% of all stories observed at 38 and 50 months, suggesting that stories that are both extended in time and elaborate in events are relatively rare.

The variation in duration in this category of stories is so large in part because the number of events is arbitrarily truncated at the threshold of *at least 5* events. Some of the more extreme

variation in this category is certainly driven by longer sequences of events, although we may also find in these episodes some of the extending features we identified in the previous categories, including continuous action and repetition. Although we know that children can spend time pretending without adding story events, we might expect that in many of the most extended stories in this sample we will also see more events over time. In part, this assumption is based on the number of events observed in the pretend episodes which last longest. With very few exceptions, stories lasting over two minutes are likely to have at least five events. In this category, do events increase linearly with time? To examine this assumption, we investigated the number of events and utterances per minute in episodes with at least five events.

Instead of counting all events for the 199 stories with five or more events, we relied on a sample of 40 episodes with 5 or more events to estimate the relation between events, utterances and duration. Episodes were originally coded by category (e.g., at least five events), so precise episode counts were not available for all stories in this category without extensive additional coding, with some episodes lasting up to 30 minutes. For a representative estimate of the true numbers of events in episodes of this category, episodes were selected quasi-randomly to represent 20% of stories from each duration category (less than 2 minutes (9 stories), 2-5 minutes (19 stories), 5-10 minutes (10 stories) and more than 10 minutes (12 stories)). Based on this sample, we estimated the relation between duration and story events as a means of describing the variation in story complexity within this category. Below I describe the quantitative and qualitative features of episodes with few and many utterances in this category.

Sampled Episodes with 5+ Events by Duration and Number of Utterances per Minute

Duration Category (minutes)	n	Mean (SD)			
		Minutes	Events	Events/Minute	Utterances/Minute
less than 2	8	1.4 (0.3)	15.1 (7.8)	11 (4.3)	15.2 (8.3)
2-5	13	3.3 (0.8)	20.3 (9.5)	6.1 (2.4)	15.9 (8.8)
5-10	9	7.8 (1.3)	46.1 (36.3)	6.6 (7)	19 (10.3)
10+	5	19.4 (4.4)	166.8 (138.3)	8.1 (5.5)	15.2 (8.8)

Table 5-2: Sampled Episodes with 5+ Events by Duration and Number of Utterances

We found that the longer episodes typically produced more pretend utterances and more events over time. Examining episodes with high numbers of pretend utterances, we found the relation between events and utterances to be particularly strong where role play leads to extended in-character dialogues. For example, in one episode lasting 5.3 minutes, two players enact the story of Goldilocks with animal finger puppets. The players speak for the puppets as they perform the actions of the story, including an extended dialogue between Goldilocks and the Three Bears when they discover Goldilocks in the house. There were 193 utterances in this episode and 128 events. In another case, two players enact a story of delivering supplies by taking the roles of construction vehicles “Muck” and “Lofty,” (characters from an animated series). In this 11.5-minute episode there were 222 utterances and 190 events. In cases like this one, the in-character exchanges contain the story events themselves, providing a direct relationship between utterances and events.

The linear relation between time, events and utterances is not perfect, however. Some episodes, while containing elaborated story events at some points, also contain extending

features which do not contribute to story events. For example, some stories in this group are marked by extending features which add utterances but do not add to the sequence of story events. In these stories additional utterances may be repetition of the same events or, more commonly in extended social play, negotiation around the details of the pretend story. Negotiation is counted in the total pretend utterances for the episode, but would not add to the story events since it is concerned with establishing agreement between the players. In one example, players playing “store” have an extended negotiation of whether and when the store will be open for business or closed for repairs. This story lasted 17.2 minutes, had 243 pretend utterances and 159 events. In a shorter example, during an episode lasting 1.4 minutes players disagreed over whether a bouncing ball could stand in for the character “Big Boulder.” This episode contained 39 utterances but only 11 events. Finally, there are also episodes where actions extend the story duration without adding utterances or story events. In one example, a child happily rides his horse and swings his sword as a “knight” for approximately 4.5 minutes within an 11 minutes episode. This action is embedded in a longer sequence of events in which the child “storms the castle” with his mother and younger brother, also enacting an extended sword-fighting sequence. In this story, there were 124 utterances and only 33 events. Although extending features which do not add to event counts do appear in these stories, on average the stories with at least 5 events are more likely to have more utterances, and generally more events, the longer they continue.

To summarize, children’s pretend stories vary in narrative complexity in terms of related story events and episode duration. Episodes containing two to four story events are the most common. These episodes typically last under two minutes and tend to include two to four transformations. Episodes with 0 or 1 story events are the simplest examples and make up

approximately a third of the stories observed at 38 and 50 months. The most complex stories contain at least five related events and are less common across these time points (25%). The complexity of stories does not appear to change dramatically from 38 to 50 months; in fact, the proportion of stories with at least 5 events falls slightly from 38 to 50 months. In the following section we will examine how the complexity of pretend stories varies across groups of children by overall investment in pretend.

5.3.2.2 *Patterns across groups of players*

As we have seen throughout, the general trends in pretend play time and complexity show an increase from 18 months to 38 months and then a modest to significant decline from 38 to 50 months. This pattern on average, however, has not been consistent across all groups of players. In particular, the children who pretend the most are more likely to show an increasing trajectory across all three time points in terms of both duration and complexity, whereas other groups of players do not. In this section we will examine how the groups of players vary over time by story complexity as measured by number of story events. To begin, we present the **number of children** producing episodes of each category of story complexity across the four groups.

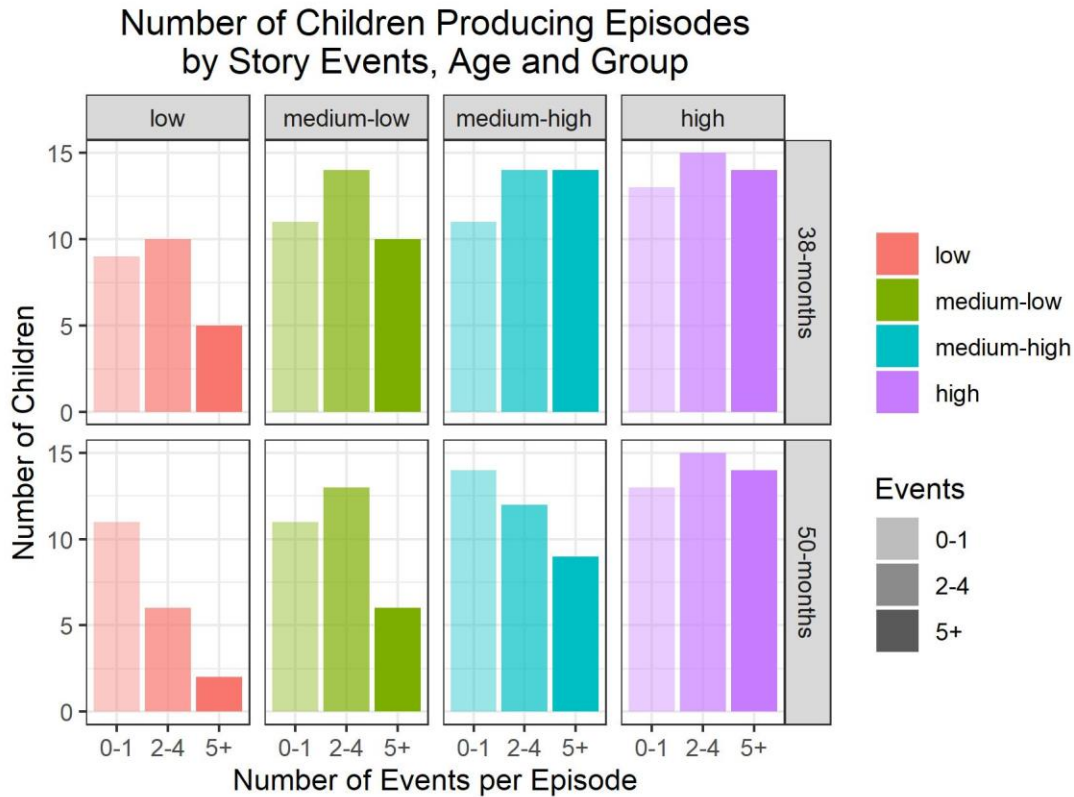


Figure 5-16: Number of Children Producing Episodes by Story Events, Age and Group

As we saw with complexity as measured by number of transformations per episode, more children in the high pretend group are producing all levels of story complexity, and particularly the most complex stories, at both 38 and 50 months. In the three remaining groups, the number of children producing the most complex stories declines at 50 months. For the low pretend group, the number of children producing moderately complex stories (2-4 story events) also declines from 38 to 50 months, possibly reflecting the overall decline in pretend play practice in this group. Interestingly, the medium-high group also reverses by children performing complex stories from 38 to 50 months – simple stories are produced by the most children at 50 months rather than fewer (as seen at 38 months), and moderately complex stories and the most complex stories are produced by fewer children respectively at 50 months than they were at 38 months. In terms of story events, complexity does not necessarily increase with age across all children.

However, children in the high pretend group continue to be more likely to produce complex stories at 38 and 50 months, once again suggesting that investment in pretend time and episode complexity may be related. Next, we present the raw **number of episodes** of each category of story complexity produced by the members of each group.

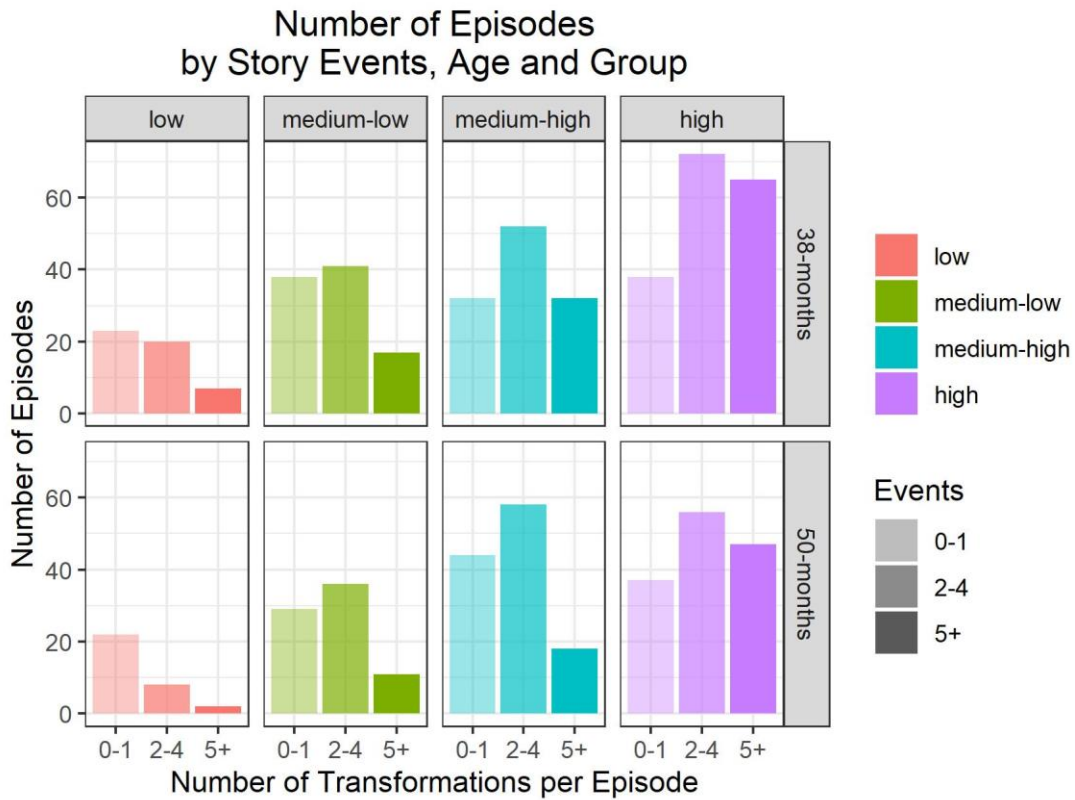


Figure 5-17: Number of Episodes by Story Events, Age and Group

The figure above describes the difference in episode quantities produced by each group overall, but also shows a clear distinction in the relative frequency of complex story episodes produced by the high pretend group compared to the other groups. Given the results thus far, this result is not surprising, although it continues to underscore how the high pretend group supplies more data overall and more complex episodes to these analyses. It is interesting to note here as well that the pattern of decline in complex episodes from 38 to 50 months applies to the high

pretend group as well, although they maintain the largest number of the most complex episodes across the sample.

To account for the differing levels of episode production of individuals, next we present the **average proportion of episodes** of each complexity category across members of each quartile group.

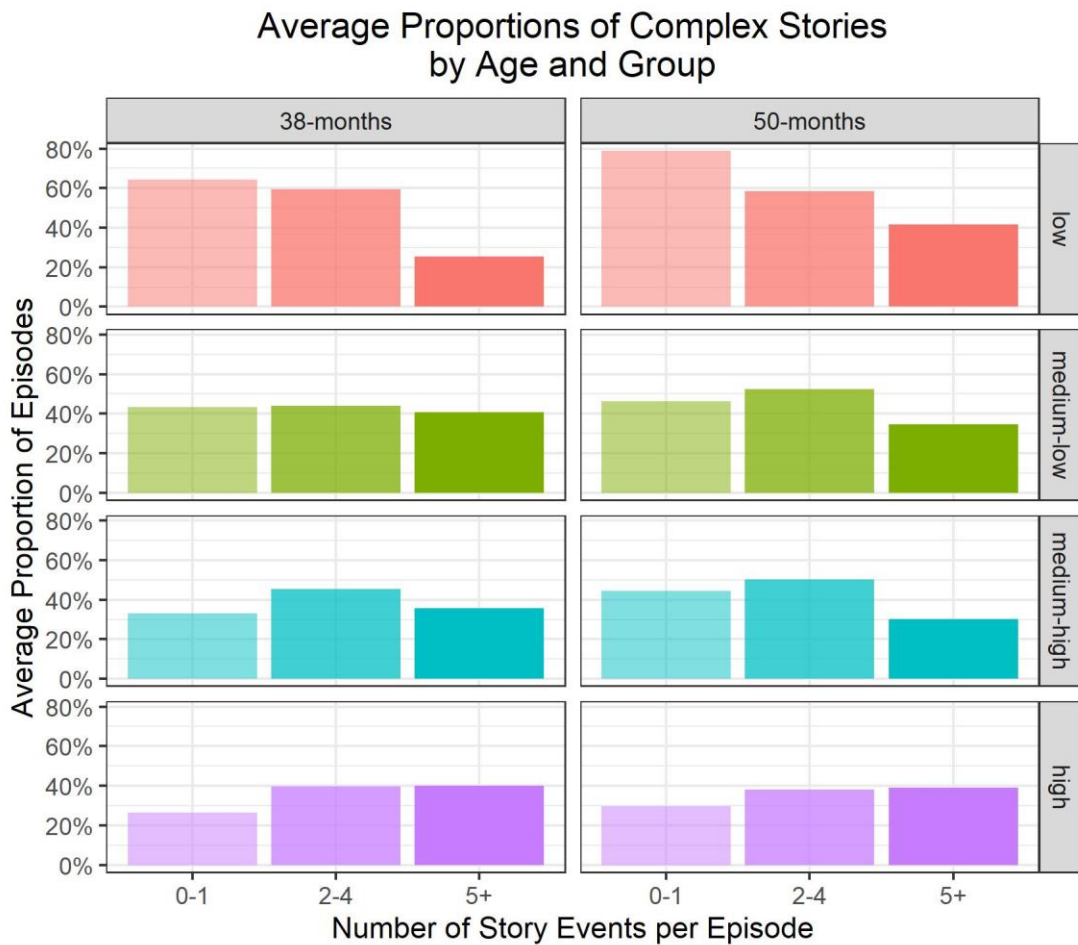


Figure 5-18: Average Proportions of Complex Stories by Age and Group

The patterns of story complexity do not appear to change dramatically within groups from 38 to 50 months. However, the patterns differ across groups by story complexity. Episodes with 0-1 events are the most common at both time points for the low pretend group, increasing at

50 months. In contrast, for the high pretend group, stories with 0-1 events are the least common at both time points. In addition, stories with 2-4 and 5+ events appear to be equally common for the high pretend group, but stories with 2-4 event are more common than 5+ stories for the low pretend group. According to these data, children who pretend for more time are also likely to be producing more complex stories. Interestingly, it is not the case that children in the high pretend group produce a higher average proportion of complex stories (5+ events) at 50 months, but rather that they have a lower average proportion of the simplest stories (0-1 events). The low pretend group is the only group that *increases* in the average proportion of the most complex stories at 50 months.

We can find yet another set of patterns when we examine story duration and story events together across groups. In the following boxplot we show the variation in duration of stories with at least five events across the four groups.

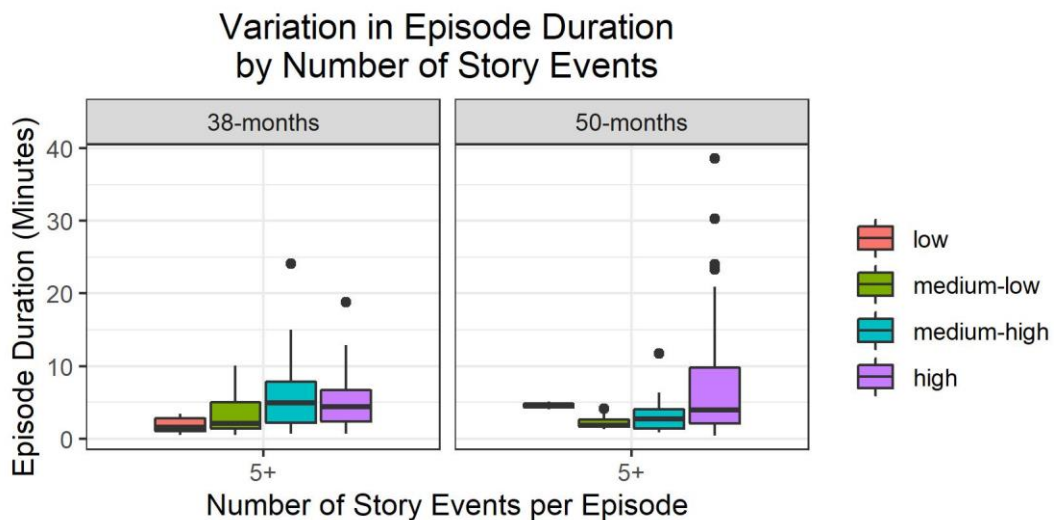


Figure 5-19: Duration of Complex Stories by Age and Group

We can see from the graph that the high pretend group members are producing the longest episodes at 50 months, and that the average episode duration will be significantly higher

for this group than the other three groups. The median duration for this group, though, is roughly similar to the other groups. This indicates that the extreme values in the high pretend group may be influencing the means for episode duration. Certainly, the high pretend group produces the longest episodes in the corpus, but they also contain the most variation in episode duration for complex stories of any group at 50 months.

5.3.3 Discussion

The vast majority of pretend episodes in the “high season” of pretend play last less than two minutes and contain simple sequences of 2-4 story events. Only 10% of the entire corpus is made up of stories lasting longer than 2 minutes with at least 5 events, and this data includes episodes where parents are frequently participating, as well as solo episodes by children. This creates a striking contrast with the iconic notion of extended pretend play sessions in the preschool period. In addition, following the trend in our data, pretend play sessions on average do not last longer or become more narratively complex from 38 to 50 months. This pattern holds on average and across groups of players, with the exception of the high pretend group, where episode duration is higher on average.

The increase in episode duration on average for the high pretend group is driven by the most complex episodes at 50 months, including the longest episodes observed. If we consider time and utterances for the most complex (5+ events) stories as a proxy for additional events beyond the first five, the data suggest that the most complex stories (lasting longest and containing the most story events) in the sample are performed by members of the high pretend group, and that these stories are significantly more complex than the majority of stories produced by the sample, containing 2-4 events and lasting under 2 minutes. As a result, when we examine

story events with episode duration, we uncover even more variation in the complexity of pretend episodes produced by different individuals in our corpus.

Overall, the extended pretend play sessions which exemplify the iconic image of childhood pretending most closely matches the behavior of the high pretend group, and based on how close even the median durations of the most complex stories are across groups, one might even consider the individuals driving this effect as outliers. The majority of players are pretending less on average and for shorter durations at 50 months. So far, the reason for this declining trend is unclear, although we can suppose that the context in which these children are playing may influence the play. For example, we know that children in the high pretend group have adults in their environment that are committed to playing with them through observations at 50 months, which is distinct from the rest of the sample. It may be that play declines because play partners are lacking in the remaining groups as parents drop off in participation and children either don't have siblings available to play or don't choose to pretend with the other children they have access to. It may be that as children become more capable of pretend, they also become more capable of participating in other activities such as structured games or craft projects, and that some parents might encourage children in these activities rather than in pretend. Future research could inform this work by doing a time and activity study to examine what activities might be replacing pretend play for most children at 50 months.

In the current study, we will attempt to trace further patterns in the commitment to pretend play by children by examining the pretend content that children are choosing to engage in, some for quite significant periods of time. How might the choice of pretend story content add further complexity to children's pretend episodes? In the following section, we will examine the

relation between the patterns of play behavior and a third symbolic feature of pretend episodes: the degree to which children engage in play about fantasy versus reality.

5.4 Fantasy and Reality

As described previously, cognitive work in pretend play has been associated with the development of executive functions, including the ability to inhibit impulses and set aside the features of the here and now in favor of the imagined situation. One way that cognitive work is described in pretend play is through the “cognitive distance” that must be traveled to imagine different circumstances, particularly those that are very distant from the child’s reality. This “cognitive distance” is one of the features of interest in children’s play about fantasy worlds, as opposed to play about everyday reality. If children are imagining worlds very different from their own, we might expect that this practice exercises, and potentially benefits, the executive functions. In the following sections we explore the degree to which children in our sample construct pretend play with elements of fantasy or invention as opposed to scripts about everyday activities.

5.4.1 Methods for Identifying Fantasy Content

As described in chapter 2, pretend content has been divided into play about reality (also called “as-if” or interpretive play), involving the simulation of routine behaviors, and fantasy play (i.e., “what-if” or inventive play), where reality is transformed into fictive worlds (Bretherton, 1984; Gaskins, 2013). Though this distinction is noted throughout the literature, the definitions vary slightly. For the current study, we chose to use the terms “reality” and “fantasy” play for ease of interpretation. We define reality play as pretend about the child’s everyday world and fantasy play simply as elements of children’s play that are impossible in reality. We take for granted that the play itself is not real (e.g., a child can’t be a firefighter, a tube can’t become a

trumpet) and focus on the idea being conjured through the pretend (e.g., putting out fires, playing the trumpet). In these examples, the child imagines about things that exist and that they might do someday in the real world, even if they are not yet able to do them. This is still play about reality. Fantasy is invoked when the play conjures things that cannot or will not happen in the real world (e.g., becoming a dog, flying like a superhero). The behaviors associated with dogs and superheroes may both be quite familiar to children, but the child will not perform these roles or actions in the course of their real life outside of play. Living the life of a dog or a superhero is only a fantasy.

The following multi-stage analysis makes use of both the content of the individual transformations children made while pretending and the sequences of actions or *scripts* that children produced in their pretend stories to conjure simulations of everyday reality and fantasy worlds.

5.4.1.1 *Fantasy Transformations*

We initially categorized pretend episodes by whether or not they contained *any transformation* that is impossible in reality. Although the distinctions made by Gaskins and Bretherton are very similar, our definition of fantasy play diverges slightly from Bretherton's continuum of "what-if" play by considering children's precocious roles (such as mother or grocer) as play about everyday reality, rather than fantasy (Bretherton describes play about real adult roles as "low-level what-if play"). We included roles such as "mother" or "teacher" with "reality" play because these roles constituted a simulation of routines familiar to the child and potential roles they could have as adults, more similar to Gaskins' definition of "interpretive" play. These roles exist in the child's reality, even if the child is not yet ready to take them on. Object substitutions are also considered "low-level what-if" play by Bretherton (e.g., using a

spoon as a telephone), but in our definition the imagined object, a telephone, is something that exists and is familiar in the child's reality, so we would define this as play about reality. However, we did make note when objects were given impossible properties, such as having feelings or being "magic." Episodes containing any impossible features were categorized as "fantasy", and those limited to simulating elements of the real world were categorized as "reality." Importantly, episodes need only contain one impossible transformation to be considered "fantasy" in the first analysis. In the second analysis, we take a more nuanced view, examining how the impossible elements are being used in combination in each episode to tell a story that is determined by the child. Sufficient inter-rater reliability for identifying fantasy elements was confirmed ($\kappa=.71$).

5.4.1.2 *Media Transformations*

As a result of further investigation of fantasy elements, we created a third category to identify where the impossible features of children's pretend are driven by specific media stories and characters. Media could encompass fictional characters or worlds from children's television, books, movies or even toys that came with their own named characters and story actions associated with those characters. Media is based on fiction, and media transformations do not constitute elements present in a child's everyday life, so they naturally could not be classified as reality. However, in these stories, children were not *inventing* impossible worlds, but rather *re-creating* familiar stories drawn directly from media content which they have experienced in their everyday lives through storytelling. These stories have been presented to children by the surrounding culture, so children are not inventing them, but they are also not about experiences children have in reality. Fantasy play descriptions in the literature highlight invention (e.g.,

Gaskins' inventive play), so these transformations seemed qualitatively different from those fantasy worlds spontaneously generated by children.

In coding media elements, we identified stories where content was drawn from media that was explicitly referenced in the play (e.g., describing the actions of "Spiderman"). In addition to identifying specific media content, general media content was also noted in cases where there might be a media influence but the play did not make the reference explicit. For example, a child playing with flying ponies could be referencing the fictional world of *My Little Pony*, but with no specific labeling or use of media-specific toys, we were cautious about drawing this connection with certainty. Episodes such as this remained categorized as "fantasy." This conservative approach likely provides an overestimate of fantasy content compared to media content, an issue we address in the later analyses. To determine the category assignment for each story, the episode was first examined for at least one media element that could be referenced directly to named sources (such as *Thomas the Tank Engine* or *Princess Jasmine*, etc.). If no specific media references were found, the episode was categorized according to the presence or absence of fantasy elements, as described above. Inter-coder reliability for identifying media elements was strong ($\kappa=.75$).

5.4.1.3 *Fantasy and Media Scripts*

After classifying episodes by *any* fantasy or media transformations, we examined the pretend story scripts holistically to understand what these stories were *about*, i.e., how transformations in combination with story events formed a narrative about familiar routines or impossible worlds. For example, fantasy transformations such as talking objects could be used to tell a variety of different stories. Talking objects could be the protagonists in stories with events aligning with an impossible world (e.g., object flies - fantasy play), re-telling a familiar media

story (e.g., tea cup dances as in *Beauty and the Beast* - media play), or interpreting the child's experiences in the real world (e.g., the chair goes to "time out" - reality play). Although it may seem unusual to describe this last example as "play about reality," we could see from coding the proportion of episodes with at least one fantasy element that there were a variety of ways that fantasy elements were being employed. Our goal was to understand qualitatively what experiences children were choosing to interpret through their pretend play. In this example, the chair is a proxy for a human, and the experience being interpreted is the experience of being sent to time out, a common and emotionally salient experience for many preschool children.

This analysis relies on the comparison of agents to the actions they perform in the story (e.g., an *elephant* fights a whale ; an *airplane* goes to bed). In these particular examples, the agents (in italics) and the actions (underlined) are all elements of reality, and even potentially agents and actions (fighting, certainly, if not "fighting a whale") that are, in isolation, familiar to children. It is the combination of agent and action that makes these transformations impossible, and therefore fantasy transformations, because an airplane is not alive and an elephant cannot fight a whale. However, the story events in the first case resemble the narratives of action heroes fighting "bad guys," and in the second case make up a narrative about the child's everyday experiences with going to bed (two themes that appear often in this corpus). In the fantasy script analysis, the first story would be classified as a media story (fighting bad guys) with a media agent (human-like animal with battle skills), and the second would be classified as a story about everyday reality (going to bed) using a fantasy agent (inanimate object). In the section *Fantasy and Media Scripts* below we provide further examples to demonstrate this identification process.

For the purpose of understanding what story content is preferred, we limited this analysis to episodes with sufficient sequences of events to be analyzed (at least 5 events). These episodes

represent the most focused stories, and also the longest stories in duration, allowing us to observe how children select characters and actions about which to construct their stories. We believe that these stories will provide more meaningful insights into children's tendencies and deliberate efforts to enact stories than the shorter, less developed stories. Although this selection limits our sample of children to 49, it increases the length of the specimens in the analysis and the likelihood that we can draw meaningful conclusions from more substantial story content. The following analyses are therefore based on 199 episodes from observations at 38 and 50 months that contained at least 5 story events. Inter-rater reliability for this analysis was based on the reliability for both media transformations and fantasy transformations, described above. Reliability was strong (average kappa=.73, range=.71-.75).

5.4.2 Results – Fantasy and Reality

The figures below describe the most common themes in transformations coded as fantasy (impossible) and reality (everyday). Only the most popular themes are included, though other less-common themes were duplicated by multiple children. This graphic demonstrates the contrast in stories with elements of the two types, and provides a sense of the frequency with which these elements were employed in pretend play among children in our sample. Animals and inanimate objects acting as humans were the most common type of “impossible” transformations children made, followed closely by pretending to become animals. Making animal sounds and movements is a very common activity for children and parents to do together in this sample, and this practice is reflected here, but also frequently in pretend episodes at 18 months which are not described in the present analysis.

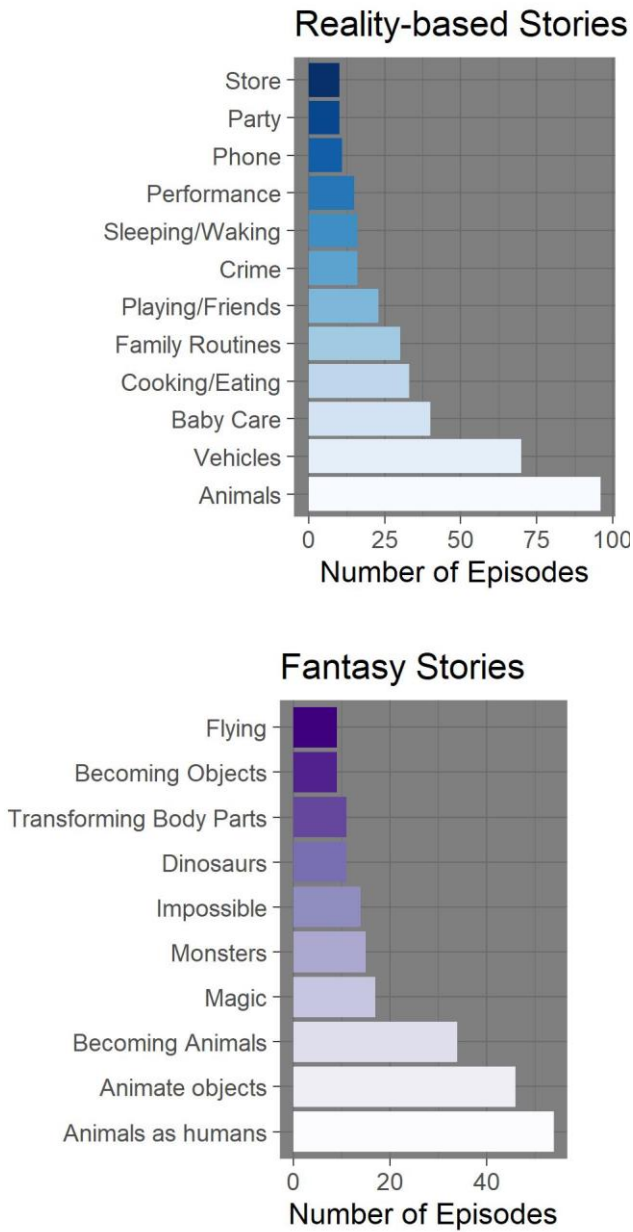


Figure 5-20: Reality and Fantasy Content in Pretend Episodes

When categorizing children’s pretend play episodes by the presence of *any* fantasy element, we found that a majority of episodes (64% at 38 months and 65% at 50 months) did have at least one fantasy transformation. The percent of pretend time spent in episodes containing fantasy transformations remains consistent across the two time periods we examined.

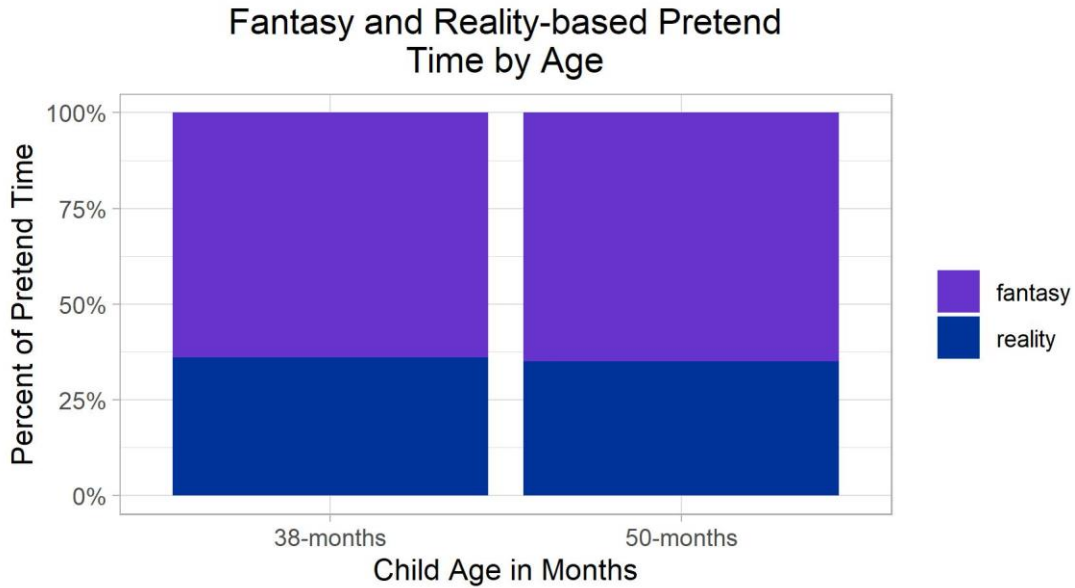


Figure 5-21: Pretend Time Spent in Episodes with Fantasy and Reality Transformations

Through qualitative analysis, we observed that many of the fantasy transformations identified in pretend stories were drawn directly from or referenced specific children’s media. We then analyzed the episodes to generate groupings of elements that were considered “impossible” (fantasy) and elements that contained specific media references. We found that these groupings of transformations were closely aligned.

Table 5-3: Themes in Fantasy and Media Stories

Specific Media References	Fantasy Features
Thomas the Tank Engine	Talking Vehicles
Santa Claus	Flying, Animals as Humans
Spiderman	Transforming Body Parts, Heroes/Powers
Dora the Explorer	Animals as Humans, Animate Objects
Toy Story	Animate Objects
Batman	Heroes/Powers
Scooby-do	Animals as Humans, Monsters/ghosts
Power Rangers	Heroes/Powers
Three Little Pigs	Animals as Humans
Sesame Street	Animals as Humans
Winnie the Pooh	Animals as Humans

It is striking that the top categories of fantasy transformations – animals acting as humans and animate objects – are also the most common features of the popular media stories of the time. Given the prevalence of these “fantasy” elements, we wondered how much of children’s “impossible” play is actually drawn directly from media rather than invented by the child. In the following analysis, we distinguished the episodes categorized with fantasy elements on the basis of whether the fantasy element was a reference to specific media. Our goal was to understand to what degree children’s exploration of “impossible worlds” actually consists of transformations borrowed directly from children’s media.

5.4.2.1 Media Transformations

The following graphic represents the most frequent topics and features appearing in children’s pretend play in our sample referencing specific media. From this list we can recognize a few timeless childhood figures, such as Winnie the Pooh, and other popular characters from contemporary children’s media, such as Dora the Explorer, at the time of our observations (2003-2006).

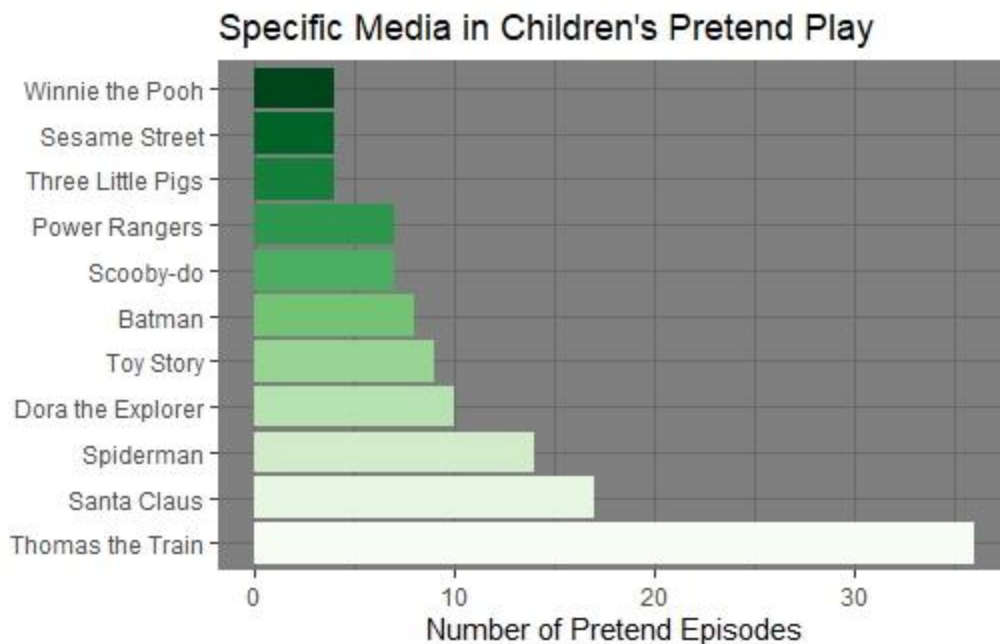


Figure 5-22: Specific Media in Pretend Play

When we revised our identification of fantasy transformations to distinguish specific media, we found that “impossible” content was equally likely to be drawn from specific media content as invented fantasy content. At 38 months, 34% of pretend time was dedicated to episodes with specific media and 32% to fantasy, and at 50 months 35% of time was dedicated to specific media and 30% to fantasy. Our conservative coding decision with regard to specific media is important to recall here. If an element such as “flying horses” is borrowed from media without a specific reference, we classified it as fantasy, so several fantasy ideas may already be reflecting ideas that are grounded in media stories.

We also observed that, in stories with fantasy elements which did not reference specific media, children were relying upon many of the same conventions used in familiar media, such as animals acting as humans, magical creatures or powers and body morphing. Based on the observation of play in this sample, we concluded that media content could be an important

source of “impossible” ideas that are incorporated into children’s play. In a sense, children’s media may be teaching children what content to apply in their “invented” fantasy stories.

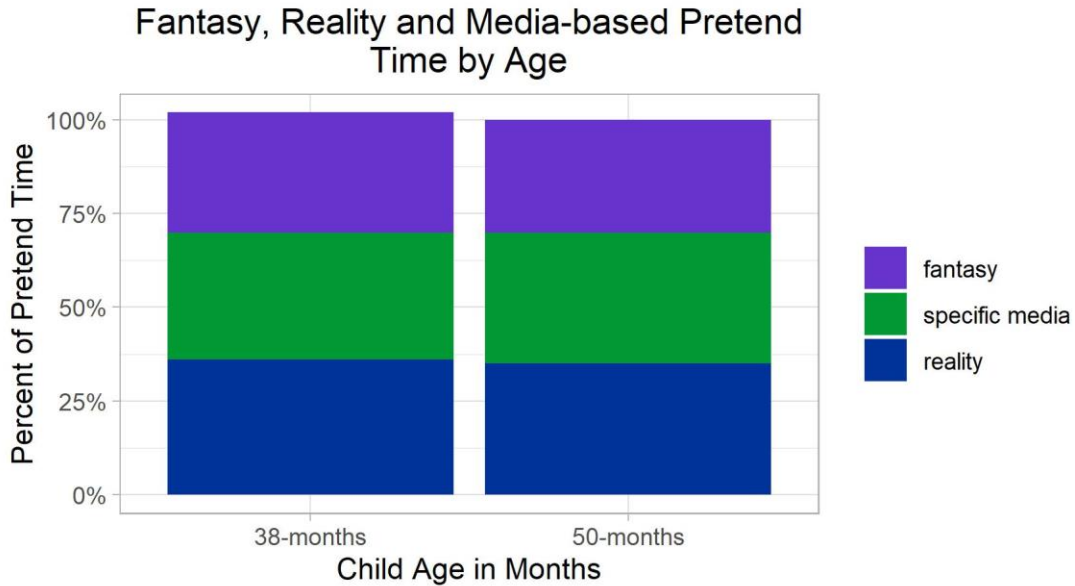


Figure 5-23: Fantasy, Reality and Media-Based Pretend Time by Age

However, we also observed that specific media elements were not always used to tell the media story they were drawn from, nor were all fantasy elements, such as talking animals, used to explore fictive worlds. The nature of the individual elements did not always indicate the nature of the story itself. For example, a talking bear might serve in a pretend story about going to bed. Likewise, Batman could be excited about drinking chocolate milk. Beyond the individual transformations of each episode, which demonstrate children’s strategies for enacting their stories, we wanted to understand what content – experiences, stories or scripts – children were interested in creating or re-creating. Therefore, we investigated how the individual pretend elements were being utilized by children to enact each pretend scenario as a whole. In other words, how were media characters and conventions such as magic and anthropomorphism

enabling children to tell stories, and what kinds of stories were these conventions being used to tell? Does pretend with media differ from pretend about reality and fantasy?

5.4.2.2 *Fantasy and Media Scripts*

As described above, the combination of story actions and the agents performing them was evaluated across all story events. Any combination of interpretive, inventive, or media elements was allowed. For example, the story of a baby going to bed or a person needing a hug were considered play about reality because both the actions and the agents performing them are possible occurrences in real life. The story of a telephone going to bed, or couch needing a hug were considered to have reality-based actions (e.g., things children do) with fantasy agents (e.g., animate objects). The stories of a girl spontaneously flying or a boy who shoots lasers from his arms were considered to have reality-based agents (e.g., humans) with fantasy actions (e.g., flying, weaponized arms). The story of a family of jellyfish saving their own lives by jumping on a ball, and the story of a giant juice threatening the shoppers at a mall were considered to have both fantasy agents and fantasy actions.

Table 5-4: Agent and Action Combinations in Pretend Stories

	Reality-based Action	Fantasy-based Action	Media Action
Reality-based Agent	Baby goes to bed	Baby flies	Baby rides in Santa's sleigh
Fantasy-based Agent	Giant Juice goes to bed	Giant Juice turns invisible	Giant Juice fights Spiderman
Media Agent	Mickey Mouse goes to bed	Mickey Mouse speaks in tongues	Mickey Mouse wears a magic hat

After examining the transformations in each story in combination with the story events, story events were assigned to categories based on the nine possible combinations of story agents and actions pictured above. Episodes with multiple agent-action combinations appeared frequently, although most stories contained a majority of one type, and only a single event featuring a different category. For example, a story about *Thomas the Tank Engine* could proceed according to the media script for all events, with *Thomas* characters performing actions typical of the *Thomas* world, with the exception of one event where the character Douglas (a train) flies. If a story contained multiple agent-action types, but a significant majority of one type, we categorized the most frequent type as the primary action type for that story. For those stories with significant content in multiple agent-action types, we did not indicate a primary type. As a result, the frequencies below of the nine combinations of agents and actions represent the major of story patterns, but they are not mutually exclusive.

In addition, in this analysis we included generic media (i.e., witches, talking vehicles, knights, etc.) to be included in the media category. The rationale for this choice is that children enacting stories with these characters are working from a set of characteristics and actions that are pre-determined. A witch casting a spell is part of the existing framework for stories about witches, and it is clearly distinct from experiences in the child's real life. But it would be difficult to justify that a child is *inventing* the story of a witch riding a broomstick. This story has been handed to them by popular media and they are re-creating it in their play, just as they might for a story about witches which directly references the *W.I.T.C.H* animated series (briefly popular during the period of our observations). If we truly want to explore how children create invented worlds, then we must distinguish between when children are enacting the scripts of familiar stories and when they are generating their own inventions.

In the table below we report the proportions of stories with reality-based, fantasy-based, and media-based agents or actions. Ignoring whether or not an action type was “primary” for now, we allowed every type of agent-action combination present in these episodes to be counted here, even if the type was only seen once in the episode. Therefore, these categories are not mutually exclusive, but this structure gives us a picture of how often children are utilizing these different modes of storytelling in their pretend play.

Table 5-5: Number and Percent of Agent and Action Combinations

N=199	Reality-based Action	Fantasy-based Action	Media Action	Totals
Reality-based Agent	96 (48%)	12 (6%)	13 (7%)	121 (61%)
Fantasy-based Agent	11 (6%)	5 (5%)	1 (1%)	17 (9%)
Media Agent	43 (22%)	11 (6%)	79 (40%)	133 (67%)
Totals	150 (75%)	28 (14%)	93 (47%)	

We found that reality-based agents and actions were the most common types of events children produced. This is perhaps expected, since reality-based stories draw upon events which are familiar to children from their personal experiences in the real world. The second-most common stories were based on media characters performing actions drawn directly from their media source. The third most common type of event contained media agents performing reality-based actions. This finding supports the idea that children borrow media figures to tell stories about real life, using media characters as a proxy for humans. Fantasy events with invented characters performing impossible actions appeared very rarely in this sample.

We found that media characters were fluidly substituted for regular humans as though there were no differences between them. That is, in these stories, children used media characters to enact stories about their own experiences of everyday life, including family routines. For example, one child performed routine baby care with a plush *Sesame Street* Ernie. The child did not make mention of any detail related to Ernie's *Sesame Street* context, but referred to the baby as "Ernie" throughout the play. We also found that media agents were used interchangeably in different media contexts, in order to serve as a character in another media character's story. For example, one child recruited Long John Silver to chase Mr. Incredible in a race car.

Many children extended anthropomorphic media conventions to generic toys, making matter-of-fact statements about the actions and feelings of stuffed animals and objects. For example, one child pretended a toy airplane was flying, and when it got tired from flying it wanted to go to sleep, so she put it to bed. It was rare that talking animals or objects were considered odd or unusual. This is not surprising, although it is by no means universal in children's pretend play that animals and objects can serve as humans. In this sample, however, we know that children's media communicates that animals and objects can and do act as humans. This message is pervasive in the popular media from which many of the children's toys and stories were drawn. Talking vehicles are the stars of television shows such as *Thomas the Tank Engine* and *Bob the Builder*; *Toy Story* features the adventures of children's toys, *Blues Clues*, and *Dora the Explorer* rely heavily on talking animals and objects.

With this in mind, it becomes much less extraordinary that children's pretend frequently features "impossible" ideas. At this point in time, children are not necessarily creating elaborate imaginary worlds of their own, but rather playing inside those surreal worlds they have witnessed on television, in books and other media.

5.4.2.3 *Story Action Preferences*

To understand more clearly what these stories are *about*, we focus now on story actions alone (regardless of agent). This serves the purpose of illuminating the actions that are most often simulated by children and does not put undo emphasis on the impossible combinations (e.g., couches having feelings, animals going to school, etc.). Since we know children allow animals, inanimate objects and superheroes to behave as regular humans, the frequency of the types of actions alone will show what experiences children are most seeking to simulate. Are they spending time inventing imaginary worlds or performing impossible actions such as flying, fighting bad guys and going on adventures? Or are they more often simulating the experiences of children's lives by going to school, having lunch and taking a nap?

In the following figure we show the proportions of pretend time spent with each type of story action. In this analysis we looked at the stories more holistically, meaning that we allowed for a primary action type if one was apparent (e.g., all actions but one of the same type). Multiple action types were retained when both (or all) were equally present in the episode. The distinction we aim to make with this organization of the data is to understand what type of content (or combination of content) is most present in children's pretend play. Rather than coding for *any* appearance of action types, we limit the analysis here to what is the most prevalent type (or types) in each episode. Of the 199 elaborated pretend episodes we examined, 158 (79%) contained only one action type, 37 (19%) had two clear action types and 4 (2%) had three clear action types.

In keeping with our agent-action combination findings, a large percent of time is taken up by reality-based action, followed closely by media-based action, or some combination of both. The episodes employing fantasy actions or fantasy and other actions have been collapsed here to

include any episodes where invented fantasy play was one of the clearly represented types. As anticipated, fantasy was the least frequent action type.

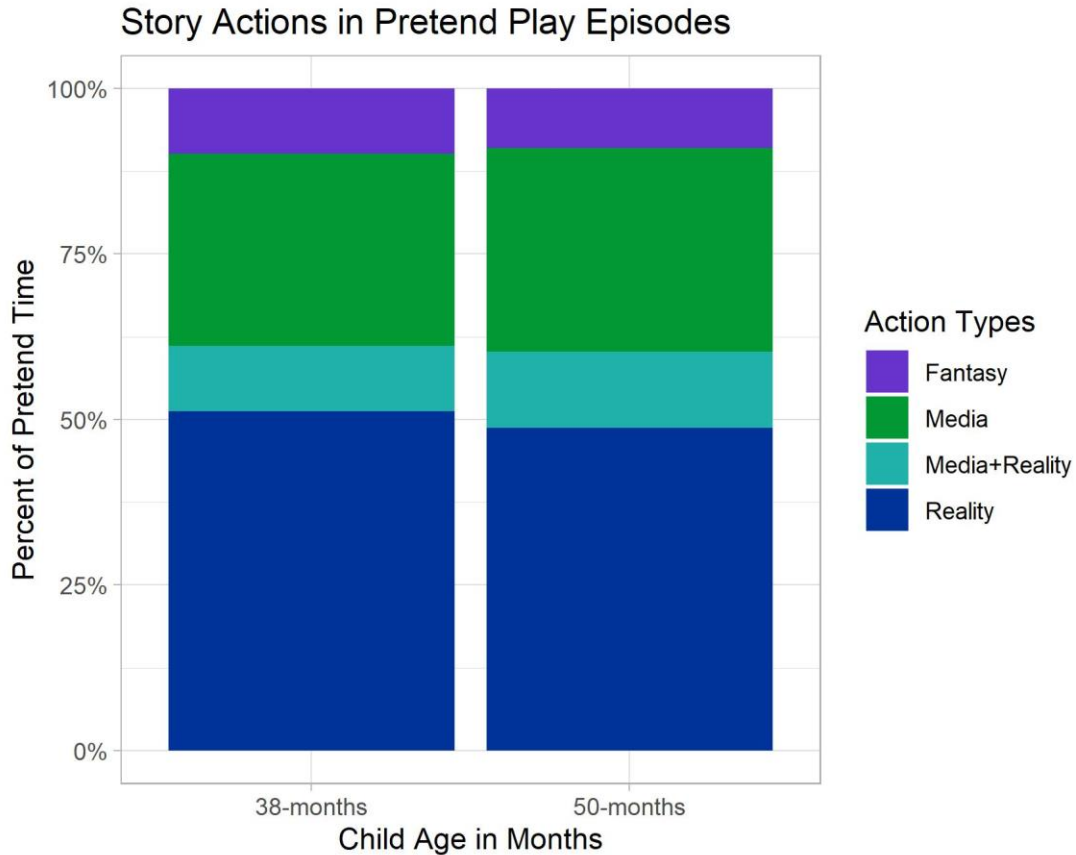


Figure 5-24: Story Actions in Pretend Play Episodes

We've learned from these data that a majority of children's stories are made up of primarily reality-based actions. The second most common story actions are drawn directly from media, and the third most common story action type is a combination of these two (e.g., *Mr. Incredible* comes over for lunch and then punches down a wall). The remaining story action types, which include invented fantasy actions, comprise less than 10% of the sampled stories. These results make sense, given that creating is much more challenging than re-creating, particularly for young children. But these results go against one of the most accepted ideas about pretend play; i.e., that children are exercising their creativity in inventing alternate worlds, and

that this is a primary feature of their play. At least in the preschool period, that picture does not represent the majority of children's pretending at home based on the data from this study.

Rather than an intentional departure into an invented world, we observed that fantasy-based agent-action combinations often arise as a function of the features of the environment. For example, during an episode focused on *Thomas the Tank Engine*, a player finds a toy knife in the train's path. This knife becomes an animated threat that attacks the train and then retreats. In another story, a child's real sippy cup is recruited as a villain. This cup, from the perspective of the tiny *Polly Pocket* dolls being played with, is large and threatening, so it enters the story as a monster and Polly responds accordingly (delivering karate-kicks). Perhaps it is noteworthy that children incorporate such convenient adaptations into their play so seamlessly. However, it may be important to recognize that many examples of invented fantasy are employed as a matter of opportunity and not necessarily the primary intention. This tendency demonstrates children's flexibility in transforming objects to serve the play, rather than relying on objects to prompt the play as they do early on.

How does this pattern of primarily reality-based play hold for our groups of children? Do some children come to prefer certain story action types over others? Or do children who pretend the most tend to follow the same action type? We will examine this question in the following section.

5.4.2.4 *Patterns across groups of players*

Looking at children individually and in groups, we can attempt to understand whether different children prefer different story types or whether patterns of commitment to pretend might predict the type of story that is preferred. The table below describes how players prefer story content that is composed of fantasy, media themes or the events of everyday life. For

children who played within reality-based stories a majority of the time, we classified them as “reality preference.” Likewise, for those who enacted media stories a majority of the time, we classified them as “media preference.” If fantasy stories took up the majority of time, children were identified with “fantasy preference.”

Story Action Preferences and Mean Story Duration by Preference		
	Number of Children	Minutes per Episode
	N (%)	Mean (sd)
Reality	18 (37%)	1.78 (0.84)
Fantasy	4 (8%)	0.92 (0.24)
Media	18 (37%)	2.28 (1.66)
No Preference	9 (18%)	1.70 (0.45)

Table 5-6: Story Action Preferences and Mean Story Duration by Preference

Of the 49 children who produced elaborated pretend stories (at least five events), we find equal preference for reality-based and media play (37% respectively). Only a small portion of children played for a majority of time with invented fantasy actions as a strong component (8%). 18% of children showed no preference because no category of play comprised more than 50% of their elaborated play time. We also find that players who prefer media actions may tend to sustain their episodes longer than those who prefer the other types or show no preference; though this difference may not be significant. Players who prefer fantasy actions do not sustain their stories for as long as those with other preferences or no preference. These results are consistent with the story results reported so far. Stories with media and reality-based action are preferred over invented fantasy, and may be easier for children to sustain because they are familiar.

In the following figure we display the story action preferences across our four quartiles of pretend play. It is important to highlight, as mentioned before, that the number of players who produce elaborated stories is smallest in the low pretend groups and highest in the high pretend groups. This makes some obvious sense, since we created our quartile groups based on amount of pretend time. However, we have seen that despite duration, many players do produce pretend episodes with at least five events, so we might expect to see some complex stories across the board, even if they are short. On the other hand, we've seen that complex stories appear much less frequently in this corpus, so it is not surprising that they are rare in the lower quartiles.

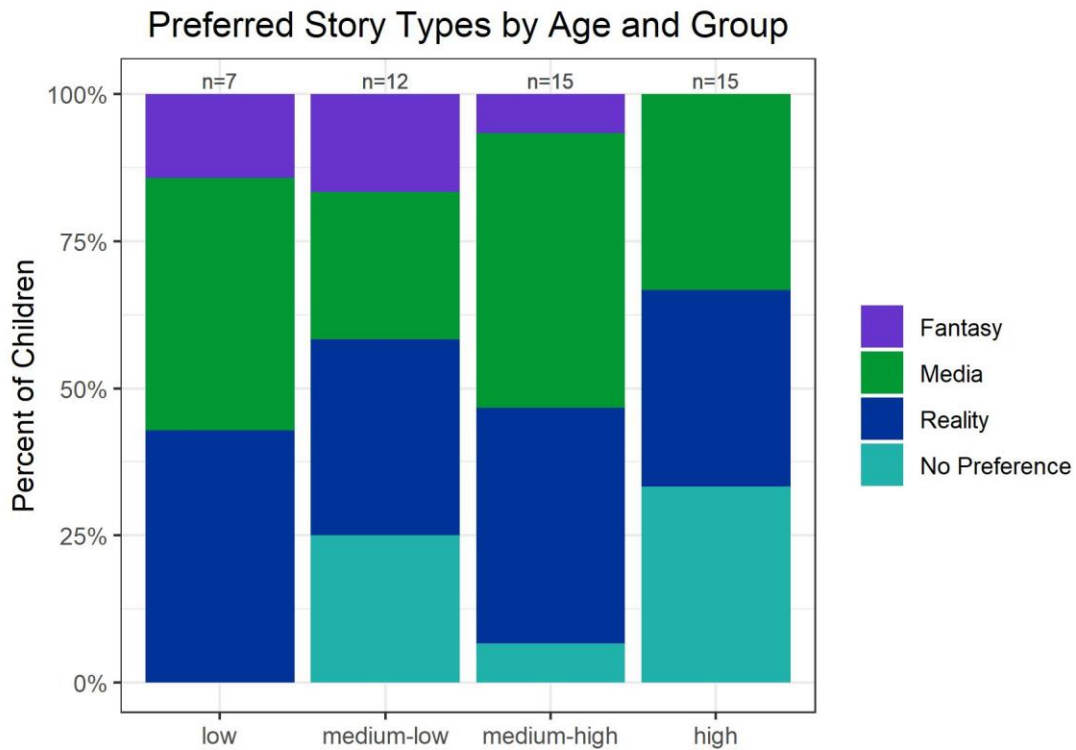


Figure 5-25: Preferred Story Types by Age and Group

The groups have some consistent patterns, although the differences that stand out are those between the low and high pretend group. The low pretend group does not have children with the “no preference” designation, and the high pretend group has no children with a

preference for fantasy invention. In that group the majority of children either prefer reality or media action, or they pretend across action types with no preference. Another difference to note is that the medium-high group appears to have a greater number of children with a preference for media action. If media episodes are more likely to last longer than other episodes, the preference for media may explain some of the extra investment in pretend time that is seen in this group.

In this analysis we are limited to elaborated play (at least five events) as described previously. Examining only the 199 stories of this type and splitting the sample into groups, our sample size becomes quite small, so we interpret these results with caution. In addition, these preferences are determined by elaborated play alone. Not every child produced elaborated play, and many children produced only a few examples of elaborated play. For these children, the data may be limited with which to determine a true “preference.”

However, the elaborated stories give us the clearest picture of how children are likely to spend their play time: either interpreting everyday life or re-telling the familiar media stories they know well. Although this result may appear to conflict with the idea of pretend play as an arena of invention, these results align well with the understanding that children use pretend play to interpret the world around them. Media stories are a major part of the childhood environment for these families. The fictional worlds of children’s media are indeed distant from the everyday experiences of children in the preschool years, and so we recognize that children are making the cognitive leap to inhabit those imaginary places introduced by the media they consume. But this is not a leap into the unknown – the construction of these stories is supported by a plethora of books, videos, movies, soundtracks and perhaps most salient, the toys and high-structure figures that accompany them. These materials reinforce not only the features of the imaginary world but also the sequence of story events that take place inside it. Children engage with the same

materials repeatedly over the preschool years, such that the characters and plots become ingrained. While engaging with these toys, children also make meaning of their personal experiences with the everyday world, and borrow media elements as agents to play out those stories. For the great majority of the pretend episodes we observed, children engage not in the process of creation, but in the process of re-creation and interpretation.

5.5 General Discussion

We have described three distinct features of children's play that theoretically offer benefits to children: transformations, narrative complexity, and fantasy story content. We learned from these observations that children's play at 3 and 4 years is largely short in duration (under 2 minutes), concrete (leveraging objects), comprised of few story events (4 or fewer), and mostly feature human agents performing everyday actions. This is not to say that sustained bouts, ideational transformations, elaborated stories and invented worlds do not appear. But they are not the norm.

We also observed a large body of stories re-created from familiar media, which we distinguish from the traditionally binary classifications of real and fantasy play. When children engage in media play, their play is more sustained. This could perhaps be related to the familiarity of the themes, and perhaps also due to the arousal that familiar characters often inspire in young children. However, when we separate the familiar media from invented fantasy, it is not at all clear whether media play affords the same cognitive benefits ascribed to fantasy play.

It is important to note that we made assumptions in our story analysis regarding agents that were not specific to media we could identify, and yet seemed to be familiar characters in the child's world. For example, "valentine bear" could be a generic stuffed bear, but could also have

a media connection to *The Care Bears*. The generic stuffed animal was often featured in pretend stories in the same manner that baby dolls or human figures were used. Imagining that a bear is capable of human activities still requires a leap out of this reality, but a much closer one, given that talking animals are pervasive in children's media, and stuffed bears and other animals are as common as baby dolls. Does featuring stuffed animals as agents require invention in the way that conceiving of a novel character or impossible action does? We would argue that it does not. This assumption led us to categorize generic stuffed animals as "media agents" rather than inventive agents, which certainly impacts our results.

However, we are able to look beyond this assumption by focusing on the story actions. Considering actions, regardless of agents, helps us distinguish between stories that are centered on children's real-life experiences and stories that children learn through some form of storytelling. As we described in the previous section, repetition of familiar stories is not invention. But perhaps these stories still offer children an opportunity to exercise their symbolic capacities by engaging in an activity with roles and settings that are still at some psychological distance from the concrete world they inhabit.

We have yet to determine, as we will discuss in chapter 7, whether story complexity (duration and number of events) will offer children additional benefits in the arena of storytelling, or whether ideational transformations (imaginary elements, role play) will be relevant to children's symbolic capacities. In addition, these data raise the question of whether invented fantasy play earns the distinction of "more complex" than reality-based play. It is true that fantasy play requires actions the player has never experienced, but as we see from these results, when we distinguish media play from fantasy, very little time remains dedicated to fantasy invention. The majority of play consists of familiar experiences and of plots provided to

children through various forms of storytelling. Is this kind of play nonetheless important for children's development? And if so, what do we expect it will do to benefit children? Affirming that aspects of pretend play benefit children requires that we specify the function we expect pretend play to serve. We discuss the function of play in more detail in chapter 7, and with this specified, we will evaluate the benefits of each type of complexity described here for the specified cognitive outcomes at kindergarten.

But first, we must address the unacknowledged element in the room. As we described in chapter 4, many of the children in our sample rarely or never engaged in pretend play during our observations without the participation of an adult. How did their participation influence the content and quality of the play? We return to this question in the next chapter.

6 The Role of Parents in Pretending at Home

“Play behavior is self-initiated. The sulky child who is forced to ‘play’ a math game by his teacher is not really at play.” (Sylva, Bruner, Genova, 1974, p. 245)

6.1 Introduction

I have argued throughout this dissertation that the literature on pretend play is ambivalent with respect to the participation of adults in children’s pretend play. In some of the foundational literature, the participation of parents was rejected as an important element in the development of pretend (Fein, 1981). In other literature, and more recently, parents and teachers are encouraged to prompt and participate with learning in mind, to both ensure that this important behavior is practiced, and also to enhance children’s development through pretend play (Katz, 2001; Weisberg et al., 2016). In the current study, we find that parents are a consistent presence in the pretend play of most of the children in our sample. Adults are most consistent in the participation in pretend at 18 months, where we find that the greatest proportion of episodes are conducted with adults. We have demonstrated that cultural messaging emphasizes not only the importance of the parent in ensuring optimal development for the child, but also in stimulating children during play to enhance learning. We can infer from these observations that what parents bring to their interactions with children in pretend play reflects their social and cultural context. Through the examination of the play itself we can also describe the immediate impact of adult participation on episode complexity and social interactions during pretend play episodes. In this chapter I address the following questions:

6.1.1 How complex are episodes of pretend play when parents are present?

In the previous chapter we examined the symbolic complexity of pretend play episodes in this corpus using three constructs: *transformations, story events and fantasy*. As reviewed in previous chapters, symbolic representation is the hallmark of pretend play and historically has occupied the major interest in pretend play as means of promoting cognitive development. The assumption in the literature is that children practice and subsequently enhance their symbolic capacities through pretending (Vygotsky, 1967). It follows from this assumption that the more practice children have with increasingly complex play, the more advanced their symbolic capacities will become. What remains unclear thus far is how the participation of adults impacts this process (P. K. Smith, 1988). If adults take up the responsibility for children's cognitive growth by engaging in pretend play, does this engagement impact children's likelihood to produce increasingly complex transformations, tell more complex stories or involve more fantasy content? Based on existing literature we have chosen these constructs to measure symbolic complexity and take for granted the claims of the literature, for the purpose of this analysis, that when children produce these behaviors, they are exercising their symbolic capacities in an important way. Do parents model these behaviors? And does this modeling predict engagement of children in these behaviors as well? In part one of this chapter, I will address how the presence of adults (in contrast to solo play and play with child partners) increases the likelihood of complex pretending in play episodes across the sample. I will then describe how, within pretend play episodes with adults, children and adults are initiating and producing the behaviors in question. From this analysis we aim to understand how the presence of adults and adult modeling may predict child behavior in subsequent pretending at home.

6.1.2 How do adult play partners communicate their priorities to children during pretend play?

When asking parents about their approaches to children's play, patterns emerge across groups of individuals which also vary across cultures. Based on parent interviews, parents were organized into four categories: *Teacher, Facilitator, Observer and Playmate* (Muhonen, von Suchodoletz, Doering, & Kärtner, 2019; Parmar, Harkness, & Super, 2008). The parents were organized into these categories according to similar beliefs about the purpose of children's play and their responsibilities as a play partner. These beliefs impacted how parents interacted with their children during play. These profiles were not based on pretend play alone; however, we would expect, as pretend is considered a major component of children's play, that these profiles are likely to appear in the interactions we observe during pretending at home. Though we were not able to interview parents about their explicit intentions for playing pretend with their preschool children, we are able to describe behaviors that communicate the parents' priorities when choosing to interact with their children using pretend play. In part two of this chapter, based on qualitative analyses of interactions between parents and children, I will describe the patterns we observed that communicate parent priorities for their children during pretending at home.

Throughout this investigation, questions arise as to whether the behaviors that parents promote or inhibit during play serve to enhance children's development. In prior chapters we have focused on cognitive outcomes as a means of operationalizing the impact on development. Though we recognize that cognitive development is a major focus of the literature, it is not the only area of development that has been analyzed or considered important in the study of pretend. In this chapter we intend to describe the interaction with adults during pretending not only in terms of cognition but also in terms of what pretend play may be accomplishing for children and

adults socially and emotionally. As we do so, we also raise the question of whether the goals of children and adults are aligned in these interactions and what value pretending holds for adults and children in serving what may at times be distinct purposes.

6.2 Symbolic Complexity in Pretending with Parents at Home

We described in chapter 4 that pretend episodes are longer on average when adults are present compared to children's solo episodes. This effect may be due in part to having a play partner present, but we also know from this sample that children are more likely to have an adult as a play partner or play solo than play with other children at home. In the following analysis we continue to compare children's pretend episodes with adults to children's solo episodes in order to understand how episodes with adults may differ from those where children are playing alone.

We can also describe parent contributions in terms of the behaviors that they perform and initiate during play. This analysis allows us to compare children and adults within episodes rather than only relying on the contrast between adult and solo episodes. Both analyses offer information regarding how pretending with adults plays out, but the second analysis also allows us to leverage our large sample to understand families pretending within their contexts rather than only comparing solo play with social play. This is important because we've seen that children who pretend often by themselves may be distinct in other ways from children that only pretend with adults present. For example, we know from the prior chapters that the proportion of time that adults participate in children's pretend play is highest among the children who pretend most. So, we might expect that more solo episodes would be coming from children that are not expecting such consistent participation (or perhaps any participation, in some cases) from adults. The social context is quite different for these children, and so we would expect that to be reflected in the behaviors within their episodes of solo play.

6.2.1 Methods for analyzing parent contributions to play

Partner Type

As described in prior chapters, episodes were coded for the presence of play partners and the types of play partners (adults or children). Using partner type as a categorical variable, we evaluated the symbolic features of pretending by episode, comparing episodes where adults were present to episodes where children were playing with other child partners or by themselves.⁵ Inter-rater reliability for partner type was strong (mean Kappa = 0.92, range=0.87-0.96). We used these codes to compare the number of transformations per episode, frequency of transformation types and number of story events between episodes where adults were and were not present.

Production

Within episodes, we also coded which participant produced at least one of each transformation type or element of fantasy content during the episode: adult, child or both. Inter-rater reliability for transformation production was included in reliability metrics for identification of transformation types (i.e., presence or absence of the transformation was coded using four categories: adult, child, both or none). Reliability across the categories was strong (mean Kappa=0.89, range = 0.82-0.96). For specific metrics for each of the transformation and story categories, see the appendices (“Reliability metrics”). We used these metrics to compare the contributions of adults and children within episodes where adults were present, cataloguing the production of ideational transformations and use of fantasy content.

⁵ Solo pretend play was coded when the child was pretending with no other active partners, but occasionally the child directed pretend to the experimenter. The experimenter was a silent observer and was filming the session, not interacting with the family. When the child playing alone spontaneously directed pretend to the experimenter it was typically met with little or no verbal response. Thus, it was included as part of the child’s solo play.

Initiation

For the major categories of transformations (object, role, setting) and for episodes coded for fantasy content, the initiator of the content was also coded. Reliability for story content initiator was strong (mean Kappa=0.84, range= 0.83-0.85). These codes were used to describe the relative contributions of adults and children to stories with at least five events at 38 months and 50 months. We describe where media and fantasy invention are introduced by adults and children in these episodes.

Methods for Comparison

To describe the frequency of behaviors across the sample, two methods are employed in order to mitigate impacts of the variation in the amount of data provided by each child. We know from previous chapters that the sample varies greatly in how much pretend each child produces. This variation could limit our ability to draw inferences based on the frequency of specific pretend play behaviors (e.g., role play) because the number of episodes varies so much by individual, and those who produce more episodes already have more opportunities to produce specific behaviors within pretend play. Likewise, the sample is dominated by episodes where adults are participating as compared to episodes where children are playing with peers or by themselves. This can limit conclusions we draw about how different play partners may alter play. We will attempt to account for this by comparing not only the proportions of episodes within groups but also the observed and expected frequencies of behaviors given the prevalence of partner types and behavior types across the sample.

6.2.1.1.1 Observed-Expected Proportions

To understand whether a behavior is more likely to occur in episodes with adults versus with other children or solo episodes, we will examine the difference between the observed and

expected probabilities for each behavior across groups. For example, ideational transformations were described in the previous chapter as a complex feature of pretend play. To determine whether episodes with adults are more likely to have ideational transformations, we first account for the frequency of episodes with adults in the sample. The proportion of episodes with adults varies by age. If episodes were as likely as chance to have ideational transformations across adult or child dyads, then we would expect the proportion of episodes with ideational transformations to mirror the proportion of episodes present for each partner type. However, we also know that ideational transformations appear more frequently at different time points in the sample. This behavior is present in 11% of episodes at 18 months, 42% of episodes at 38 months and 43% of episodes at 50 months. To determine the expected frequency of episodes for each behavior and partner type if the behavior were equally likely across groups, we multiply the frequency of episodes with that partner type at that time point by the frequency of the behavior in the whole sample at that time point. At 18 months, we multiply the frequency of episodes with adults (95%) by the frequency of ideational episodes (11%) resulting in an expected proportion of 10% of episodes. The observed proportion is calculated by dividing the total ideational episodes produced with adult partners at 18 months by the total number of episodes at that time point. Subtracting these values, we can see how different what we observe is from what we would expect, and analyze the size of this difference (similar to a chi-square test).

6.2.1.1.2 Mean Proportion of Episodes

We will also evaluate the average proportion of episodes with each behavior across individuals and groups. For this example, we take the mean of the proportion of ideational episodes for each child/dyad at each time point. This analysis allows us to examine the variation in frequency of behaviors by individual and according to our quartiles of investment in pretend play time. One caveat with this analysis is that children with fewer episodes to evaluate may

have noticeably higher proportions of the behaviors of interest since the denominator (number of episodes) may be small. An alternative is to evaluate the production of episodes containing the behaviors of interest per hour. Here, children with more episodes may be advantaged. To account for these issues, we can divide the larger samples into randomly selected smaller samples and evaluate the mean differences. However, the purpose of this chapter is primarily to describe what we see, and not to test significance. The differences in production of pretend play across the sample is simply a reality, and it may serve us more to consider the behaviors holistically, as they appear together, rather than on an individual basis. We do not want to lose sight of the fact that children are performing pretend at home in different contexts, and that the differences in behaviors across children are likely to be related to these contexts.

6.2.2 Transformations

As described in chapter 5, transformations are considered an important indicator of cognitive complexity and a vehicle for developing cognitive skills. Different types of transformations such as object substitution and role play may promote distinct skills, such as language and theory of mind (Sachet & Mottweiler, 2013). The theories regarding the development of such capacities assume that children are practicing these skills by participating in pretend play and producing transformations of different types. As we've seen so far, most children engage in pretend with adults at home during preschool, and our analysis thus far has not distinguished between the contributions of adult versus children in the production of transformations. If adults are modeling transformations for children early on, children may be more likely to produce such transformations themselves later on. On the other hand, parent modeling may not influence children's production, in which case some of the cognitive complexity we've described so far will be owing to the contributions of a mature player, and

may not relate to the development of the child. In the following sections we describe how transformations appear in episodes according to whether adults are present or whether children are pretending alone. As discussed earlier, we can include the episodes recorded with child partners (without adults) as a second comparison to begin to examine whether the differences in episodes with adults may be driven in part just by the presence of a partner. But recall that episodes with child partners (without adults) are rare in this sample, making solo episodes and episodes with adults the most likely scenarios for the children in this corpus.

It is expected that episodes with adults will have more complex elements than episodes with children alone, because children during preschool are still developing their symbolic capacities, while adults are capable of producing all types of complex transformations. That adults *can* produce complex behaviors in pretend, however, does not necessarily mean that they *do*. In the ensuing sections I will describe how complex pretend episodes with adults are compared to children's solo episodes in terms of transformations.

Number of Transformations

First, in the previous chapter we described the number of transformations in an episode as the first measure of complexity, assuming that more transformations require more cognitive work, holding multiple mental representations in mind simultaneously. Using the observed-expected probabilities of episodes with adults and episodes with 1, 2-4 and at least 5 transformations, we evaluate whether episodes with adults are more likely to have more transformations than children's solo episodes. In the figure below, bars above the midline (the X axis at 0) represent probabilities greater than expected, and bars below the midline represent probabilities below expected, based on the overall frequency of episodes of each category and each partner type.

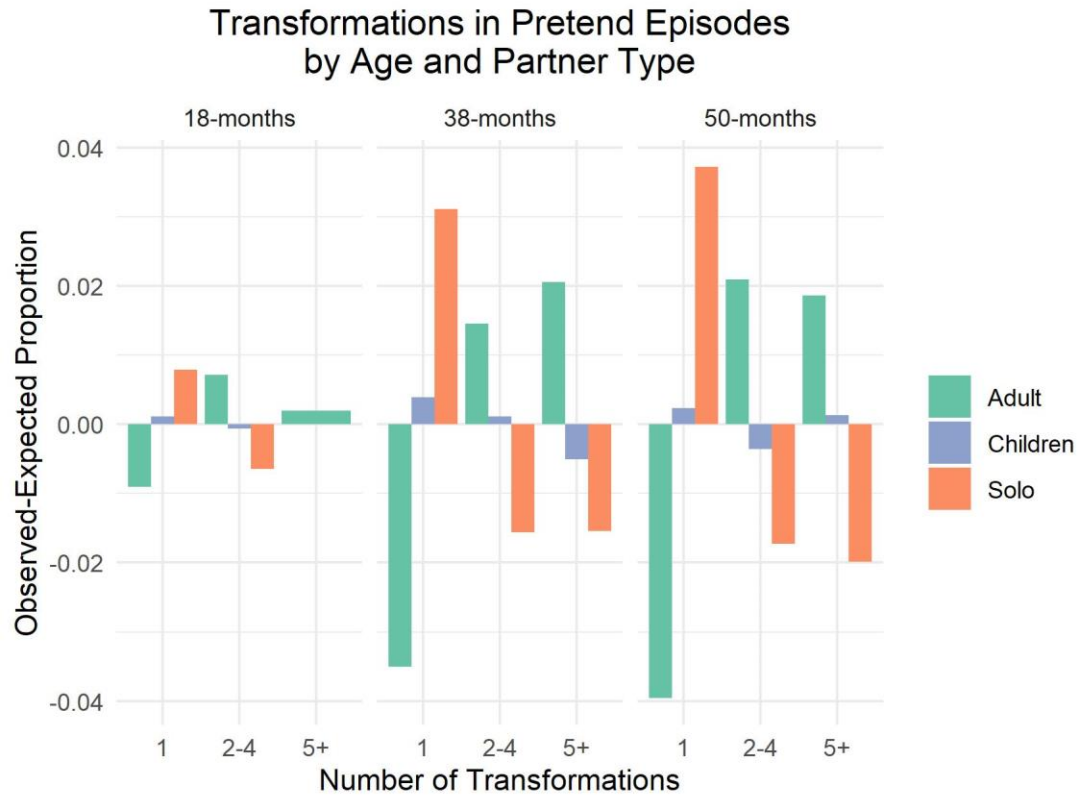


Figure 6-1: Transformations in Pretend Episodes by Age and Partner Type

Based on the figure, children performing solo are producing a higher proportion of episodes with only one transformation than expected particularly at 38 and 50 months. Likewise, episodes with adults contain more 2-4 and 5+ episodes than would be expected based on frequency alone. As mentioned previously, this is not surprising given that episodes with adults have at least one mature player. This result is consistent with prior claims that episodes with parent are more complex; in particular in this case with regard to number of transformations. This effect is fairly consistent across 38 and 50 months, and even by 50 months children produce fewer complex episodes than expected based on frequency alone.

Types of Transformations

As reviewed in the previous chapter, transformation types are not considered equally complex. Object transformations are considered to be more easily produced by children and are

likely to be produced earlier than other transformation types. Most object transformations are considered concrete, since they ground the pretend play in a physical feature of the real world. Pantomime is the only category of transformation considered more complex than other object transformations because the objects themselves are imagined. Pantomime is also extremely rare. Role play, on the other hand, is quite common, and also considered more complex than object transformations, particularly when the role is projected onto the body or an imaginary character, as opposed to a highly representational figure or toy. In either case, perspective-taking is required, which is considered more cognitively complex than object transformations in general. Settings are also considered more complex than object transformations, although the literature is ambivalent on whether role play is more complex than setting transformations or vice versa. Regardless, our data suggest that setting transformations are rare, role play is more common, and object transformations are the most common transformation types in this sample. How do episodes with adults compare to solo episodes on the complexity of transformation types?

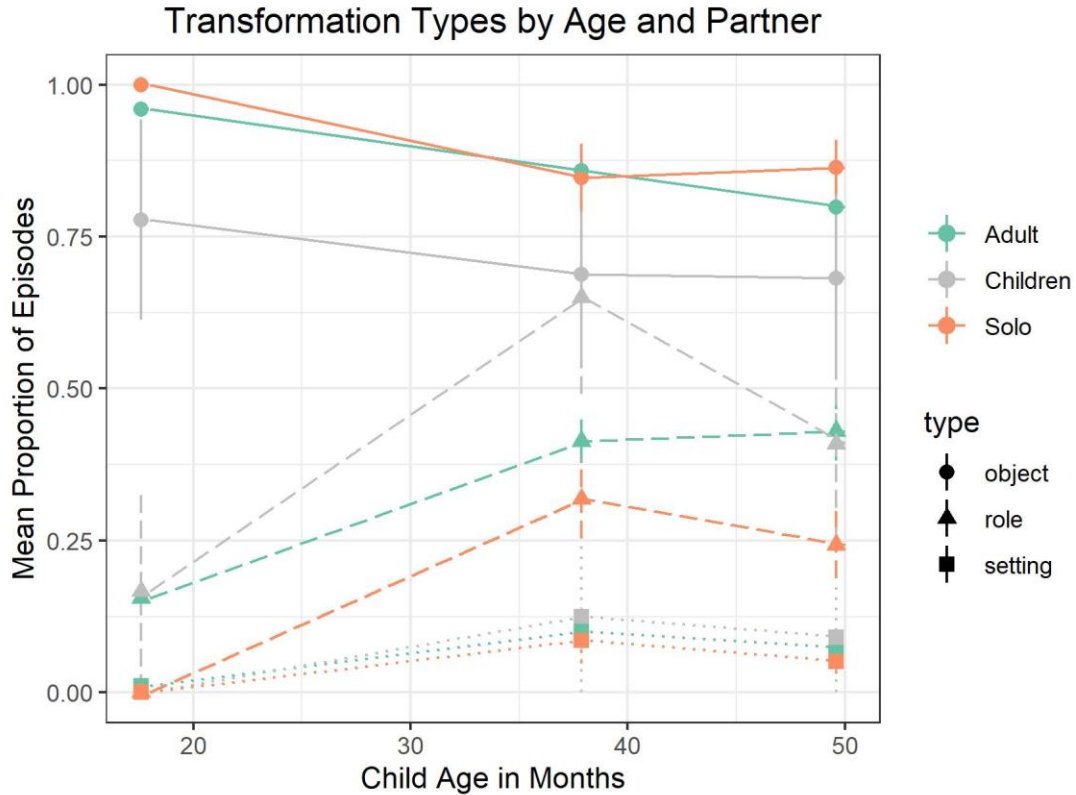


Figure 6-2: Transformation Types by Partner

As seen in the figure above, object transformations, the simplest type, appear in the majority of episodes across the three time points regardless of partner. Setting transformations are rare across the board. Where partner type appears to matter most is in role transformations, which are considered complex, ideational transformations. From the figure we see that role transformations appear in a higher proportion of episodes with child partners (without adults) than in episodes with adults or solo episodes at 38 months, and they appear in a higher proportion with any social partner at 50 months.

In addition, role play appears at higher average proportions at 18 months in social episodes (with either adult or child partners) as opposed to solo episodes, regardless of partner type. This is logical because children at 18 months, if playing with another child without an adult, are likely to be playing with an older sibling. Spontaneous role play, as we have defined it,

is quite rare for a child at 18 months on their own, although it does appear. For example, a clear role transformation was performed by a child at 18 months when she heard a dog barking outside. She imitated the bark of the dog while standing, and then she dropped to the floor and began crawling on all fours and barking. Though she did not verbalize “*I am a dog*,” her body movement and vocalizations were sufficient to indicate her transformation. This type of transformation is, of course, much easier to identify for animals as opposed to human behaviors. In the case of humans, as a conservative criterion in our coding scheme, players needed to indicate that a role shift had occurred, rather than just performing actions associated with a role (i.e., role enactment, discussed in chapter 3). Nevertheless, perspective-taking is challenging for young children and is expected to be rare at 18 months. But it is certainly not so challenging for adults or older siblings.

Despite the fact that solo episodes have no partner with which to play reciprocal roles, children performing solo do use role play in character dialogues, often voicing for multiple different figures in conversation. For example, one child carries on an extensive dialog between Mommy, Daddy, and other family members while moving toy cars around in the bathtub. Another way children can employ role play in solo play is by transforming themselves and somehow verbally articulating the change; similar to the transformation observed from the child pretending to be a dog at 18 months. Children have, for example, pretended to fly, articulating a signature character phrase such as “To Infinity and Beyond!” to indicate role play as a superhero, even when playing alone. But although it is possible for children to role play alone, role play by children playing alone is harder to identify, and consequently less likely to be coded. It is interesting to note nonetheless that role play in solo episodes and episodes with adults appears to be more similar in average proportions at 38 months. At 50 months, role play happens at a

greater average proportion with adults, and the proportion of role play in solo episodes falls slightly.

Since role play is a common feature of pretending in this sample, and is also considered complex, we considered the contributions of adults and children separately in the next analysis. If role play is accessible to children 38 months, perhaps role play is driving the complexity in ideational transformations? How much of this complexity is produced by children performing role play as opposed to adults?

Ideational Transformations

As described in chapter 4, ideational transformations are considered the most complex transformations in pretend episodes because these transformations are not grounded, or scaffolded, by concrete features of the here and now. Ideational transformations include pantomime, settings, embodied role play and role assignment, and imagined characters. Once again, we expect such transformations require little work from parents, but across the corpus these transformations are rare by subtype (pantomime and setting transformations are particularly rare) and by age. How likely are these transformations to appear in episodes with adults versus children?

In the figure below we plot the average proportion of ideational transformations by age and partner type. As expected, there is a higher average proportion of episodes with ideational transformations in episodes with adults. The differences between social episodes and solo episodes are likely driven by role play, as we discussed in the previous section. But in keeping with that discussion, older siblings and adults have more facility with all transformations than children at 18 months old, so this difference is not surprising. In fact, these trajectories are quite similar to the trajectories we see for role play, although clearly adults are generating other

ideational transformations which make their overall proportion of ideational episodes higher than episodes with children (without adults). So, role play is an arena where child partners may outpace adult partners at 38 months, but this does not seem to be likely for all ideational transformation types.

It is also perhaps noteworthy that episodes with ideational transformations do not increase from 38 to 50 months, following the trend for flat or decreasing complexity in pretend from 38 to 50 months across the sample. With children gaining capacity for complex transformations, we might have expected the frequency of ideational episodes to increase, but we do not.

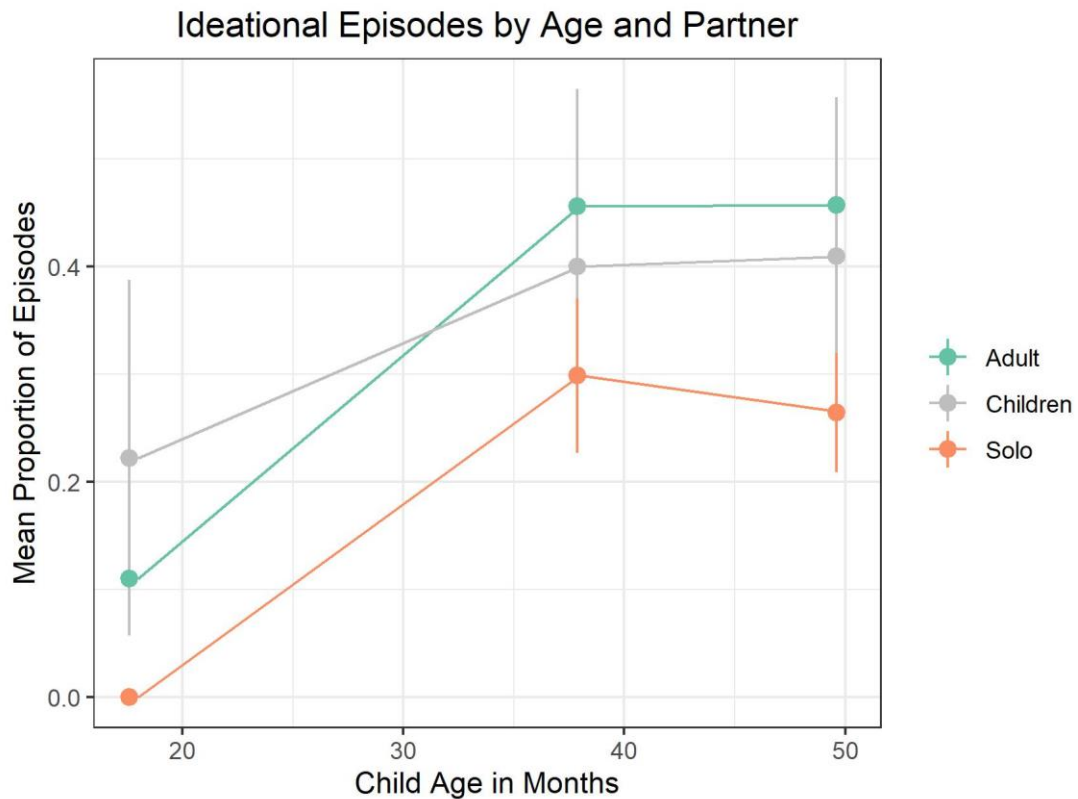


Figure 6-3: Ideational Episodes by Age and Partner

To investigate complex transformations further, we turn now to analyses that compare the production of transformations within episodes rather than across episodes with different partner types. We do this with the goal of understanding what each partner is actually producing during the episode. Looking across different episodes, we would need to infer that the presence of the adult is the key element impacting differences. By viewing the data within episodes, we can differentiate between what parents are contributing and what children are contributing under the same social conditions.

In the following analysis we examine only episodes with adult play partners. Here we describe which play partner – the adult, the child or both – produced at least one ideational transformation. I have organized the data to describe when the complexity is a contribution from parents alone (adult) or from children alone (child), or when each player produced a transformation that would be considered “complex” because it is ideational in nature. This is the beginning of our attempt to understand parent modeling and subsequent child production. In the following figure, we simply plot the proportion of episodes where only adults produced ideational transformations, only children produced ideational transformations, or both adults and children produce ideational transformations during the episode.

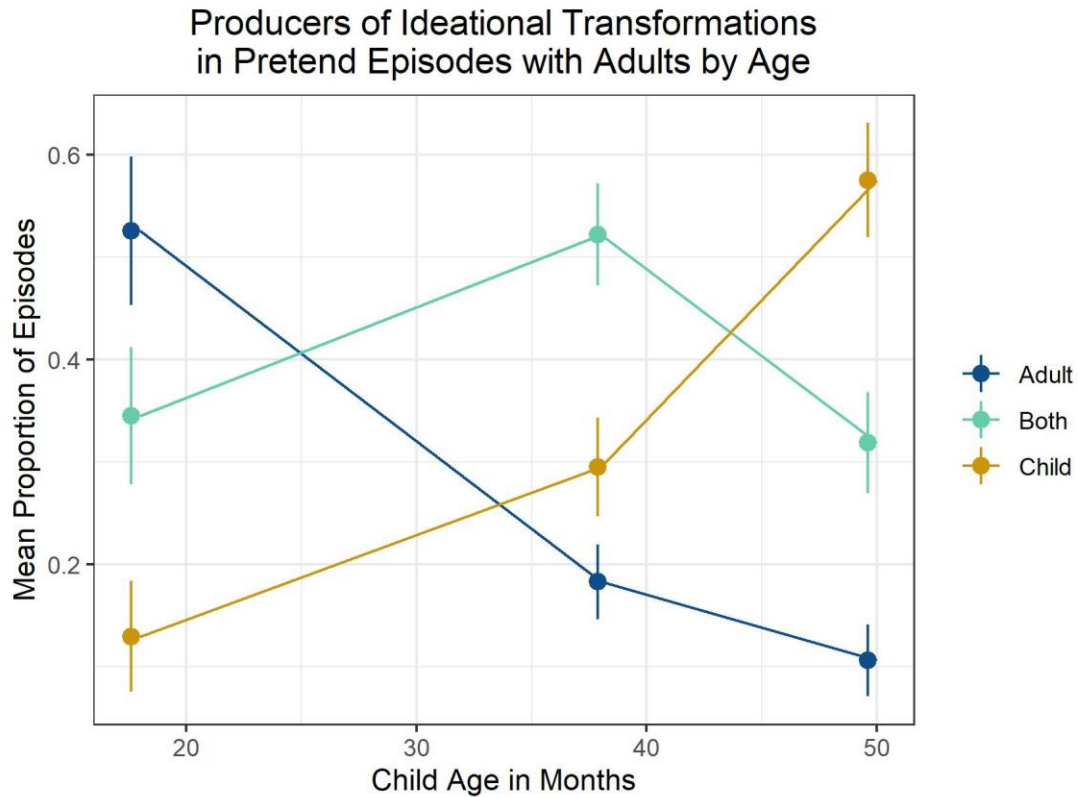


Figure 6-4: Producers of Ideational Transformations in Pretend Episodes with Adults by Age

The pattern in figure reveals a change in the relative contributions of parents and children over time. At 18 months, parents are most likely to be the only participants producing ideational transformations. At 38 months, ideational contributions are more balanced because children have begun to produce them more and parents are producing fewer ideational episodes on their own. Episodes where parents and children both produce ideational transformations are most common. At 50 months, child-only ideational episodes surge, while parent-only and episodes with both contributors producing ideational transformations decrease. This pattern suggests that parents are scaffolding complex transformations at 18 and 38 months, but then reduce this scaffolding as children demonstrate their capacities to produce complex transformations on their own.

This figure offers another perspective on what has so far appeared to be a consistent decrease in pretend episode complexity from 38 to 50 months. Ideational transformations are

contributed more often by children and less often by adults as children age. This looks much more like the developmental trajectories we have expected based on the literature – that children’s pretend play increases in complexity as children become more capable.

This also raises questions about the types of transformations that make up the ideational transformation category which may be more or less preferred by children versus adults. Role play in particular comes to mind here. Perhaps children are producing more ideational transformations over time in part due to a greater interest in and capacity for role play. These are social episodes with adults, so children may be prompting role play with parents, or they may be performing role play without adults taking on a reciprocal role. For example, children often announce a role, (e.g., by saying “I’m Buzz Lightyear,”) potentially as a means of inviting interaction with adults. Adults may playfully acknowledge the role of the child, but not necessarily take on a role themselves (e.g., saying “Oh my gosh, it’s Buzz Light Year!”). When they don’t assume a role themselves, parents often asked questions about the role the child was taking. For example, when a child introduced himself in the role of “grizzly bear,” his mother asked “What color bear are you? Are you a brown bear?” In many episodes where role play was introduced by children, adults revealed their priorities for their children through the way they responded to these initiations: by taking on a role themselves, acknowledging the child’s role without taking a role, or asking questions about the characteristics of the role. In part two of this chapter, I explore these responses further as a way of describing how parents communicated to children about their goals and priorities during play episodes.

6.2.3 Story Events

The second measure of complexity we examined in chapter 5 was the complexity of the story as measured by the number of related story events. Story events draw a picture of the

degree to which a story is elaborated by the players and may include details that follow a social or familiar script of behaviors, such as the events of going to bed (e.g., brushing teeth, turning out lights, saying “goodnight,” etc.). A simple story about an abstract script, such as talking on the phone, might have just one or two events that would be part of a typical phone call (e.g., saying “hello,” and saying “goodbye,”). A more elaborated, and therefore complex story episode may have five or more events that include more details associated with the script (e.g., dialing the phone, waiting for the person to answer, reacting to what is said, etc.). We found in the previous chapter that the majority of the episodes observed in this sample were relatively simple, containing one to four events. Simple stories are expected from preschool children, but as we have been discussing, adults may offer additional complexity to pretend episodes by providing additional story events for children to enact. In this section, we return to the data regarding story events from chapter 5 and evaluate whether episodes with adults are more likely to have elaborated stories, containing five or more story events.

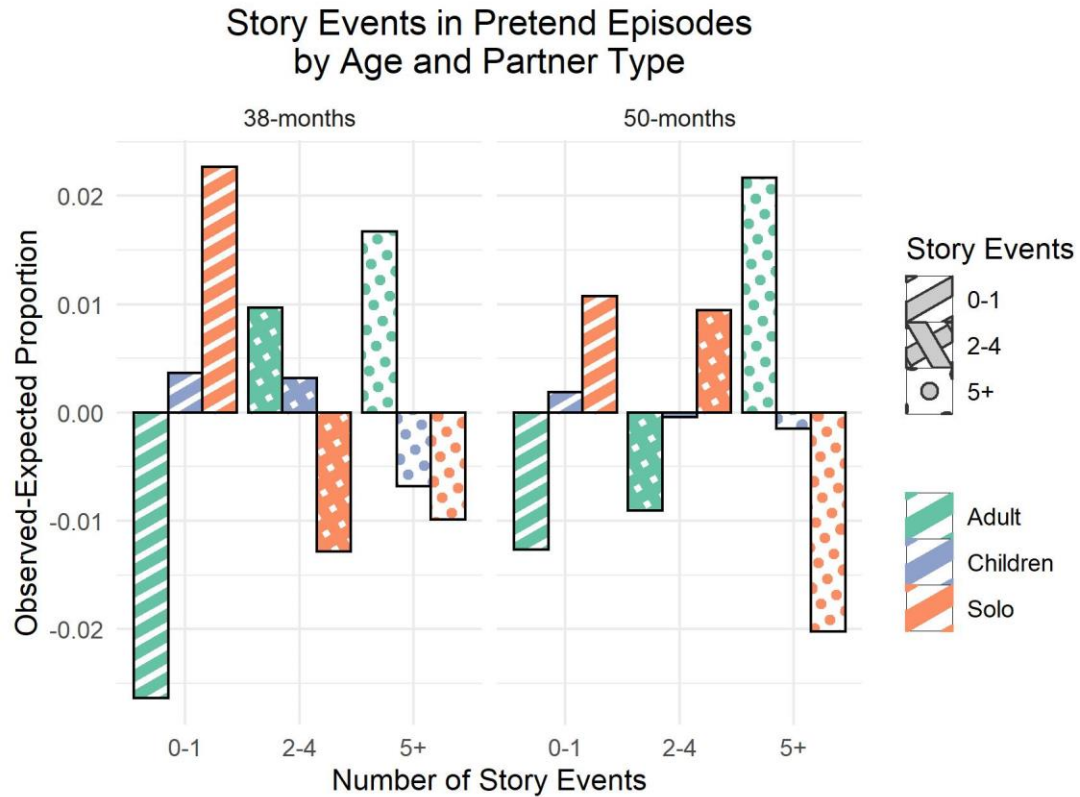


Figure 6-5: Story Events in Pretend Episodes by Age and Partner Type

As expected, episodes with parents are more likely to have at least 5 events at both time points at which story events were coded, as shown by the green-dotted bars above the x-axis. Solo episodes were more likely to have 0-1 events than would be expected by frequency alone, as shown by the orange-striped bars above the x-axis. For the middle category of 2-4 events, parents show opposite tendencies at 38 and 50 months. At 38 months, parents are more likely to be involved in episodes with 2-4 events (as well as 5+ events) when children are less capable of sustaining pretend, but at 50 months, parents are less likely to be involved in episodes with 2-4 events (or 0-1 events), at a time when 5+ events are more likely to be sustained with children. One possible interpretation of this result could be that parents are scaffolding the length of episodes that they perceive are appropriate for the child's age. This result, together with the

results from the number of transformations, supports the prior work stating that episodes with adults are more complex, in this case, in terms of elaborated narratives (Lillard, 2011).

The number of story events suggests a degree of elaboration that adults may be providing to the play, although it does not describe how different parents support elaborated storytelling in real time. Certainly, there is variation in how parents interact with children while telling stories, and some parents may be better able to help children elaborate on play than others. It's not clear from these data, though, whether the elaboration in these episodes is being driven by the adults or children, with adults serving instead as observers. We do not have data to track the initiator of each story event, however we can describe the variation in how parents respond to children's story ideas, and how these responses function in pretend storytelling, which we will do in part two of this chapter.

6.2.4 Fantasy and Reality

As reviewed in chapter 5, much literature argues that fantasy pretend play is more complex than reality pretend play because it requires players to traverse a greater "cognitive distance" from the here and now. That is, imagining circumstances very different from the everyday takes more cognitive effort, and is presumably more challenging for children. We described in the previous chapter that in roughly two-thirds of the pretend episodes that we observed, stories contained impossible or surreal elements. Upon closer look, however, we saw that many of these fantasy elements were composed of familiar characters and plots drawn directly from children's media. Ultimately, by examining the reality-based, media and fantasy play elements as a whole, we concluded that much of children's pretending is made up of familiar stories, from everyday life or popular media, as opposed to fantasy invention. In the current section we ask, how are adults and children contributing to these stories?

Some prior literature suggests that children are inclined to produce fantasy invention, whereas adults are more likely, after the child turns three years old, to prompt pretending about everyday life (Garvey, 1990; Lillard, 2006). In part two of this chapter, we will describe qualitatively how adults and children interact with fantasy content; in particular, how adults communicate their priorities for children's learning in their responses to fantasy content initiated by children. In this section we examine how likely episodes with adults and children are to contain real, media and fantasy content across observations at 38 and 50 months, when pretend stories are comparatively more developed.

Following the progression of analyses in chapter 5, we begin here with the broad categorization of episodes containing only reality-based content, "impossible" elements, or elements directly referencing specific media. The figure below describes the proportion of pretend episodes with adult partners, child partners (without adults) and solo episodes that contain reality, media and fantasy elements. This analysis includes all 805 episodes of pretend observed at 38 and 50 months and calculates the proportion of the total pretend time taken up by the episodes assigned to each category (episodes with reality-only, specific media or fantasy elements).

Fantasy, Reality and Media-based Pretend Time by Age and Partner

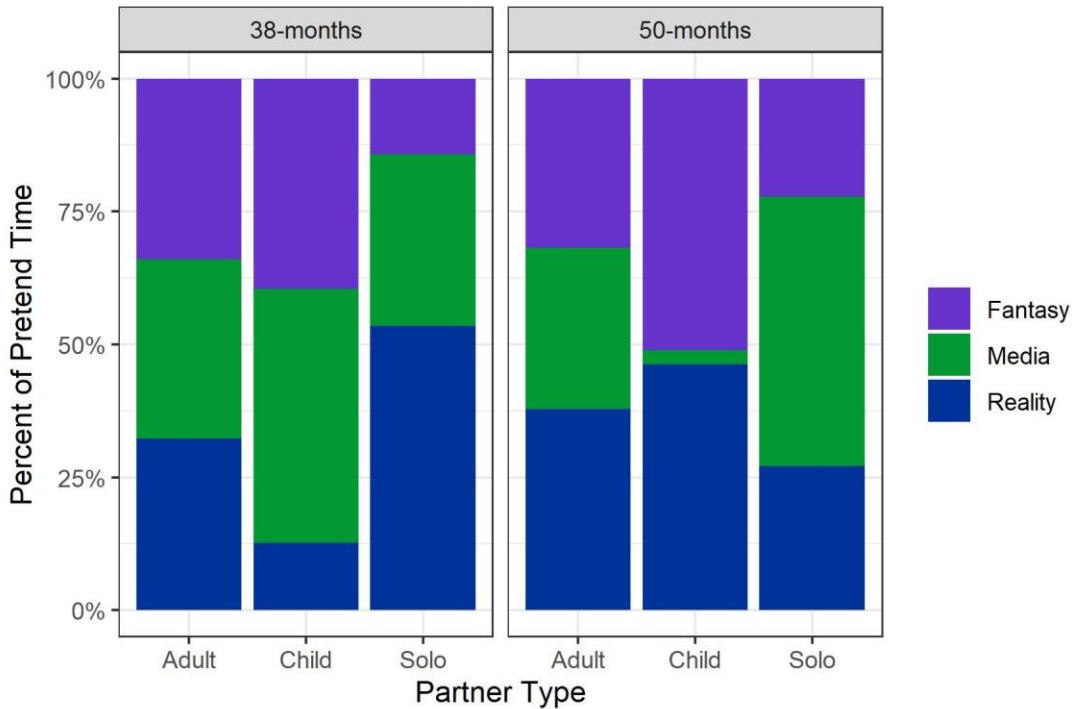


Figure 6-6: Fantasy, Reality and Media-Based Pretend Time by Age and Partner

From the figure we can see some interesting distinctions between the proportion of time pretending with media and fantasy elements in episodes with children (without adults). The episodes with adults reflect the relatively even split between fantasy, media and reality time that we described in the first analysis in chapter 5. Children playing together appear to spend more time with media-specific content at 38 months at a cost to reality play, and children playing solo appear to spend more time on reality episodes at a cost to fantasy play. At 50 months, there appears to be a strong shift toward reality and fantasy elements for children playing together, at a cost to specific media. This is somewhat striking given that media was dominant at 38 months. For children playing solo, more media and fantasy, and particularly more media, take up time than play with reality elements only.

This initial look at media and fantasy elements has a few limitations which we discussed in chapter 5. Since specific media was only coded when an explicit reference was made, we may be over-estimating invented fantasy elements here. In addition, the elements only needed to appear once to qualify the entire episode for the category of media or fantasy, which does not necessarily tell us in what the players were really interested; since we know that children use media figures and other non-humans to stand in for regular humans in their pretend stories. To get a better sense of the nature of children's stories, we limited the analysis to the type of story (reality, media, fantasy) indicated by the *actions* being simulated. As described in the previous chapter, familiar actions witnessed or experience by the child were considered play about reality (e.g., going to bed, eating lunch, etc.). Actions familiar to children from popular media were considered play about media (e.g., searching for buried treasure, fighting bad guys, etc.). Impossible actions invented by players were considered play about fantasy (e.g., becoming a clock, shooting jellyfish balls, etc.). For this analysis, we only review the 199 stories with at least 5 events, to ensure sufficient examples of actions within the episode to evaluate the overall category for the story. A single occurrence of an action type could be set aside if the majority of action types in the episode were of a different category, considered the "primary" action type. If multiple examples of different action types were present the episodes were categorized by the combinations. Below we describe the proportions of pretend time devoted to episodes according to action type for the 199 episodes with at least five story events.

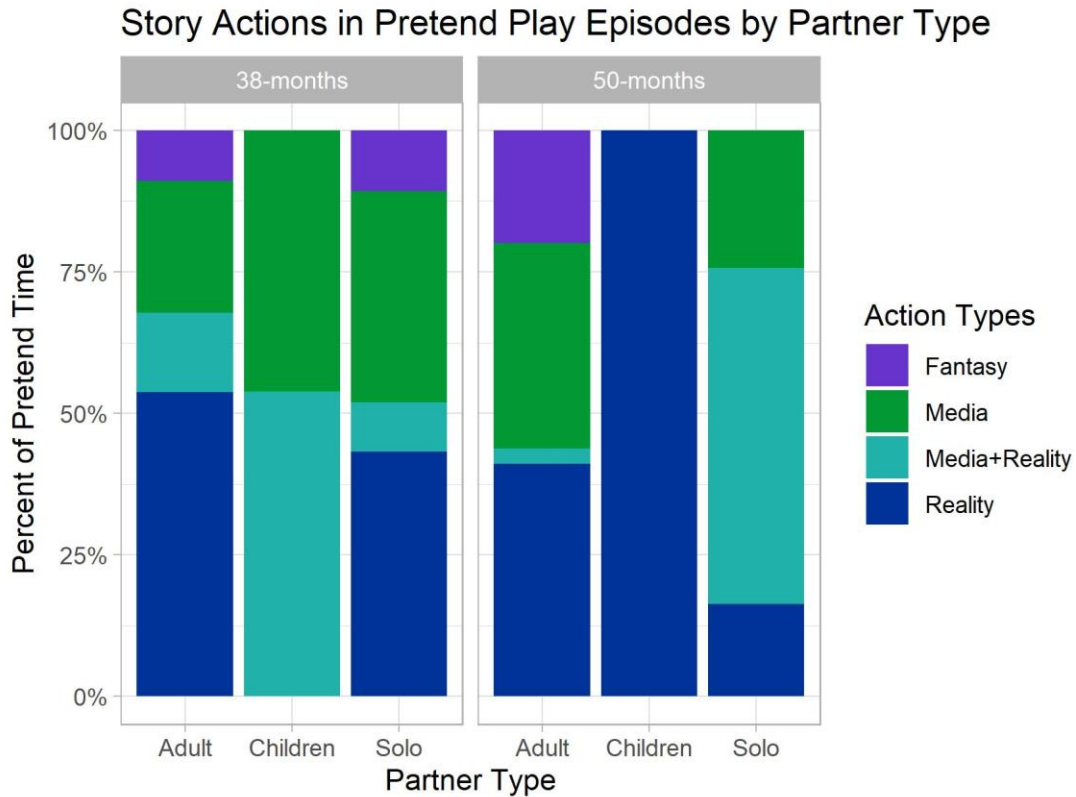


Figure 6-7: Story Actions in Pretend Play Episodes by Partner Type

The figure describes a preference for media and reality action types for children in particular, whether playing alone or playing with other children (without adults). Child partners at both 38 and 50 months are investing all of their time simulating actions drawn from either media, reality, or a combination of the two, but they switch from a media/reality-media combination at 38 months to a full reality focus at 50 months. The shift is stark – but it should be remembered that there are fewer child-child episodes to draw from. Children playing solo are moving from a somewhat more distributed set of content, including fantasy play, to a media/media-reality focus. It is quite interesting to note that children playing with adults at 38 and 50 months are more likely to simulate fantasy actions than when playing alone or with other children.

Although these data suggest that children may be more inclined to simulate familiar rather than novel content on their own, they do not tell us who is producing or initiating the fantasy elements we observed when children pretend with adult partners. When examining the players who are producing media-specific content, we found that parents and children are both likely to participate in pretend transformations with media-specific characters. Both parents and children produced transformations with media in episodes referencing specific media most of the time (84% of episodes at 38 months, 77% of episodes at 50 months). Children and adults were also nearly equally likely to initiate pretend elements with specific media; these elements were 47% parent-initiated (53% child-initiated) at 38 months and 43% parent-initiated (57% child-initiated) at 50 months.

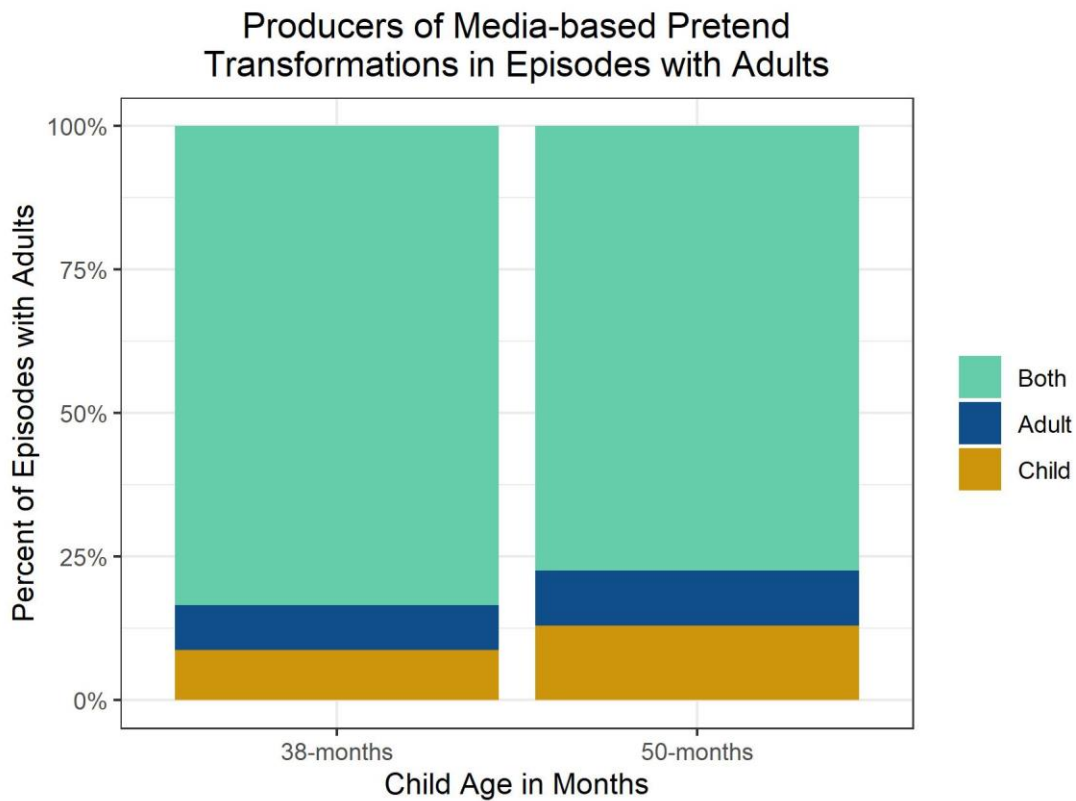


Figure 6-8: Producers of Media-Based Pretend Transformations in Episodes with Adults

For fantasy elements, adults and children behave slightly differently at 38 and 50 months. The figure below shows the proportion of episodes with adults in which fantasy elements appeared, broken down by the players who produced the fantasy elements.

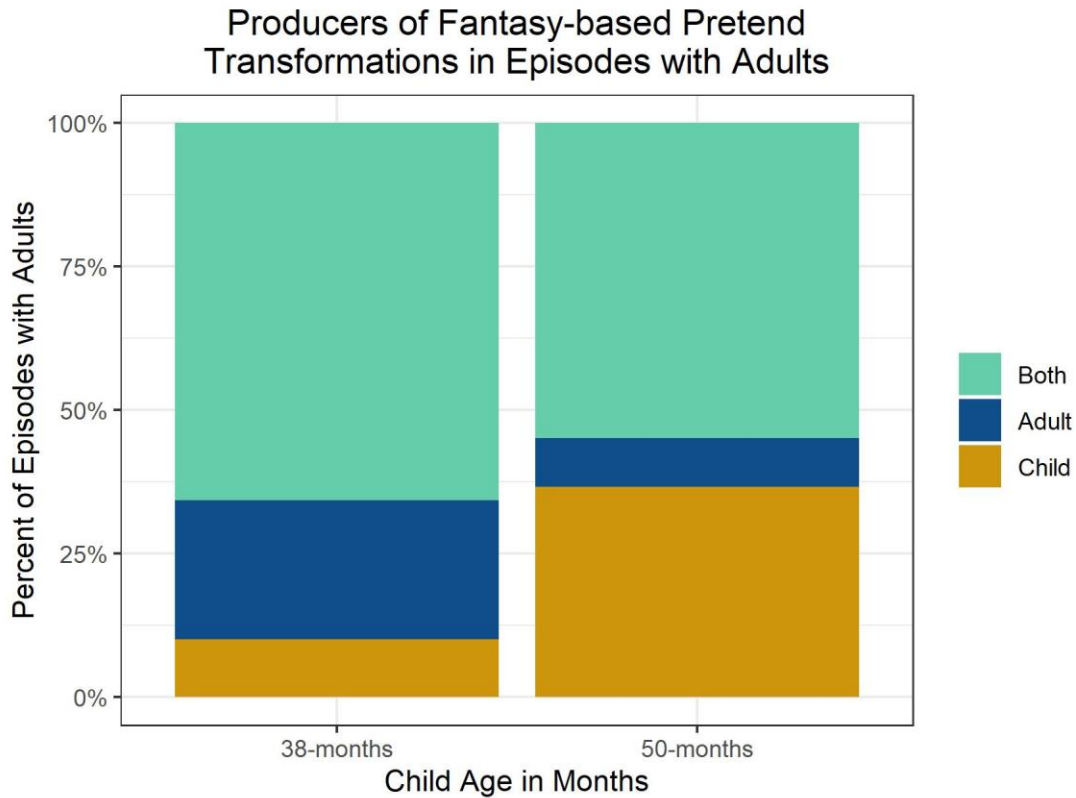


Figure 6-9: Producers of Fantasy-Based Pretend Transformations in Episodes with Adults

From the figure we see that, although both partners are likely to pretend with fantasy elements in an episode where fantasy has been introduced, more fantasy elements were produced by adults alone than by children alone at 38 months. This pattern reverses at 50 months, where more children are likely to be the only ones to produce fantasy elements in pretend episodes with adults present. It is perhaps not surprising, then, that when we examine initiation of these elements, we also see parents stepping back from introducing fantasy from 38 to 50 months. At 38-months, 46% of fantasy elements are parent-initiated, whereas only 38% of fantasy elements are parent-initiated at 50 months.

To summarize, there appears to be a shift in how parents and children participate in pretending about fantasy and reality across observations at 38 and 50 months. On their own, children appear to be more inclined to pretend with familiar plots and themes, either drawn from familiar stories or familiar experiences in their lives. When pretending with adults, on the other hand, fantasy invention appears to be more likely. At 38 months, we see some episodes where parents are the only ones producing fantasy elements in a pretend story. At 50 months, on the other hand, children are more likely to initiate and produce fantasy elements without adults also producing the fantasy.

These results suggest a picture of children's invented fantasy that modifies our understanding of children's invented worlds in pretend play. It may be, and the data in this study suggests, that adults are modeling fantasy elements in pretend play until children are three years old, as has been suggested by the literature, and then transitioning away from these prompts as children get older. In addition, popular children's media is also modeling story plots for children to use as elements in the pretend stories they create. What results is a propensity for children to use impossible elements and everyday experiences simultaneously, as they interpret and make meaning of both the cultural stories they have been surrounded by and the experiences they encounter in their everyday lives.

6.3 Discussion

The quantitative data in this section describe a story of changing roles for parents and children in pretend play over time. At 18 months, adults and older children produce the complex elements of pretend episodes. At 38 months, episodes with adults are more complex in terms of the number of transformations, transformation types including ideational transformations, the number of story events and story duration (discussed in chapter 4). This pattern of enhanced

complexity continues in episodes at 50 months, where episodes with adults are more likely to have multiple, complex transformations and at least five story events, whereas solo episodes are more likely to be single-event episodes. Episodes with adults are more likely to have fantasy actions at 38 and 50 months as well, compared to solo and child-child social pretend. In all the ways we have defined complexity, episodes with adults appear to be more complex than episodes with child partners or children pretending alone.

Although complexity is more prevalent when adults are present, within episodes with adults over time, parents and children begin to share responsibility for contributing complex elements to the play. Adults do not stop offering complex elements, but we see that children are contributing a greater proportion of complex elements as they age, and parents are stepping back in their contributions. This pattern remains true across elements of story complexity as well, assuming that fantasy elements are indeed more complex than other story actions. Parents also pull back in initiating media elements from 38 to 50 months, although this change is less pronounced. Across the board parents are pulling back in pretend play in this corpus as children get older, and this change leaves room for more complex play to be initiated by children rather than by adults, a pattern of increasing play not clearly seen before in this investigation.

We have yet to understand how this change in participation of adults over time directly impacts the complexity of the play that children produce. In the next chapter we will address how parent pretend behavior at 18 and 38 months may predict child pretend behavior at 50 months. Does the complexity of parent contributions to pretend play increase the production of complex play by children at 50 months? We will return to these questions in the next chapter.

In the remainder of this chapter, we turn to describing how parents and children interact when they pretend together, with a focus on the strategies they use to achieve their goals for the play.

6.4 Parent Priorities in Pretending at Home

Now that we have described the features of the play itself when pretending with adults, we can turn to the nature of interactions between parents and children during pretend play at home. After providing such detailed descriptions of the quantitative features of pretend play throughout this investigation, we risk reducing pretend play to its discrete features, overshadowing the richness and meaning embedded in this practice for children and families. The moment-to-moment experience of play is not discrete in its interpretation, and although the data reported thus far suggest the considerable variation in quantity and quality of play, this project would be lacking a crucial perspective if we did not provide an equally detailed description of how pretending at home unfolds in player interactions “on the ground.” That is, by highlighting the experience itself through excerpts from interactions between parents and children while pretending.

Rich descriptions of the interactions within pretend enhance our understanding and interpretation of the quantitative data already presented. Examining real excerpts from pretend play interactions, we can witness the ambiguity, flexibility, and complex negotiation that takes place over the pretend landscape. We can appreciate even more the degree to which pretending at home is difficult to parse, a perspective that is easy to lose when examining quantitative data exclusively. The abstraction of quantitative summaries is of course necessary and informative. But it does not convey the meaning and significance attached to the activity in the way that the players do themselves.

The following is a description of the patterns of behaviors observed in parent-child pretend play which offer us a window into parents' diverse goals for participating in pretending at home with their preschool children. These descriptions are focused on the negotiation of play in real time and describing how parents and children navigate their relationships, including status and authority, during pretend play. Importantly, these observations are illustrative; they have not been quantified for the purpose of associating parent behavior with child outcomes. The purpose here is to lift up the voices of the families who pretend and to recognize the meaning that they make in their interactions with one another over pretending at home.

As a means of framing these interactions, we consider how parents' goals for their children are manifested in their interactions. Based on cross-cultural research, parents demonstrate their priorities by organizing children's activities (Parmar et al., 2008). In a comparison of Asian immigrant families and Euro-American families, Asian immigrant parents were found to organize more activities that explicitly focused on academic skill building, such as learning letters and numbers. Asian immigrant and Euro-American parents spent similar amounts of time participating in activities with children, including play. However, Asian immigrant families participated in more construction play and Euro-American families participated in more pretend play. From this study of how Asian immigrant and Euro-American families spent their time, the authors proposed two distinct approaches to activities with children: that of teacher and playmate. The "teacher's" priorities differed from the "playmate's" in the types of activities emphasized. "Teacher" approaches, more dominant in Asian immigrant parents, involved more explicit academic skill-building activities. Parents were categorized as "playmates" if they engaged in more pretend play, as opposed to construction play, or other types of academic activities. This approach was more dominant in Euro-American parents.

A second study elaborated on these findings by interviewing parents about their priorities for children's play, and added two additional approaches: facilitator and observer (Muhonen et al., 2019). A "facilitator" expressed interest in supporting the child in developing independence, but also being a resource to support play when the child needed it. These parents described offering suggestions to elaborate play, but ultimately prioritizing the child's choices. "Observers" described their behavior as paying attention to what the child is doing and ensuring safety. These parents described the play itself as the priority, rather than learning goals. "Playmates" also prioritized the play itself and described the enjoyment in spending time with their child. Some explicitly rejected pursuing learning goals during play, while others described the goals in terms of positive emotions and relational connection. "Teachers" on the other hand, used the explicit language of modeling and explaining, emphasizing learning goals. They described both the formal learning of concepts and information about the world, and informal learning about appropriate behavior. Both of these studies found that although a single approach might be dominant in a particular cultural community, all of these approaches were identified to some degree in all the communities studied.

These studies offer a useful framework for examining parent approaches to pretend play. Although the first study characterized the participation in pretend play itself as a "playmate" indicator, the authors also acknowledged in their conclusions that choosing pretend was likely related to Euro-American parents' beliefs about play as a vehicle for learning.

"We believe that the Euro-American parents' greater involvement in play activities with their children does not indicate a greater personal disposition toward playfulness, but rather a different cultural belief (based partly on advice from 'experts') that play itself is the most successful medium for teaching school-related skills."
(p. 173)

If parents who prioritize play do so because they believe it offers benefits for learning, how do parents communicate their priorities for learning (as opposed to simple enjoyment) when playing with their children? I will argue in the following section that these approaches could be applied to the characteristics of interactions between parents and children *within* pretend play, and may reveal important differences between parents with distinct objectives for participating in pretend play with their children. If we examine interactions during pretend play with these approaches in mind, we may begin to understand how parent beliefs about the benefits of play impact the interactions during play. For example, if a parent believes that pretend is a means to learning about the real world, they might inject more real-world knowledge into play sessions. On the other hand, if the goal of the parent is simply to participate in the child's imaginary world, parents may play less of a lead role in directing the content of the play. In the following analysis, I propose behaviors within parent-child pretend play sessions that could be interpreted to reflect the four approaches of parents to children's activities: teacher, observer, facilitator and playmate.

6.4.1 Methods for Analyzing Interaction

Episodes were analyzed qualitatively to draw out themes describing the interactions between parents and children during pretend episodes. The sample of episodes utilized in chapter 5 to evaluate precise utterance counts. As described in that analysis, 40 episodes with adult participants containing at least five story events were analyzed. The episodes analyzed were selected quasi-randomly from the categories of duration outlined in chapter 5 (less than 1 minute to 5+ minutes). The sample was selected to represent 20% of the data according to the relative proportions of episodes in each duration category.

We examined all episodes in context to understand the nature of interaction within and around pretend play, even those utterances that were not considered part of the pretend play

itself. Patterns of interaction were coded within each episode and interactions were grouped according to their similarities. Results were then summarized according to major patterns with accompanying evidence from the data. The results presented below focus on how parents display their different approaches to play while pretending with their children.

6.4.2 Results

Two major behaviors that distinguished parents from one another included questions that served to assess the child's concrete knowledge and questions that served to elaborate the pretend story. We selected these behaviors for investigation to evaluate whether they align with two of the stances described earlier; that of "teacher" and "playmate." Through these investigations we found that elaboration was commonly supported in two different ways: from inside the play (e.g., through role play) and outside the play (e.g., through questions or suggestions). Finally, we identified a fourth pattern of interaction that did not fit comfortably with elaboration or teaching. These interactions were sustained conversations between parents and children that did not advance the story, but were nonetheless positive towards the activity. In the following sections we examine how these four types of interactions (closed questions, suggestions, elaborating through role play, and acknowledging remarks) align with the roles of teacher, facilitator, playmate and observer.

Observers and Labels

Certain parents sought to continue verbal interaction with children during play by acknowledging the child's actions and asking questions, mostly about the subject of the play, but sometimes about other topics tangentially related to the play. Comments were often generically positive, including "Wow," and "Oh really?" which were apparently intended to show support for the child's play. Questions posed in these interactions were often focused on labels, most

especially the names of play characters and the identification of toys or other objects. These questions served to continue a conversational exchange with children, but they rarely led to more events or details that extended the story. For example, parents often asked children for the names of characters or objects being animated or respond to children's demonstrations by asking about the characters or objects they're using. In the following excerpt, a parent and child play with construction toys from a *Transformers* toy set.

Table 6-1: Excerpt of Observer and Labelling

Parent: what do you think of this guy?
Parent: look.
Parent: I don't know what he's called.
Parent: we need to make a name up for him.
Parent: what do we call him?
Child: he's -- he's Optimus --
Parent: oh yeah?
Child: he's Land_Mine.
Parent: oh he's Land_Mine.
Parent: he's a what?
Parent: a land mine?
Child: he's Land_Mine.
Child: and here's Scatter_Shot.
Child: he doesn't turn into anything.
Parent: Scatter_Shot.
Parent: where do you get all these words sweetie?
Parent: where did you learn that?
Parent: Scatter_Shot.
Child: every -- everything --
Child: every Transformer learned from a Transformer_Cybertron.

Table 6-1, continued

Parent: did you?
Child: every Transformer.
Parent: hey this guy --
Parent: look.
Parent: this has got a special thing on it.
Parent: look.
Parent: what could that be?
Parent: some kind of --
Child: oh that's a thing for me.
Parent: ok.
Child: yeah that's my radar.
Parent: ok look.
Parent: I've got a special radar as well.
Parent: look at that.
Parent: it's my radar.

This episode typifies much pretend play that centers around media objects. The pretend occurs mostly in the third person, describing what characters can do but not necessarily acting the actions out. In this rest of this episode, very few pretend actions are performed in the present, although there are some. What stands out from the parent contributions is that they rarely succeed in extending the narrative. The parent does prompt the child for creative input around naming and identifying objects. But that focus remains dominant - the episode revolves around labeling characters and objects, not story actions, so the stories embedded in this episode remain short. The only story action coded in this example is that transformers learn from a “Transformer Cybertron.” There is an implied action of turning into something, which is only explicitly mentioned in the negative (“he doesn’t turn into anything,”). But otherwise, the conversation is

centered around labels. The style of interaction that this parent displays contrasts with other parents who produce story elaborations more frequently that add to the number of story events.

Although labeling interactions were particularly common with identifiable media characters, this kind of interaction was also common with generic toys. For example, a parent asked her child playing with generic blocks and people toys, “What’s this guy’s name? Have you named him yet?” Sometimes children would make up names in response to such questions, and other times they would dismiss the question with “I don’t know.” In this particular example, the child responded with “I will name him some day.”

Judging by the frequency of these types of questions, parents behaved as though the names of characters were particularly important, even when they were perhaps not pre-defined or considered so important to children. However, it is also possible that parents were using the names of objects and characters as a means of sustaining interaction with the child, centering the conversation on content the child was focused on, even if these questions did not serve to sustain the pretend story. For this reason, this type of interaction most closely resembled the observer approach. The parent is paying attention and focused on the child, but not necessarily working to extend the play itself.

Playmates and Saying “Yes”

Playmate interactions stood out when parents embraced children’s choices in play, regardless of its content. Playful parents validated children’s unusual, inaccurate or even inappropriate choices during play, whether or not they made any sense in the real world. This pattern was apparent with reality play as much as it was with play about fantasy. For example, in an elaborated play session with parent, child and sibling, children set up a “store” for shopping. The parent is waiting for the store to open, and the child says that it is not ready to open yet.

Table 6-2: Excerpt of Playmate Validating Play – Time

Parent: It's still closed?
Parent: Ok.
Child: No.
Child: It going to take time when -- when it's -- have to take time when it's outside.
Child: Want to go open when it's sixty+nine.
Child: Yeah.
Child: It means the store's going to open right now after sixty+nine.
Parent: That's what time it's going to open?
Child: Yeah.
Parent: Ok.
Child: Sixty+nine and the third clock is right here, so --

The parent does not comment on the nonsensical time, but rather accepts the made-up time as valid. The child then plays the store clerk, and the sibling and parent shop and buy items. When the parent checks out at the register, she asks how much the items are, and the child provides nonsense numbers. Here again, the parent accepts the prices and repeats the nonsense numbers that the child quotes even though the numbers don't sound like dollar values.

Table 6-3: Excerpts of Playmate Validating Play - Money

Parent: I need all these things.
Child: This one is twenty+four two five each.
Parent: Twenty+four two five.
Child: Yeah.
Parent: Ok.
Child: Twenty+four two five each.
Parent: Ok how much are the rest?
Child: Twenty+four.

Table 6-3, continued

Parent: Twenty+four plus twenty+four two five is forty+eight two five.
Child: Seven eighty+nine.
Parent: Eighty+nine?
Parent: I don't think I want this.
Parent: Maybe I'll buy it next time.
Child: It's seventy+eight, eight nine.
Parent: Yeah, I -- I don't have that much money.

Finally, she returns to the store when she discovers a problem with her eggs.

Table 6-4: Excerpt of Playmate Validating Play - Eggs

Parent: Sir, I got home and one of my eggs is broken.
Child: Ugh, I got to fix your thing.
Parent: You're going to fix it?
Parent: Alright.
Child: I got to fix this.
Child: Oh this one is --
Child: Mom put your fingers here and put back together.
Child: Every egg is not broke.
Parent: Thank goodness.
Parent: Ok, is it all fixed?
Child: Yup, yeah.
Parent: Thank you very much sir.
Parent: You're a good business man.

Without questioning, the parent accepts that eggs are something that a store manager can fix, and together they pretend to fix the imaginary broken eggs. Over this episode the parent

displays consistent acceptance of the child's "incorrect" contributions, presumably because the accuracy of the pretend with respect to the real world is not so important to her. This parent could, if she had different priorities, pause or stop the play to teach the child about time, money or the properties of eggs, but she does not. Other parents with teaching goals might, on the other hand, find ways to use this scenario to reinforce other concepts; as an example, a parent suggests that, while playing "store," they should shop for food according to the four food groups. Granted, steering the play in this way might require significantly more effort on the part of the parent, and could potentially create a conflict with the child's focus on the play, as we will see in later sections. But for some parents, the effort to assert reality appears to be worthwhile in service of the child's learning. The lack of this correcting and steering behavior distinguishes the play-oriented parents from the teaching-oriented ones.

When the priority is the story, parents incorporate not only children's inaccurate suggestions, they also take up children's surreal and even distasteful suggestions. In one such example, a child and her younger sibling are sitting in an empty laundry basket while their parent folds laundry. They establish that the basket is a boat, and that where the parent is standing is water, which the child has declared is "too yucky." The parent says she is wearing a special suit to protect her from the dirty water.

Table 6-5: Excerpt of Playmate Validating Play - Dirty Water

- Child: But it has to be a dirty suit because it's very dirty water.
- Parent: Well, when I first get in the water it's clean.
- Parent: Because I put it in the laundry.
- Parent: And then when I get out of the water it's all dirty from the dirty water.
- Child: But -- but there's poop in it.
- Parent: There's poop in the water?

Table 6-5, continued

- Child: Bird poo.
- Child: They was flying and they pooped in it.
- Parent: There was a what that flies?
- Child: Bird that flies.
- Child: And it has poop.
- Child: Poop poop poop poop.
- Parent: Yeah?
- Child: Go in it.
- Child: Get it out.
- Child: Have to get it out.
- Parent: Instead of going in the bird and fly poop?
- Child: Yeah.
- Parent: But I have my special suit on so I can be here.
- Parent: Besides look my boat's broken.
- Parent: I have to fix it.

The word “poop” is a source of tension between parents and children in quite a few households during these observations. But here in the pretend story (and possibly also in everyday life in this family) there is no conflict over the word or the proposed story, which has the parent swimming in “dirty water” from the beginning. In some households, talking about “poop,” even in pretend play, could get children sent to time out. But in this family context, the taboo subject matter of the play is not questioned.

Play-oriented parents accept children’s initiations in fantasy play as well, reinforcing the idea that the break from everyday reality in pretend play is valid. In one example, a child is drinking juice from a no-spill cup while playing with tiny *Polly Pocket* figures in a playhouse.

The child spontaneously recruits the juice cup to play a threatening character in the story, and the parent supports this enthusiastically, responding in character for the tiny dolls.

Table 6-6: Excerpt of Playmate Validating Play - Giant Juice

Parent: Close the roof?
Child: And we can be safe and warm.
Child: I don't want to do that at my house.
Child: *(In a deep voice)* Here I come.
Parent: There's juice in your house?
Child: *(Indicates juice)* Look.
Parent: Giant juice?
Child: Uh-huh.
Parent: *(In a high-pitched voice)* Oh, I'm scared.
Parent: No!
Parent: Giant juice!
Parent: Giant juice.
Parent: I'm scared.
Parent: Ah!
Child: *(hiding the juice behind her back)* There no more.
Parent: Yay!
Parent: Yay yay!
Parent: The giant juice is gone.

The parent smiles and responds to the fantasy invention with clear acceptance and reinforcement through the play. The child continues this story, repeating this short sequence of events many times: the juice appears, the dolls are scared, the juice goes away, the dolls are relieved. At one point, the dolls fight back and yell at the juice to go away. But the sequence repeats with relatively little deviation approximately nine times. Each time the juice appears and

disappears, the parent makes clear reactions for the dolls. At no point does the parent comment on the repetition. This parent satisfies the child's goal of playing out the story of danger and rescue/relief over and over again as long as she prompts it.

This parent also shows a willingness and facility with assuming roles and following the child's directions in the play. A while later, the child prompts the story of the *Three Little Pigs*.

Table 6-7: Excerpt of Playmate Validating Play - 3 Little Pigs

Parent: Little pig little pig.
Parent: Let me come in.
Child: Not a the ### of my chinnie chinnie chinnie.
Parent: Then I'll huff and I'll puff and I'll blow your house in.
Child: You can't -- you can't do it.
Parent: I can't?
Parent: Darn.
Child: ### It's way up here.
Parent: Oh.
Child: It's way up here again.
Parent: Oh no.
Parent: Darn.
Parent: Little pig little pig.
Parent: Let me come in.
Child: You can't.
Child: You got to be a nice wolf.
Parent: Oh I have to be a nice wolf?
Child: Yeah.
Parent: Ok.
Parent: Can I come in, please?
Child: Yes.

Once again, the parent adapts during the scene to the child's direction, embodying a "nice wolf" by changing her tone of voice and saying "Please?" The parent never offers another version of events or argues about the details of the referenced story. Also, the way the parent responds in role to the child's adaptations reinforces the child's agency and satisfaction in the game. Her parent makes the pretend she desires come to life.

Facilitators and Extending Stories

Similar to some of the observer interactions, some parents use questions as a means of extending a story in collaboration with the child, and some parents ask many more elaborating questions than others across the sample. For facilitators, though, elaborating questions serve to add details and events to the story. These questions differ from closed questions, where there is a correct answer, and clarifying questions, which refer to what is already established. Elaborating questions are also distinct from labeling questions, described earlier, which focus on naming and recalling details that do not promote further story action.

Some parents work hard to produce elaborated narratives with children by eliciting the story details one by one. In the following excerpt we list the set of questions used by a parent to elaborate a "doctor's visit" pretend scenario. A real cat and several stuffed animals also feature as patients in the episode. Each question is only shown once here, representing a single instance of elaboration on the story action, although several of these questions were repeated multiple times. This list describes the variety of prompts serving to sustain the pretend actions performed by the child, resulting in an extended pretend story.

Table 6-8: Facilitator Questions - Doctor

Parent: Are you going to check her before she goes?
What else can you do to check her?

Table 6-8, continued

Ok, how about that?
Medicine?
Will that keep her from getting an infection?
Does she have a temperature?
How's her heart sound?
Can you hear it?
Is she ok?
Does her heart sound good?
Does she need a shot?
How's her blood pressure?
Does he need a shot?
Is he sick?
What do you want to do?
Want to bandage her front leg?
Are you going to wrap anything on her?
Where -- where you going to wrap her?
Is that hot tea?
Is it good?

If we assume that the child responded to these questions in the intended manner, performing additional story events, then the parent would be responsible for initiating 20 story events through this strategy alone. This example illustrates clearly what an facilitator can contribute to story complexity which is above and beyond what children may be capable of sustaining on their own.

For some parents, this active elicitation of story events can approach a more teaching-oriented practice. In one family, storytelling was explicitly framed as a “tell me a story” game,

and the child was often reluctant to contribute ideas at first. In the following example, the child has selected, from prescribed options for things to do, to play with shapes (pretend play is not specifically mentioned). The parent and child are sitting in front of a pile of shape toys and a toy bus.

Table 6-9: Facilitator - Story Game

Parent:	Look at your little people.	
Parent:	Can you tell me a story about their -- they're people going on a bus?	
Child:		No.
Parent:	Let's play a story game.	
Parent:	Tell me a story about the people.	Why?
Child:		I can't.
Parent:	Yes you can.	
Child:		It's not my turn.
Parent:	It's not my -- it's not your turn?	
Parent:	Sure it is.	
Child:		No, it's not.
Parent:	Whose turn is it?	
Child:		Mommy's --

Although it takes some time to get going, this dyad eventually constructs one of the longest story sequences observed at this time point. The questions the parent poses are deliberate. She focuses on eliciting the story events from the child, and does not allow the child to decline when the child says "I don't know." She asks questions like, "What are they going to do to have fun?" and "What are two things that they will do at the party?" "What else did they do at the park?" and "What did he do to scare the blocks away?" When the answer is specific enough, the

parent and child act out the actions described. Then, the parent asks “What happened next?” Eventually the child volunteers story actions without being prompted, but sometimes, when specifically asked what’s next, the child will default to “I don’t know.”

It is interesting to consider how framing pretend play as a “story game” with a parent might alter children’s approach to it. Children are rarely at a loss for the next action in stories they are spontaneously constructing while pretending alone. However, it may be that being in the company of an adult with obvious expectations, and the authority to pass judgment, some children may become more apprehensive rather than elaborate. The position of authority that the parent holds is not suspended during pretend play, at least not for many parents. In the next section we consider how the parent exercises their authority during pretend play, and uses strategies during play to communicate their values and learning expectations for children.

Teachers and Assessing Knowledge

Teaching interactions were identified where parents placed a priority on real-world knowledge. Some parents used questions frequently to assess children’s knowledge during play, often in the form of “closed” questions – questions with a “correct” answer that the parents already knew. The questions were employed in the middle of playing and often, though not always, served as a departure from the pretend. For example, some parents were particularly inclined to test children’s knowledge during play episodes utilizing the pretend scenario as a prompt for questions they expected children to know the answers to. Academic skills were also tested in these scenarios. For example, adults would ask children to name objects, colors, letters and shapes during pretend play. Adults would ask if children remembered details about a past experience or a vocabulary word. Sometimes these questions were embedded almost seamless into the play itself. In one episode, which I will use as an elaborated example, a parent plays

“dinosaur hunter” with his child, using a “map” to find “dinosaur bones.” The child initiates the story and the parent asks the child if he can remember the name of the place where they went to see a dinosaur exhibit (i.e., the parent was testing for knowledge of the word “museum”). After passing this test, the child proceeds to “read” the “map” and identify common household objects as different types of dinosaur bones. The parent follows suit, employing his own “map” with its own “instructions” to find dinosaur bones. From this point on, the parent transforms the story into a game where he describes something specific in the room for the child to find.

Table 6-10: Teacher Activity - Correct Answers

- Parent: There's a long dinosaur bone that's white with a blue end to it with special writing on it.
- Parent: And it's white.
- Parent: It's long.
- Parent: It's on the table.
- Parent: It's right on some cards.
- Parent: Here it is.
- Parent: It's white.
- Parent: On the table.
- Parent: It's real long.
- Parent: No -- no.
- Parent: It's white, and it has a blue little end to it.
- Parent: It's about this long, and this skinny.
- Parent: It's by the train.
- Parent: It's on the table.
- Parent: Right here.
- Child: This one?
- Parent: No, that one, right there.
- Child: Another dinosaur arm!

What was initiated as play about transforming objects in the environment becomes a game where the child is finding what the parent directs him to find. The parent pretends to read the dinosaur “map” for the instructions describing the real-world item he has selected. The parent offers a good deal of praise when the child succeeds, but through this transformation of the game, the parent has also opened up the possibility for the child to be “wrong” in his answers. Using one of the “bones” that was found, the parent then becomes focused on letter identification, and asks the child to identify the letters he points to so that he can read the word on the object. The parent has not entirely left the dinosaur hunting game, but the activity appears to cause frustration for the child, resulting in an outburst. The child destroys something belonging to the parent and is sent to “time out.”

Table 6-11: Teacher Activity - Naming Letters

Parent:	The next letter?
Parent:	That letter sounds like a sss.
Child:	Daddy.
Parent:	Yeah?
Child:	Just read it.
Parent:	I can't read it.
Parent:	I can't do ###
Child:	I don't know what it says.
Parent:	You just have to tell me a letter and I'll tell you what it says after you say the letter.
Child:	I don't know what it says.
Child:	So you read it.
Child:	I don't know what it says.
Parent:	I can't read it.
Parent:	Because when you're four years old there's a special --
Child:	I can't read it.

Table 6-11, continued

Child: You have to try to read -- make me read.
Parent: I'm not going to try to make you read.
Parent: You can read on your own.
Parent: After the O, it says to have your four-year-old boy read the letter after O.
Parent: If he wants to be an expert dinosaur hunter, he has to tell you the letter after O.
Parent: Well, don't break it.
Parent: Can't break --
Child: I'm not playing -- I'm not playing dinosaur hunt again!

Following this scene, after a few minutes in time out, the parent comes to the child and explains why it is important to label letters when he is asked to, particularly once he starts going to school. During this exchange, the child tries multiple times to distract the parent with new pretend scenarios he has devised, but the parent dismisses his initiations. Finally, the parent uses pretend to reinforce his message by taking on the role of the child's preschool teacher, "Mrs. V."

Table 6-12: Teacher Activity - Playing School

When you're in school, if your teachers ask you something, if they want to know
Parent: a letter, you better answer them, Ok?
Parent: I don't want you to get mad.
Parent: When you're in school, I want you to pretend that I am Mrs_V.
Parent: (*In high-pitched voice*) [child full name], what letter is this first one?
Child: T.
Parent: What letter is the uh last one?
Child: S.
Parent: And what letter is this one right here?
Child: R.

Parent: Uh, no, that one right next to the L.

Parent: It goes something L...

Parent: What's that letter next --

Child: B!

When the child has identified several more letters for "Mrs. V," the parent declares "...you have your newfound dinosaur hunter powers for being a good boy. You are no longer in time out." The child responds with "I love you, Daddy."

Although it's clear that a positive resolution was found for this parent-child conflict, this example underscores how the parent's teaching priorities superseded the child's interest in continuing to tell the pretend story. In this case the parent also used pretend play to reinforce his learning goals for the child, employing pretend explicitly to recruit the child into accepting the lesson about labeling letters and responding to teachers. Although the attempt to engage the child is sincere, the child is no doubt aware, while sitting in "time out," that there are real-world consequences for not playing along. It is not clear from the transcript, but rather only from the child's tone of voice, that labeling the letters for "Mrs. V" is at first an act of resignation. In a low, defeated tone, the child recites the first few letters, until the parent suggests that one of the letters "Mrs. V" wants him to name is a "hard one." When then child succeeds at identifying this letter, he smiles, and opens up to the labeling game. After "Mrs. V" returns the dinosaur hunter's powers, the parent and child continue to pretend about dinosaur bones for a few minutes more before turning to a game of catch. Teaching activities like naming letters are common in certain parents' behavior patterns, although this parent is somewhat unusual in his weaving of teaching

strategies into the pretend scenario. For other parents inclined to teach through pretend, the departure of the teaching from the play can be more direct.

For parents concerned with children's knowledge of the real world, children's unusual choices begin to be questioned rather than accepted during pretend play. For example, one parent plays with her son who is hiding under a blanket pretending to be a grizzly bear. The parent participates in a repeated sequence of actions, prompted by the child, saying 'who is hiding under there?' and then checking under the blanket to confirm that there is grizzly bear. After three repetitions of this sequence, the parent shifts to closed questions, a pattern she repeats throughout the session.

Table 6-13: Teacher Activity - Grizzly Bear

Parent: What color grizzly bear are you?
Parent: What color are you?
Child: It's -- it's --
Parent: What color?
Child: Where's my ### my tail.
Parent: What color grizzly bear are you?
Parent: Hmm?
Parent: You purple?
Parent: You a purple grizzly bear?
Child: Yeah
Parent: Oh you are.
Child: Oh no.
Parent: I didn't know they made purple grizzly bears.
Parent: What about brown or black?
Parent: Brown grizzly bear.
Child: Um, black grizzly bear.

Table 6-13, continued

Parent: Oh you're a black grizzly bear.

Parent: Ok.

Although the parent prompted the color purple for the grizzly bear, it quickly became clear that she intended that “silly” choice to be rejected. But, in the realm of pretend play there are no limits on the colors that bears can be. Nonetheless, the parent expresses her priority for “real” answers, and the child adapts his choice.

This child has an idiosyncratic interaction strategy for pretend play – he says the line(s) that he wants the parent to say to him, repeating until acknowledged, like a theatrical prompt. The parent usually responds by saying what the child has prompted, which allows the child to react in the way he wants to in the pretend story. Using this technique, he initiates and directs the pretend with his mother. For example, he starts the grizzly bear interaction by saying “Who’s hiding under there?” Each time he says it, and the parent repeats the line, he starts the scenario over again. At some point, though, the parent appears to lose interest in the repetition (she says, “Always need to find the grizzly bear,”) and tries to change the activity. The last time the child prompts with “Who’s hiding?” she replies, “I don’t know.” This doesn’t deter the child for long, however. After some time, he changes the prompt to “What you doing, chameleon?” With this scenario, the parent shifts away from the pretending into closed questioning relatively quickly.

Table 6-14: Teacher Activity - Chameleon

Child: What you doing chameleon?

Parent: Ok.

Child: What you doing chameleon?

Parent: What are you doing chameleon?

Child: I'm trying to get on the grass.

Parent: Oh you're trying to get on the grass.

Table 6-14, continued

Parent: Not much grass there.

Parent: Did you turn the same color as the grass?

Parent: Chameleon?

Parent: Hmm?

Parent: Did you -- did the chameleon turn the same color?

Parent: As the grass?

Parent: What color would that be?

Child: Same as the -- the --

Parent: What color?

Child: Mixdy.

Child: Mixdy.

Parent: Mixdy?

Parent: Ok.

Parent: What color is grass [child]?

Child: Mixdy.

Parent: No that's not a color.

Parent: That's somebody's name.

Child: It's mixdy.

Parent: What color is grass?

Child: It's mixdy.

Child: Mixdy.

Parent: Who's mixdy?

Parent: Who's mixdy?

Child: It's the chameleon.

Parent: Oh the chameleon -- the mixed up.

Parent: Yeah that's -- that's the book called The_Mixed_Up_Chameleon.

Child: The mixed up.

Parent: Yeah.

Table 6-14, continued

- Child: The mixed up.
Parent: He wanted to be everybody but himself.
Parent: He wanted to be an elephant.
Parent: Right?
Parent: He wanted to be a flamingo.
Parent: What else did he want to be?
Parent: Hmm?
Parent: What else did he want to be?
Child: A big fox.
Parent: Yeah he wanted to be a big fox.
Parent: What else?

Once again here, the child's unusual answers to closed questions are not accepted by the parent. This is an important distinction found in parents that prioritize real-world knowledge over play goals. In this scenario, the parent does not choose to take on another role from the book, or engage in other dialogue allowing the child to explore the perspective of the chameleon, according to the child's prompts. Even when asking questions of the child in the role of chameleon, the questions pertain to real world knowledge – i.e., the color of grass. When the parent realizes that the book “The Mixed-up Chameleon” is being referenced, she turns to asking the child to recall details from the book, but none of these details or ideas become part of the play. In fact, the play is extinguished in favor of this knowledge-checking activity.

Despite the parent's steering in favor of her teaching priorities, the child persists in initiating role play with the parent. Somewhat later he proposes a reciprocal mother-baby scenario with himself and his mother as lions. At first, he refers to the parent as “mama lion,” but then shifts back to prompting her with what to say to him, i.e., to call him “baby lion.” Instead of

engaging in the role play, the parent shifts to a real-world activity: calling the child's father on the phone, as though that is what the child was asking to do. The play is extinguished when the parent makes the phone call.

Table 6-15: Teacher Activity - Lions

Child:		Ok mama lion.
Parent:	Yes.	
Child:		Ok baby lion.
Parent:	What's a --	
Parent:	Ok -- ok what?	
Child:		And where's daddy lion?
Parent:	Daddy lion's at work.	
Parent:	You want to call him on the telephone?	
Parent:	Want to talk to daddy on the telephone?	

The pattern of using pretend to focus on real-world knowledge is common for certain parents, and the questions that they tend to ask children make their priorities clear. This messaging doesn't necessarily change children's priorities or behaviors, though. In this particular case, the child is inclined to prompt role play throughout the session despite multiple dismissals and transitions from pretend to quizzing prompted by the parent. At the 50-month visit, this child remains an avid player, pretending for extended periods despite his mother's distinct focus. The parent engages in the play as well, though at the 50-month visit the child appears to rely less on her to interact with him in order to sustain the play. So, it appears that even when parents take a "teaching" stance during pretend play, which can extinguish the play in some circumstances,

certain children nonetheless continue to spend significant time investing in pretend with their parent.

Teachers and Communicating Values

Throughout the corpus, parents communicate to children about what is acceptable and appropriate, including what they believe it is acceptable and appropriate to pretend about. This pattern of interaction is another side of the teaching stance, but one that focuses on informal lessons of social norms and expectations. A common pattern among parents is to express disapproval when children pretend with negative emotions, displaying aggression or violence through pretend. They communicate this disapproval both explicitly, by stopping the play to negate a child's suggestion, and also implicitly, by modifying the story to express their own values and expectations through character actions.

Parents expressing disapproval at violent ideas in pretend play appeared commonly in the corpus. Often the prohibition of negative words such as *kill* or *hate* was invoked during pretend, although this was by no means universal. In another example from the shape story with the facilitator parent above, the parent and child play with blocks, animating them as though they are a classroom of children. The children go on the bus, go to the park and play in the water. The parent then prompts for the next event in the story, but won't accept a violent resolution.

Table 6-16: Teaching Values - Monster

Parent:	what else did they do at the park?	
Child:		they can -- the monster came.
Parent:	the monster came?	
Parent:	at the park?	yeah.

Table 6-16, continued

Parent: who's the monster?
Child: (chooses toy) this.
Child: him.
Parent: oh, ok.
Parent: and what did the monster do?
Child: um, she scared all the people away.
Parent: he scared all the people away -
- or scared all the blocks away?
Child: yeah.
Parent: so how did he scare all the blocks away?
Parent: what did he do to scare all the blocks away?
Child: she -- she killed them.
Parent: oh.
Parent: he did?
(Pause)
Parent: I don't like that word.
Parent: how about he just roared at them?
Child: yeah.
Parent: ok.
Parent: can you -- can he roar at them?
Child: Rarr!
Parent: and then what did the blocks do?
Child: they ran away!
Parent: they ran away?
Parent and child: Ahh! yeah.

Table 6-16, continued

Parent and child:	Ahh!	they have to get on school bus!
Parent and child:	hurry up!	let's get --
Child:		hurry up!
Child:		the monster going to get us!
Child:		let's get on -- let's get on school bus!
Child:		come on, kids!

This rejection of violence in pretend comes in stark contrast with parents taking the playmate approach, who either ignore or even embrace the child's contributions, even if they are taboo. In one extended example, a child and parent role play with animal finger puppets. At one point the parent is reminded of the three bears from *Goldilocks*, so they begin to act out that story (with two bears, one monkey, and a chicken as *Goldilocks*). Towards the end of the story, the bears find Goldilocks in their bed.

Table 6-17: Teaching Values - Goldilocks

Child:	(as bear) who's sitting in your bed?
Parent:	(as bear) It's a yellow chick.
Child:	It's Goldilocks.
Parent:	(as Goldilocks) hey.
Parent:	Who are you?
Child:	Bears.
Parent:	What?
Child:	Bears.
Parent:	Oh bears.
Parent:	(whispers to child) do bears eat birds?
Parent:	Hmm?

Table 6-17, continued

Parent: Do bears eat birds?
Child: I think.
Parent: You think so?
Child: Yeah.
Parent: (*as Goldilocks*) ah.
Parent: Got to run away.
Parent: Oh no got to run away.
Child: (*as bears*) I don't like that.
Child: Ok.
Parent: I got to run away.
Parent: She ran away.
Parent: You can't find her.
Parent: Stop.
Child: (*reaching for the chicken finger puppet*) just let go.
Parent: (*releasing finger puppet to child*) Because you're going to keep on chasing her?
Child: (*as bear*) I got you.
Parent: What are you going to do when you catch her?
Child: I got ###.
Parent: (*as Goldilocks*) ah.
Parent: Ah.
Child: I got some dinner.
Parent: I'm so sorry.
Parent: I'm so sorry.
Child: I got some dinner.
Parent: Dinner.
Parent: Oh no not --
Parent: (*narrating*) and the three -- and the two bears and the monkey ate chicken for dinner.

Table 6-17, continued

Parent: (as bears) yum yum yum yum yum.

Child: (as bears) yum yum.

Parent: That's a horrible story.

Parent: That's so not right.

Parent: No.

Parent: Bad.

Parent: Poor chickie.

Parent: Poor chickie is eaten for dinner.

Although the parent appears to be expressing disapproval at the end of the story, she does so while laughing. As a playmate, she is complicit in creating the violent ending to the story, and she allows it to stand. In reality, an ending where the protagonist dies as a result of their own careless behavior is not out of character for fairy tales, so this ending is certainly “correct” for the genre. This parent does not reject the violence though – she even prompts the “Yum, yum, yum,” of the bears eating *Goldilocks* the chicken for dinner. This response to violence in pretend play comes in strong contrast to other parents who reject such choices out of hand.

By avoiding negative story events, parents also communicated their expectations for children’s behavior in real life. In one example, a child responded to a toy falling out of a toy car.

Table 6-18: Teaching Values - Crying

Child: Did she get a boo-boo on her head?

Parent: She might have gotten a boo-boo on her head, yes.

Child: Is she crying?

Parent: No, I don’t think she’s crying. I think she’s brave. I don’t think she’s crying.

Child: You don’t think she’s crying.

In some ways it is not surprising that parents desire to steer children away from pretending about undesirable behaviors and negative events. Parents do not want to support such behaviors, and they might suppose that engaging in those behaviors in pretend play condones those behaviors in real life. Certainly, they offer examples of preferred behavior (e.g., being brave when you get a “boo-boo”) in pretend play episodes. But it is not at all clear that children internalize these lessons from pretending.

Furthermore, since the early days of the study of pretend, theorists have proposed that children utilize pretend play to process salient negative experiences. Many of the most well-formed spoken narratives by young children pertain to negative events (Peggy Miller & Sperry, 1988). Children who pretend about a variety of strong emotions, including negative emotions, are reportedly more emotionally mature than those who do not (Russ, 2004), although work on emotional expression in pretend play must always be considered within its specific cultural context. American children are particularly known for invoking highly emotional scenarios in their pretend compared to children in other cultural contexts (Gaskins & Miller, 2009), and children’s goals for pretending in this context may not be limited to those behaviors that adults consider to be appropriate. However, it is clear from examples in this corpus that when parents play with children, their rules and prohibitions apply to behavior both outside and inside the make-believe.

Importantly, no parent adopts the approach of any category exclusively. Parents change strategies throughout episodes and observations, perhaps offering elaboration at one point and labeling or closed questioning at others. With this analysis, we simply observe the overall patterns of pretend play with parents and highlight how parents assert their priorities while pretending. In a very extended episode at 50 months, a parent invokes three out of the four

approaches during the play: teacher, playmate and facilitator. Through this episode the parent utilizes the platform of pretend play to emphasize preferred behavior and real-world knowledge, while also elaborating extensively on fantasy themes through role play and taking up (although sometimes reluctantly) the child's inaccurate or distasteful assertions. Through these strategies the parent supports the child's initiations, but within limits. Like other parents, he becomes fatigued with repetition. And when there appears a conflict between fantasy and reality, he asserts that reality must prevail, even when pretending.

The circumstances are unusual for this family. The child's mother passed away only a few months before the observation. This reality pervades the play session, both in the content explored and in the parent's approach to play. In the following example, the child initiates multiple scenarios involving a family of flying horses being separated from one another. At first, the mother and sister are captured and taken away to a mountain. The father and brother horses journey to rescue them. There, the story goes down a path that challenges a boundary for the parent.

Table 6-19: Teaching Values - Sleeping Horses

Child: Your sister is dead.
Parent: Sister is what?
Child: Your sister is dead.
Parent: No she's not.
Child: Yes she is.
Parent: What happened to her?
Child: The guiders made her -- magic --
Child: They gave them -- some -- magic sleeping potion.
Child: They will never wake up.
Parent: Well, are they sleeping or are they dead?

Table 6-19, continued

- Parent: Different.
- Parent: Because if they're dead, they're not -- they're going to go to heaven and they won't be coming back.
- Parent: No, they're up in heaven.
- Parent: Are they sleeping?
- Child: They're up in heaven.
- Parent: Ok.
- Child: They're up in heaven.
- Child: You got to go get them.
- Parent: We can't get them when they're in heaven, honey.
- Parent: If they're sleeping, we can go get them.
- Parent: If they're sleeping.
- Parent: But if they're up in heaven, they're -- up in heaven.
- Child: They're sleeping.
- Parent: They're sleeping?
- Parent: They're not dead?
- Child: Ok, they're sleeping.
- Parent: Then we can go get them, Ok?
- Parent: Ok?
- Parent: So they're sleeping?
- Parent: Are you sure?
- Parent: Ok.
- Parent: So we can go get them then.

It becomes clear as this dialogue unfolds that the parent is asserting reality into the pretend play on behalf of what he believes is best for his daughter's grieving process. The parent does not want the child to be confused about the loss of her mother, or to generate expectations that somehow her mother could be rescued or return. The interaction is clearly uncomfortable for

both of them. Eventually the child acquiesces and the story continues with the sister being rescued and reunited with the family. With varying degrees of variation, the child initiates this story over and over again. The family goes to sleep, they wake up to find someone missing, the missing person is rescued and the family is reunited. In some versions, the sister is locked in a high tower, the brother is trapped on the mountain, the parents are trapped in a hot oil pot, then both the brother and sister are locked in the tower. At one point, when the brother and sister horses come to rescue their parents, the child delays the escape to express their feelings.

Table 6-20: Teaching Values - Family Emotions

Parent: What are you guys doing?
Child: Brother.
Child: Missed you.
Parent: I missed you, too.
Parent: What are you doing?
Child: I don't know.
Parent: We have to go back.
Parent: We have to go down the slide.
Child: No.
Parent: Back to step stone hill.
Child: We missed you really much.
Parent: I did.
Parent: I missed you.
Parent: Ok, ready?
Child: Sister, I missed you.
Parent: Down the slide.
Parent: Oh, I missed you, too.
Parent: Ready?
Child: We missed you really much.

Table 6-20, continued

Parent: Aw, yeah Mommies and -- Mommies and Daddies miss their little girl.

What seems to underlie parents' behaviors across the sample are their beliefs about what would be best for their child. As we have discussed, these parents are under significant pressure to support their child's healthy social, cognitive and emotional development in an optimal manner. It is difficult to know, however, exactly what children are learning from practicing pretend play with their parents. We can't know whether the parent's or the child's approach is superior – whether it is “better” for this child to play out her fantasy about rescuing her mother from heaven or not. But we can observe that this was the story that the child wanted to pretend, and the parent prohibited that play from happening with him as a play partner. It is also entirely possible that this child might have played out such a scenario on her own. This of course returns us to one of the original questions we asked at the beginning of this study. If pretend play itself offers children the opportunity to “be their own teachers,” how is pretend play altered when parents are teaching as well? These data suggest that parents' priorities become primary, whether they are to teach lessons about the real world, or to surrender to whatever incongruities they encounter so that children can follow their own path.

6.4.3 Discussion

In their qualitative descriptions of interactions during pretending at home, Haight and Miller (1993) raised a number of functions that they observed that pretend play served for children. They argued that “Children and their mothers pretended for the sheer fun of it. But they also used pretend play to express and regulate feelings, support an argument, enliven daily routines, teach and influence the other's behavior.” Specifically with regard to teaching, they

focused on the opportunities for children to learn about social roles and conventions when pretend is not being used as a “deliberate teaching device.” As Vygotsky suggested, there is much that children learn about the social conventions of the societies they live in through pretend play, and he did not consider parents to be the vehicle, or to create specific opportunities for that learning (Vygotsky, 1967). Here, instead of examining how children learn about the everyday world through pretend play, we highlight specifically how parents teach lessons deliberately through pretend play. When the adult becomes the teacher, their priorities guide the play, and at times disrupt the pretense.

Do the behaviors described in this section inform us about parent approaches as teachers and playmates? I believe that they do. We can identify parents who, like observers, mostly remain on the periphery of play, observing and acknowledging, but not necessarily engaging in the way that children do. Play-oriented approaches, in our conception, do not inhibit the child’s desire to imagine circumstance that are unusual, inaccurate, surreal or uncomfortable for adults. I’ve argued here that deliberate teaching can often be identified in the ways that parents modify children’s proposals, steer the content of the play or seek correct answers to closed questions. Parents who prioritize teaching also invoke real-world consequences for children’s unacceptable choices for pretending.

As for facilitators, this approach can occupy a liminal space between teaching and playing. It could be assumed that elaboration of play, like engaging in pretend at all, may be another indicator of a play-oriented approach. This criterion may fit under some circumstances, but elaboration and teaching are not mutually exclusive. In fact, in some families, elicitation of story events seems more like a teaching activity than a play-oriented one, in that it can conflict

with children's own desires for play, and soliciting details from children does not necessarily mean that children's responses will be acceptable.

These data once again raise the tension between the traditional assumptions that pretend play is an activity for children to direct their own learning and satisfy their own emotional needs and the modern approach to pretend play as a teaching opportunity for adults. When adults teach, they promote their own priorities, and boundaries parents set around these lessons inhibit children's opportunities for self-directed expression. Furthermore, we've seen from this study that parents invest significant time in pretending with children, to the point that some children never pretended without an adult during our observations. Deliberate teaching requires significant effort on the part of parents, and reminds us of the description of scaffolding from Jerome Bruner (1977) in chapter two: "The tutor's first and obvious task is to enlist the problem solver's interest in and adherence to the requirements of the task...**getting the children not only interested, but weaned from initial imaginative play...**" that is, the play the children initiate themselves.

If parents are a consistent presence in children's pretend play, and the objectives of parents, pursued with considerable effort on the part of parents, are in tension with the objectives of children, who is getting their needs met when parents and children pretend together? And if parent authority inhibits children from pursuing what they seek to understand, how do children ultimately satisfy this curiosity?

6.5 General Discussion

In this chapter we have uncovered how parents contribute to pretend play with children and how these contributions may impact how children experience and potentially learn from pretending. We've confirmed findings in the literature that episodes with adults last longer and

are more complex in terms of producing ideational transformations and linking together longer sequences of story events. We have also described supporting evidence for the claim that parents are more likely to prompt fantasy until the child is three years old, and less likely to do so after that age. This section confirms accepted understanding in the literature that adults “raise the level of play.” But we also identified that parents and children have evolving roles in the prompting and production of complex play over time. Particularly with ideational transformations, we see children taking up more responsibility for the play, and adults stepping back in the amount they initiate, and even in the amount of pretend they produce with children over time. It is also very interesting to see how parents are more likely to be involved where fantasy actions are part of the storytelling. If we consider fantasy play to be more complex, this is another avenue through which parents may be elevating play. We have certainly seen that there are parents who validate and promote fantasy. But children seem to be more likely to choose stories about what they know, rather than what they must invent. Perhaps this behavior is less cognitively taxing, but it may also be more satisfying for children to explore the worlds and the stories that surround them. Children on their own in preschool appear to be choosing to play out stories from media, and their everyday lives, and sometime the combination of both.

In part two we described the strategies that parents use to communicate their priorities during children’s pretend. We described four major types of approaches that adults take during pretend play with children: teacher, playmate, observer and facilitator. We found that parent approaches to play with children can be identified within pretend play interactions. Teaching behavior can be conceived in terms of asserting parent priorities over children’s contributions, where parents stop or modify play to create what they deem acceptable or important for children to learn. These lessons are presumably inserted into play to recruit children to learn, and to teach

what parents deem necessary for children to function in the real world. This approach lives in stark contrast with the playmate approach which does not prioritize real-world knowledge or standards of decorum. Some parents do seem to have a dominant stance as a teacher or playmate. But we suggest, as did Parmar, Super and Harkness (2008) did, that these approaches can be intertwined. A facilitator may elicit stories from children with a learning goal in mind, and sometimes a parent's priority for real-world accuracy can be surrendered. In every case, we observed that parents are playing a role in children's play, which is not limited to "raising the level" of play. Parent participation alters the experience of the play itself for children. We must acknowledge this as a fundamental feature of pretend play for preschool children in modern American homes, and discuss the activity within its rich and complex context. We hope that this analysis of parent behavioral strategies can be used to ground these investigations in that context, reminding us that the impact of pretend play on development cannot be measured in isolation. In the follow chapter we will focus on putting play into context more thoroughly, not only within households, but also within the surrounding context of socio-cultural communities.

7 Putting Play into Context

“Indeed, a ‘play ethos’ in modern societies might be functional in raising levels of scaffolding for pretend play well above what they might be normally. Whether this heightened scaffolding actually has all the benefits intended and expected is still to be fully demonstrated.” (Smith, 2005, p.202)

7.1 Introduction

Thus far, we have highlighted how pretending at home varies in a representative sample. First, we described how children and parents vary in the amount of time they invest in pretending across the preschool years. To examine this variation, we divided the sample by the total amount of time children spent pretending at 38 and 50 months to create four groups for comparison. Across these groups we observed further variation in the features of pretend play episodes, such as duration, complexity and the contributions of play partners. In this chapter, we aim to bring together the results from the preceding chapters by putting pretend play in context, within families, communities and the education system.

We start by exploring the patterns of play systems within families. For example, we saw in chapter 5 that children who pretend the most were also likely to pretend more with adults at 50 months. We saw that some children who pretend for extended periods of time at 38 months drop off in their investment in pretend play at the same time that adults back off in their participation in pretend, whereas others take up more solo play at 50 months. With the large number of families and observations we have available, we aim to understand how groups of children cluster together in the overall features of their pretending at home during preschool. We will derive these groups algorithmically in order to include the variety of features that have been

described as important in the literature, and that we have described in detail throughout this dissertation.

Putting play in context means we must also recognize that the presence of an adult play partner is only one indicator of a variety of other contextual factors. As we discussed in chapter 6, parents' beliefs and priorities impact whether and how parents interact with children during play. We acknowledged in chapter 4 that a great many parents in this study invest considerable time in pretending with children throughout the preschool period, and in chapter 2 we discussed how cultural pressures to promote children's development through play may drive some of this behavior. In the second analysis in this chapter, we relate the contextual factors which are already present in families' lives to the practice of pretending at home.

Finally, we aim to understand how the practice of pretending at home prepares children for the systems they will engage with outside of the family context – that is, when they begin formal schooling. The field has not resolved whether pretend play practice by children, or the efforts of parents to promote pretend play, result in the desired learning outcomes. Here, we define the expected learning outcomes of pretending at home in terms of school-readiness skills. School-readiness outcomes are not the only learning objectives parents may have when pretending with children, as we began to describe in chapter 6. However, school-readiness outcomes are certainly a major focus of the prescriptions for pretend play practice in the literature. In addition, whereas behavioral norms and standards are more variable across communities, school readiness outcomes have standardized measures which we can evaluate in the current sample. Therefore, in the current chapter we will put pretend play in context by addressing the specific questions below.

7.1.1 What **patterns of play systems** are present in a representative sample?

Throughout this dissertation, we recognize that pretend play behaviors do not occur in isolation. Where children pretend with parents, they may also be prompted to pretend for more time. Where children do not have play partners, they may be less likely to engage in role play. When more episodes are produced, more complex transformations are observed. It is our goal in section one of this chapter to recognize how pretend behaviors pattern together by complexity (episodes with ideational transformations, episodes with five or more story events), by participant (episodes with adult partners, solo episodes) and initiator (episodes and role play initiated by adults). If we can trace how pretend play is practiced as a whole, we can avoid making claims about isolated features of pretending (e.g., role play) without considering the impact of the contextual variables (e.g., play partners) that accompany those features. In section one of this chapter, we will utilize the variety of features catalogued throughout this dissertation to derive clusters of children with similar patterns of pretend play behavior across the corpus. This analysis allows us to draw on more than just quantity of time as a means of grouping children, and assures that other variables, such as episode complexity, are taken into account.

7.1.2 How is **family context** associated with pretend play behaviors?

As acknowledged throughout this dissertation, pretend play is sensitive to the context in which it is practiced. We see this in cross-cultural work on pretend play (Gaskins et al., 2006), but also in individual households, as described in chapter 6. We aim to understand in section two of this chapter how the social context of families, and the characteristics of parents and children may predict the investment in pretend play. For example, the literature describes socio-economic features such as parent education and income as significant predictors of parents' approaches to play with children. In addition, child characteristics such as early child language have been

implicated as predictors for preschool pretend play. In section two of this chapter, we will examine how these child and family characteristics relate to the variation in pretend play investment observed in this corpus.

7.1.3 How do pretend play systems relate to children's **school-readiness outcomes**?

In the final section of this chapter, we evaluate the relation between pretend play behaviors and school-readiness outcomes. Using standardized assessments at kindergarten entry, our goal is to understand how pretend play practice as a whole, including parent investment in pretend play with children, relates to defined learning objectives. In this section we will use the profiles of play systems as predictors because they encompass the variety of features that appear together in children's pretending at home, including how often they pretend with parents and the complexity of the play they produce. The outcomes we will evaluate are commonly associated with pretend play in the existing literature: language skill, theory of mind, narrative production and executive function. We are also able to use prior measurements of child skills, such as language measures taken earlier in the preschool period, to more accurately assess the variation explained by pretend play. If we control for prior skills, does the profile of pretend play practice predict scores on academic outcomes?

The implications of these findings are important because they will help us evaluate what is at stake in the investment in pretending at home. These finding may confirm the existing assumptions, or they may suggest a modification to the recommendations for parent investment in promoting child pretend play at home in the preschool years.

7.2 Patterns of Variation in Pretend Play Systems

In this section we will build profiles of child pretend play behavior based on the investment of time and the features of pretend play observed across the sample. As described

above, some features of pretend play may be more likely to appear together, such as the production of role play and the participation of a play partner. Since role play is considered a more cognitively complex transformation, there may be an important connection between the features of the social context (availability of play partners) and the benefits of play. Furthermore, to distinguish between the complexity of pretend play generated by adults, as opposed to children, we need to account for the contributions of each play partner.

As I will describe in detail below, we will identify clusters of children following similar patterns in their pretend play behaviors using mixture modeling. This method will provide more formal information than we have been able to access by simply dividing the group into quartiles by amount of pretend time. Certainly, amount of time will be taken into account in this analysis. But players who pretend the most at 38 and 50 months do not necessarily showcase the same patterns in other features of play, as we have seen, and we want to understand which players exhibit which patterns of play complexity, social play, etc. Some players are more active at 38 months than at 50 months, and some are active at both time points. Some of these same players are supported more consistently by adult play partners, and others pretend more independently. In addition, some players may prefer more or less role play and others more or less fantasy. Establishing profiles of players will help us describe the variation in play behavior across the sample rather than generalizing from the mean. Evaluating these patterns iteratively using mixture modeling, we can then describe the number of patterns represented strongly in the data, and the number of children following each pattern.

7.2.1 Methods

Data summarized for each child at 38 and 50 months was selected for analysis. We chose not to include data at 18 months due to the many similarities in pretend play behavior across the

sample at that time point (including a dearth of variation in complexity). In the next section, we will address family variables present during the early visits, which will take what variation is present at 18 months into account. But in the current analysis we focus on the pretend play behaviors that manifested during the “high season” of pretend, when pretending is expected to be prevalent and also when children become capable of performing and sustaining pretend play on their own.

Constructs for inclusion in the analysis were selected based on the degree to which they represented variation in behavior as described in the previous chapters. In chapter four, we saw important differences in the number of episodes produced, the proportion of episodes in which adults participated and the duration of episodes. In chapter 5, we saw clear differences in the numbers of episodes with ideational transformations and the number of story events per episode. In chapter 6 we saw distinctions between the trajectories of contributions from adults and children over time with regard to complex transformations and fantasy content. We also saw distinct changes between 38 and 50 months across these variables for members of the different quartile groups. Because the differences in trajectories across children represent potentially important differences in behavior patterns (e.g., increase versus decrease in episodes with adults) we utilized the key variables separately by timepoint. As a result, 17 variables at each time point (34 total) were included in the model to derive clusters of children with similar behavior patterns. The variables included in the mixture model are presented in the table below.

<i>Table 7-1: Variables used in mixture modeling to develop profiles of pretend play behavior</i>
Parent Support Characteristics
Number of Episodes with Parents
Number of Parent Pretend Utterances
Number of Parent-initiated Episodes
Number of Episodes where Parents participate in role play

<i>Table 7-1, continued</i>
Number of Episodes with Parent-initiated role play
Number of Episodes with ideational transformations by Parents only
Number of Episodes with Parents lasting over 2 minutes
Number of Episodes with Parents with at least 5 five events
Child Production Characteristics
Number of Solo Episodes
Number of Child Pretend Utterances
Number of Child-initiated episodes
Number of Episodes where Child participates in role play
Number of Episodes with Child-initiated role play
Number of Episodes with ideational transformations by Child only
Number of Child Episodes (without adults) lasting over 2 minutes
Number of Child Episodes (without adults) with 2-4 events
Number of Child Episodes (without adults) with at least five events

The majority of these constructs are represented as count data, so we utilized a mixture model based on a Poisson distribution to determine clusters of children with similar patterns of data. The data were analyzed using the *FlexMix* package in R version 4.1.1 (Leisch, 2004). *FlexMix* employs an iterative Expectation-Maximization algorithm; it uses the count data for each of the 17 variables for each child and time point to classify children based on the likelihood of belonging to a particular cluster. This method is superior to identifying means for each group and then minimizing each individual's distance from the mean to determine clusters (K-means) because it offers a probability that each observation belongs to the assigned group. Using this algorithm, we will identify the number of groups and estimate the expected values for each variable (lambdas), variance-covariance matrices and proportions of the children belonging to each group.

7.2.2 Results

Using the EM algorithm, 8 clusters of children were identified according to patterns across the 34 pretend play behaviors observed at 38 and 50 months. As an example of one

variable used in the analysis, we will describe the patterns identified by the production of pretend utterances. The figure below describes the expected values for the utterance variable only, but as described earlier, this was just one of the 34 variables used to create these clusters. The utterance variable is a useful example particularly because it describes well how investment figures into the groupings. Investment is a common feature across the variables used, because when there is little play produced it is less clear what the pattern of play features are, so the fact that a cluster produces very little becomes the dominant feature of the cluster. Investment in pretend time, or in this particular example, pretend utterances, also helps us see more plainly how children and parents invest in different ways across the two time points.

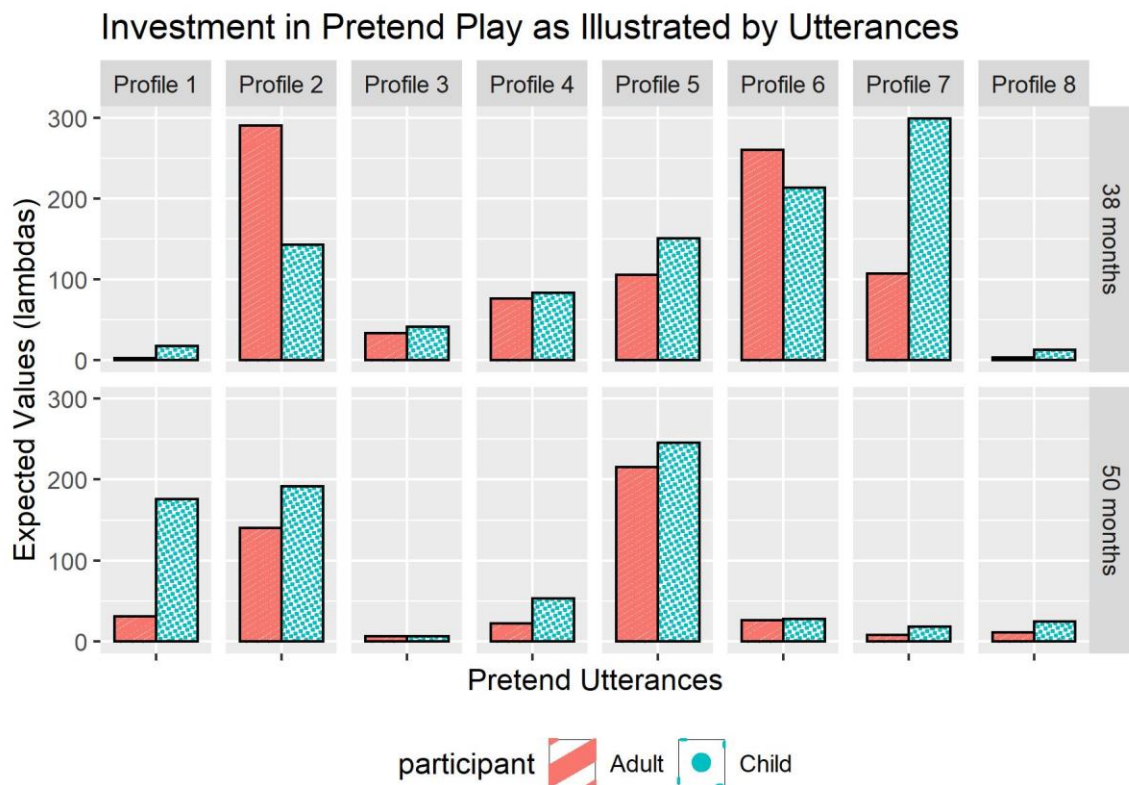


Figure 7-1: Investment in Pretend Play by as illustrated by pretend utterances

The pretend utterance data provides a clear picture of different patterns among children and parents in the study, not only in the amount of pretend speech, but also in the way that it is

balanced across parents and children, and in the way that it changes in both balance and amount between 38 and 50 months. In the figure above we are able to see the full range of available patterns. Profile 1 aligns with traditional theories claiming that children pretend more as they age and become more capable. In this profile children pretend more at 50 months, and parents are not driving the activity. Profile 2 aligns with theories on parent scaffolding. That is, the parent is producing more pretend utterances at 38 months, and the child is producing more pretend utterances at 50 months, consistent with the idea that parents are supporting the children in “learning how to play.” Existing theory accounts for these two profiles, but it does not account for the remaining 6. Profiles 3, 4 and 8 practice little pretend at both time points, and profiles three and four decrease from 38 to 50 months. The investment in pretend is quite low in these profiles, which is counter to expectations for children’s pretending in preschool. Profiles 6 and 7 show a dramatic drop in pretend from 38 to 50 months, despite clear differences in the investment of parents between those profiles. Profile 5 shows significant investment by parents at 38 months, whereas the pretend at 38 months in profile 6 appears to be driven by the child. Nonetheless, pretend play is virtually extinguished for both profiles at 50 months. Profile 5 shows a noticeable increase in pretend from 38 to 50 months, with relatively balanced participation from both parents and children at both time points.

As we suggested in chapter 4, this data offers a striking contrast to the traditional expectations of increasing pretend play over time, because 5 of the 8 groups drop off in pretend utterances between 38 and 50 months. The clusters also highlight how theory is not adequate for explaining the patterns of behavior we see when we examine the variation in pretend play practice.

We will focus for now on how these groups vary in quantity compared to the quartile groups we used as a proxy for profiles in the previous chapters. In the table below, we can see the degree to which the investment of time aligns with the different profiles of commitment to pretending at home we have derived. The patterns described above did not reveal the proportions of dyads that fall into the patterns we were describing. Indeed, when we examine the proportions, we find that 25 children belong to the profiles that pretend less overall, and much less than the average 10% of the time that we reported in chapter 4. I have highlighted in blue the profiles that show increasing pretend play from 38 to 50 months. Given the commitment to pretend shown at 50 months by these profiles, we might expect that the level of investment of these children is most likely to relate to some developmental outcome. It would be difficult to imagine that children who pretend very little, as those in profiles 3 and 8, could gain significant benefits from pretend play when they engage in pretending so rarely.

Pretend Play Time by Profile				
	n	18-months	38-months	50-months
Profile 8	13	3.8%	3.3%	3.7%
Profile 1	4	2.0%	4.1%	21.3%
Profile 3	12	5.6%	7.0%	1.7%
Profile 4	6	6.4%	12.6%	7.2%
Profile 5	9	7.5%	21.6%	29.2%
Profile 6	5	8.7%	24.3%	5.9%
Profile 2	4	8.4%	31.2%	37.0%
Profile 7	5	6.4%	42.0%	3.1%

Figure 7-2: Investment in Pretend Time by Profiles of Play

It is also logical that quantity of pretend may be more predictive compared to pretend quality. First, we see great variation in time spent and pretend utterances produced across the sample. But, as we have seen through previous chapters, the variation in complexity is relatively low for most of the sample, particularly in terms of story events. The exception to this rule has been the group of players who pretend the most. One of the benefits of using the EM algorithm is that it can identify criteria that separates some of the more extreme cases of pretend investment into their own clusters. But, as mentioned previously, it is difficult to compare complexity in groups where data is sparse. So, it appears to be that investment is one key element in understanding how groups of players are aligned. In the figure below we represent the membership of the profile groups in terms of the quartile groups we used as a proxy throughout the preceding chapters. The data here suggest that the quartile groups do break out in similar

ways as the clusters, such that clusters contain a dominant membership from a single quartile or a neighboring one. Our proxy is a good substitute for the more complex, algorithmically-derived clusters, even though it is only taking time into account. When evaluating outcomes, however, using the algorithm is superior because it we know the other features of pretend are being included in the analysis.

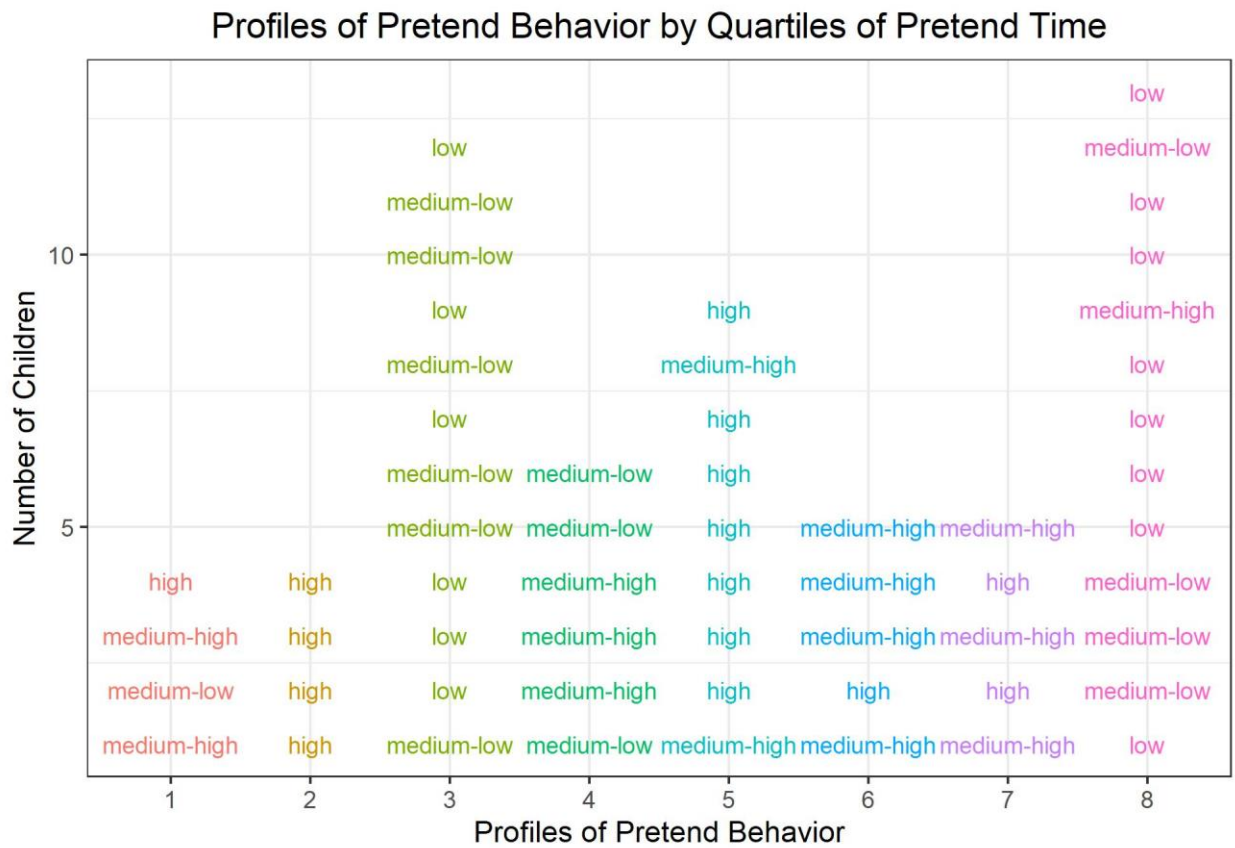


Figure 7-3: Profiles of Pretend Behavior by Quartiles of Pretend Time

The proportions of individuals belonging to each category supports our earlier claims that investment in pretend may not be so significant for a sizeable portion of our sample. As we see here, the largest groups of players fall into profiles that perform little pretend overall and where play decreases, even from an already small amount, from 38 to 50 months. Profiles 3 and 8 contain the most members, and also show the pattern of small to significant drop off in

pretending from 38 to 50 months. This representation clearly describes how children and parents are distinct in their interests in and support for pretend play, despite the prevailing notions of the importance of pretend play for all children.

7.2.3 Discussion

Using the EM algorithm, we have identified empirically-derived clusters of pretend play behavior in the preschool period. This information adds to the argument made throughout this dissertation that pretend play in the preschool period may be described more precisely by considering the different patterns of play systems within families.

We have demonstrated how the clusters can be organized by amount of pretend investment as measured by pretend utterances. But the algorithm can also show patterns by parent-initiated episodes, role play produced by adults and solo episodes produced by children. Amount of pretend is a dominant characteristic of the clusters, but some cluster rely more on parents than others to drive the play. We can see by plotting the cluster membership by the child's quartile group that investment in pretend time remains a reasonable proxy for the more nuanced profiles. Many, but certainly not all, children cluster according to the total time invested in pretending at 38 and 50 months. This may be important, given that we have seen how the amount of pretend investment also relates to the amount of complexity observed in play episodes. Notably, in the identified clusters, the proportion of children assigned to groups that invest considerable time in pretend play is smaller than perhaps expected given the literature.

What remains to be better understood are what contextual pressures shape the behaviors that formulate these clusters? As described in prior chapters, social and cultural messaging can promote the investment of time in pretend play. Does this investment vary according to family context? We take up this question in the following section, based on the logic model depicted

below. We expect that family contexts influence pretend play systems within families, such as the investment in pretending at 18 months and the trajectory of that investment through 50 months. When these contextual pressures are applied, we expect that pretend play systems are established, such as those we have described with the 8 profiles. We would then expect that pretend play systems, which encompass how pretend play is practiced across households, including all of its accompanying features, could then influence children's academic outcomes. In the following sections we will investigate how the external context may influence play, and then in the final section we will examine how the play may influence school success.



Figure 7-4: Logic model for the influence of pretend play context on outcomes

7.3 Contextual Factors Relating to Pretend Play

As described throughout this dissertation, pretend play is sensitive to the socio-cultural context in which it develops. In this section we aim to identify contextual factors that relate to the investment in pretend play by parents and children. The contextual factors we focus on here are existing characteristics of families and children prior to the development of pretend play behaviors observed in this corpus. In some ways, these factors offer a baseline for understanding what families are bringing to the play; i.e., beliefs about parenting and play, an abundance of toys, etc. In this analysis we consider what features of interaction between children and adults are particular to pretend play (e.g., meta-communication), and what are more general characteristics of the families which are being applied to the practice of pretend play (e.g., child-directed speech). For example, we expect that families that produce more child-directed

utterances in general will also produce more child-directed utterances when practicing pretend. But it is also likely that pretend play will feature heavily in the speech produced by some families and not in other families, even if they produce the same amount of child-directed speech. Acknowledging this context, we can attempt to disambiguate the contributions of pretend play practice from the contributions of the family context alone to children's development.

These questions become quite complex when we realize that family context and pretend behavior are intimately related. It may be, and we have seen evidence thus far to suggest, that the family context itself may specifically promote or inhibit pretend play. Therefore, the quantity of pretend play will be impacted by the family context as much as the other features of pretending, such as role play. Nevertheless, we will try to determine whether the claims regarding the specific importance of pretending are warranted when accounting for other behaviors related to family context such as parent interaction and language input.

7.3.1 Methods

Pretend play was examined with contextual factors describing the family's home environment, including household income, parent education, and whether the target child was first-born or had older siblings close in age. Qualities of the child were also included to investigate what factors might predict parent pretend play behavior, including child gender and child gesture types at 14-months. In addition, qualities of the primary caregiver were examined including parent IQ, parent's use of distinct word types with the child at 14-months and the parent's knowledge of infant development (Knowledge of Infant Development Inventory - KIDI). Each of these features of the family were examined as predictors for the amount of time parents spent pretending with their children.

7.3.2 Results

At 18-months, the primary caregiver's education significantly predicted the amount of time that parents spent in pretend play with children (est.=1.18, se=.35, t=3.43, $p < .001$).

Although income, child gesture at 14-months, mother's word types at 14-months and parents' knowledge of infant development were all significantly correlated with parent pretend play time, only education was a significant predictor of parent participation in the best-fitting regression model predicting pretend play at this time point. That is, education explained the most variation in the outcome of any of the tested variables, and accounted for all of the variation represented by other variables when they were added to the model. This result begins to suggest that a constellation of socio-economic factors related to education may explain much of the variation in parent investment in pretending at home.

Although parent education is the most significant predictor of early parent investment in pretend, parent pretend behavior at 18 months is also marginally predicted by variation in child characteristics (child gesture types at 14 months; $p=0.1$) which is not explained by parent education or income. Parent education and child gesture types predicted parent pretend at 18 months better than socio-economic status (composite education and income) alone. Child gesture types are an early predictor of child language and communication, supporting the claims that verbal behavior is associated with increased pretend. This may indicate that certain children are more likely to engage parents in interaction nonverbally through pointing, creating an opportunity for parents to label objects and encourage future interaction. In this scenario, a child at 18-months may be encouraging a parent who is inclined to pretend by soliciting interaction with objects.

At 38 months, the variation in both child and parent pretend increases. It is somewhat surprising, but important to recognize, that parent pretend rate at 18 months *is not the best predictor* of child pretend rate at 38 months. Instead, when we model child pretend at this time point, two features significantly predict child pretending: parenting knowledge (KIDI; est.=0.32, se=0.11, t=2.94, p<0.01) and child language (child word types at 14 months; est.= 0.19, se=0.07, t=2.79, p=0.01). The number of child word types at 14 months, like child gesture, is an early indicator of child language development; so, children who are further along in their language development may have more capacity earlier on to interact in pretend play. Greater knowledge of infant development may impact the kinds of experiences parents wish to provide for their children, including the provision of toys as well as age-appropriate activities and expectations. As noted earlier, embedded in the child development literature is the prescription for cognitive stimulation of children by parents and the importance of pretend play for children's learning. When added to the model together, all of the variation in child pretend at 38 months was accounted for by the parent's child development knowledge and children's early language. This result suggests that parent pretend at 18 months may be less important for promoting later child pretend behavior than the parent's overall approach to supporting child development. This also suggests that child characteristics, and language in particular, are important factors in the preschool trajectories of pretend play. But there is not yet particularly convincing evidence for the notion that if parents spend more time pretending at 18 months it will lead to their children pretending more at 38 months. That said, parents with more knowledge of child development also tend to be parents with higher education and those who choose to spend more time pretending. Importantly, these contextual variables do not exist independently.

In contrast, at 50 months, the best predictor of child pretend time is *parent pretend time* at 38 months (est=0.5, se=0.15, t=3.27, p<0.001). Both mother's word types at 14 months and child pretend time at 38 months were correlated with child pretend at 50 months. Parent pretend and child pretend at the same time point are also highly correlated, so when both of these variables were added to the model (parent and child pretend at 38 months), all of the variation was accounted for by parent pretend time. This may be surprising, seeing that many of our profile groups decrease in pretend play from 38 to 50 months. However, parents and children at the extremes show very similar behaviors – that is, the dyads that pretend very little at 38 months also pretend little at 50 months (25 dyads remain at 7% pretend time or lower at both time points). And the dyads that pretend a great deal at 38 months also pretend a lot at 50 months (13 dyads remain above 20% pretend time at both time points). There are profiles that show considerable change, but that pattern may not be strong enough to alter the results because the lowest and highest pretending families have parents and children that are relatively consistent over the two time points. Profiles 6 and 7 show the biggest drop-offs between 38 and 50 months (from 24% to 6% and from 42% to 3%, respectively), but these two groups together only represent 10 children. Profiles 3 and 4 also drop off from 38 to 50 months, but those decreases are much more modest (from 7% to 2% and from 13% to 6%, respectively). So, although we recognize a variety of patterns of play across these time points, it appears that parent investment becomes the prevailing predictor of child pretend by the end of the preschool period.

7.3.3 Discussion

This analysis suggests that pretend play practice may be particularly sensitive to parent education, or perhaps to the constellation of behaviors that surround educated communities; i.e., parents with many years of education are exposed to communities where research and

information about child development is valued and discussed, opportunities are increased for higher paying jobs, and parents assume responsibility for their children's learning early on, including promoting language development through child-directed speech. This finding aligns with LeVine's work on the impact of parent education across cultures, fostering a communicative change that increases mothers' literacy and access to public health systems and alters the interactions they have with their children. Specifically, according to LeVine's proposal, parents are socialized to take on a "teacher" stance with their children (LeVine, LeVine, Schnell-Anzola, Rowe, & Dexter, 2012). The collection of behaviors we observed in pretend play describes a set of cultural beliefs and expectations that accompany socio-economic conditions (Zilberstein, 2016). Because we know these behaviors are related, we highlight the importance of acknowledging that parent behaviors are not, and should not, be considered context-independent, even when discussing an activity as universal as pretend play. Pretend play may be universally observed, but the inclination to participate with children in play is culturally-specific (Gaskins et al., 2006). According to our findings, contextual factors can impact the degree to which pretend play is organized by adults, even within a culture that heavily supports pretend and play in general.

7.4 Associations between Pretend Play and School-Readiness Outcomes

In the final section of this chapter, we evaluate the relation between pretend play behaviors and child outcomes at kindergarten. As described in prior chapters, the importance of pretend play in child development has been justified in terms of the learning opportunities afforded by pretend play (D. G. Singer, Golinkoff, & Hirsh-Pasek, 2006). Parents have been encouraged to participate in children's pretend play in order to ensure and enhance learning through play (Katz, 2001). We've described in chapter 6 how learning objectives may vary,

including learning about adult values and appropriate behavior to real-world knowledge and academic skills (Parmar et al., 2008). In this section we evaluate academic skills most strongly related to pretend play practice: language skill, theory of mind, narrative production and executive function (Lillard et al., 2012). Below we briefly review the predictions regarding these outcomes. Importantly, in the current study we aim to relate the practice of pretending at home with performance assessments of these skills at kindergarten.

7.4.1 Methods

Children were administered standardized assessments of language skill, theory of mind, narrative production and executive function. Measures of language skill were conducted throughout the home visits, allowing us to use measures prior to our observations of pretend play as controls when evaluating outcomes. Measures of theory of mind and narrative production were only evaluated after our observations of pretend play, so we will use prior language skills as controls for these measures. Below we describe the standardized assessments evaluated as outcome measures for children's academic skills.

Language skill

The Peabody Picture Vocabulary Test (PPVT-IV) was administered at multiple time points throughout the observations, including at the 30 months home visit, and again during kindergarten. The PPVT measures an individual's receptive vocabulary and is used as a general test of verbal ability. In the test, children choose the picture that best represents the meaning of a stimulus word presented orally by the examiner. 57 Children completed the PPVT at 30 months and 52 completed the PPVT at kindergarten.

Theory of Mind

The Theory of Mind Scale (Wellman & Liu, 2004) was administered at the home visit at 58 months. The scale used diverse question types to assess theory of mind. Four questions were administered including contents false belief, explicit false belief, knowledge access and real-apparent emotion. Each correct answer scored one point for a total score of 0-4. 38 Children completed this assessment at the 58-months home visit.

Narrative Production

Narrative Production was assessed by a story elicitation task using the children's picture book *Frog, where are you?* (Mayer, 1969). The elicited narratives were coded for number of events and number of evaluative statements based on the criteria described by Stein and Glen (Stein & Glenn, 1979). 50 children completed this assessment at kindergarten entry.

Executive Function

Executive function was evaluated using the nonverbal block design and matrix reasoning tasks from the Weschler Preschool and Primary Scale of Intelligence (WPPSI-III). The block design task asks children to reproduce an abstract design with colored plastic blocks utilizing logic and reasoning. The block design task was administered at the home visit at 54 months. 57 Children completed this assessment. The matrix reasoning task measures visual processing and abstract spatial perception. These tasks are being used as a measure of executive function because they are associated with concentration, attention and persistence. The matrix reasoning assessment was administered at kindergarten entry. 52 Children completed this assessment.

7.4.2 Results

The table below reports the relation between scores on the selected assessments by the 8 profiles of pretend play behavior described earlier in this chapter. In the table we report linear

model estimates and standard error, with footnotes indicating where outcomes were statistically significant below $p=0.05$. The profiles highlighted in blue are those we would expect to see relating to outcomes because they represent the greatest investment in pretend play time at 50 months. Rows highlighted in gray represent controls included in the models. For every assessment we included child age as a basic a control, to account for developmental differences resulting from assessment scheduling. In language-related assessments we included the scores on the PPVT recorded when children were 30 months old. This control is intended to capture language skill prior to our observations of pretending at home.

Linear Model Estimates of Pretend Play Profiles and Outcome Measures									
	n	% Pretend Time		Estimate (Standard Error)					
		38-months	50-months	PPVT	Theory of Mind	Narrative Clauses	Narrative Evaluations	Matrix Reasoning	Block Design
(Profile 4 - Intercept) ¹	6	12.6%	7.2%	-12.33 (16.14)	67.60 (22.36) ²	68.34 (48.75)	-75.00 (24.32) ²	6.65 (7.74)	40.69 (30.64)
Profile 1	4	4.1%	21.3%	-0.11 (0.82)	19.29 (8.40)²	5.78 (8.02)	-1.78 (4.00)	-2.91 (2.55)	0.09 (3.29)
Profile 2	4	31.2%	37.0%	0.04 (0.76)	1.92 (6.73)	7.00 (7.32)	-1.08 (3.65)	0.49 (2.16)	-0.17 (2.67)
Profile 3	12	7.0%	1.7%	-0.06 (0.83)	6.74 (7.40)	11.11 (7.97)	2.85 (3.97)	2.31 (2.36)	2.79 (3.11)
Profile 5	9	21.6%	29.2%	-0.19 (0.83)	4.92 (7.46)	11.85 (7.59)	1.96 (3.79)	1.88 (2.15)	0.36 (2.78)
Profile 6	5	24.3%	5.9%	0.11 (0.80)	7.14 (7.99)	8.59 (8.27)	-0.34 (4.12)	0.74 (2.40)	1.10 (3.11)
Profile 7	5	42.0%	3.1%	-0.02 (0.85)	-5.52 (8.19)	17.70 (8.05)²	2.46 (4.01)	2.70 (2.42)	2.55 (3.11)
Profile 8	13	3.3%	3.7%	-0.28 (0.84)	2.79 (6.51)	9.47 (6.94)	0.85 (3.46)	1.03 (2.12)	0.34 (2.67)
Child Age	—	—	—	0.17 (0.27)	-0.11 (0.26)	-0.73 (0.67)	1.13 (0.33)²	0.05 (0.11)	-0.55 (0.56)
PPVT 30mos	—	—	—	0.03 (0.01)²	0.49 (0.10)²	-0.07 (0.11)	-0.02 (0.05)	— (—)	— (—)

¹ Profile 4 was used as the baseline group. This row represents the intercept in the model.

² Indicates $p < 0.05$.

Figure 7-5: Linear Model Estimates of Pretend Play Profiles and Outcome Measures

In the table there are few significant relations between pretend play profile and skill assessments when controlling for child age and prior skills. We did find in two regression models that one profile showed a significant relation where others did not. A significant relation was shown between theory of mind at kindergarten and membership in Profile 1 ($t=2.29$, $p=0.03$),

when controlling for PPVT scores at 30 months. Profile 2 was the only profile significantly correlated, however. The likelihood that this result is due to chance is high given that no other profiles with similar investment in pretend time were significantly related. Likewise, Profile 7 was significantly correlated with the number of clauses in the narrative production task ($t=2.2$, $p=0.034$). Profile 7 includes the most prolific players at 38 months, so it may be that this level of practice relates to storytelling skills in ways that the other profiles do not. However, this group also drops off precipitously in pretend play at 50 months, and those children who sustain pretending at 50 months do not show a relation with narrative production skill.

In general, the relation between measures of academic skill and pretend profiles is not apparent based on this data. Although there is variation in the investment in pretend play by children and families in our sample, it is not clear that this variation is related to the selected academic skills. Indeed, when we examined the relations statistically with linear regressions, controlling for child age and prior skill, pretend play profiles on the whole did not predict outcome measures. Where they did, the relation is inconsistent with pretend investment across groups. Of course, the profiles are based on multiple variables in addition to pretend investment in time, so it is possible that there are other qualities embedded in the profile groups that better explain these relations. Upon inspection, however, no variables stand out that would explain why these profiles would be especially predictive, where others would not. Given that the significant relations appear inconsistently, and are largely missing, it is difficult to conclude that pretend play practice is related to enhanced skills in kindergarten. If anything, the signal is too weak to detect among the other features of the home environment that are also contributing to children's development.

7.4.3 Discussion

The focus of this section has been to relate the practice of pretending at home with performance on academic skills assessments at kindergarten. It has been suggested in previous work (Haight & Miller, 1993), and earlier in this dissertation, that the importance of pretend play for development is related to the degree to which pretend play is a significant occupation for children. It may be that the practice of pretending at home is not significant enough for most children in this sample, such that whatever benefits children may be receiving from pretend play are not distinguishable from the other developmentally supportive activities they may be engaging in at home. However, even for those children for whom pretending at home is a significant occupation, we see no relation between pretend and cognitive outcomes.

Importantly, these results do not evaluate pretend play as a strategy for learning in school settings. Our purpose is to understand how parents and children invest in pretend play, the significance of the surrounding context to the pretend itself and the impact of pretend play on child development. We believe it is important to recognize the distinction between pretending at home and pretend play at school because we are concerned with the learning that arises from children's self-directed play, and the responsibility that parents take on for promoting and participating in this activity for the benefit of their children. We have described how some children invest considerable time in pretending, and some parents invest considerable time and effort in using play to teach what they consider to be important lessons. Does this investment by either parents or children result in the learning outcomes we are led to expect? Our result suggest that pretend play does not contribute significantly to the enhancement of cognitive skills traditionally associated with pretending in preschool. This result is not very surprising, given the difficulty others in the field have had in demonstrating these claims empirically over many

decades. The results have been consistently inconsistent across many studies in laboratories, in preschool settings and in the home environment (Lillard et al., 2012). The effect of pretend play would have to be sizeable indeed to be detected in the home environment, where many other features of the home and family impact development simultaneously. In this analysis we support prior work suggesting that pretend play is not essential, and that families may take many other paths to developing academic and other skills besides pretend. Pretend play may even be epiphenomenal, as a bi-product of the suggestion that children learn through play and that play is important for development, having no relation to skill building in the modern American home environment. What these data do suggest is that the practice of pretend play in the preschool years may not be as important for children's cognitive development as has been suggested, and that, for parents, the investment in pretend play may not be resulting in the expected or desired return.

7.5 General Discussion

The focus of this chapter has been to put pretend play in the context in which it is practiced within communities, describe the patterns of play systems that emerge within families, and demonstrate how the practice of play within those systems manifests in the formal school context. Our goal has been to account for the external factors that shape play and the way that play subsequently impacts outcomes.

In the first section of this chapter, we added evidence to suggest that there is a wide range of variation in pretending at home, and therefore it is important to consider this variation when evaluating the role of pretend play in development. Using the EM algorithm, we showed that many children follow decreasing trajectories for pretending at home over time (represented clearly in 4 out of 8 profiles). The EM algorithm also allows us to examine more specifically the

differences across families in how they balance responsibility for pretend play between parents and children. We see that some children are clearly investing more (as measured by pretend utterances) than their parents, such as in profile 7. We also see, in 2 out of 8 profiles, that parents are contributing more utterances to pretend play at 38 months, but the results of these investments are not consistent across profiles. In one profile parent investment at 38 months yields greater child investment at 50 months, and in the other profile it does not.

Secondly, we confirmed with our data that pre-existing contextual factors play an important role in predicting pretend play behavior in both parents and children, particularly parent education. Our data suggest that parenting knowledge and child language play a role in predicting the quantity of child pretend play at the height of the “high season.” But our data also suggest that parent investment in pretending does matter for child pretend play at 50 months. Perhaps most striking is that contextual factors are better predictors of child pretend play time at 38 months than parent investment in pretending at 18 months. Once again, these results underscore the importance of the family and community environments that shape how parents promote play.

In the final section I described findings suggesting that pretend play may not be instrumental in the development of children’s academic skills. Although pretend play may serve many functions in children’s lives, the case for pretend play as a strategy for developing academic skills remains difficult to substantiate. Based on our results, the two major predictions from the developmental literature are not realized: neither that children learn intrinsically from extensive pretending, nor that parents enhance learning outcomes through investment in play. It appears to be that the current literature portrays more about the cultural commitment to play rather than the demonstrable effects. And so, it remains that little strong evidence exists to

support the benefits of play for academic outcomes, including this study. Based on these analyses, there is more evidence that play is related to particular contexts (parent education, parent knowledge of child development, and early communication skills) than there is that play is related to a range of cognitive outcomes at age 5. These patterns undermine two major claims of the field: that pretend play is intrinsically motivated and that pretend play supports development.

8 Conclusion

“Play is the signature of childhood. It's a living, visible manifestation of imagination and learning in action.”

-Alison Gopnik, The Gardener and the Carpenter, 2016

8.1 Summary of Findings

In this investigation we add to the literature by examining a large representative sample of families practicing pretending at home. The size and scope of this corpus have allowed us the opportunity to examine three important features of pretend play that have not been evaluated at this scale before: 1) how individual children vary in their investment in pretend play at home, 2) how parents contribute to children's pretending and 3) how pretending at home during preschool relates to the family context and children's later outcomes. Below I describe the major findings from the current study within each of these domains.

8.1.1 The Pretend Play of Individual Children

This study reveals patterns of pretend play that differ from expectations created by the pretend play literature, most prominently in the domain of developmental psychology. With a substantial sample we uncover significant variation in the pretend play practices that individual children engage in at home. These variations, including differences in how much time children invest in pretending at home and the range of complexity of their pretend play, lead us to question prevailing assumptions about the importance of engaging in pretend play at home for preschool children. In general, we find less investment in pretending and less complexity in pretend play episodes than expected, leading us to re-consider how these pretend play practices will offer the same benefits in cognitive development as those described in the literature. Below

we describe these findings regarding children's individual differences in detail and discuss implications for the field.

8.1.1.1 Investment of time in pretend play by children

Children's investment in pretend play varies considerably, and declines for most children before the end of preschool. Although we find that pretending at home increases from 18 months to 38 months, the practice declines on average in our sample by 50 months. This result comes in stark contrast to expectations based on Haight and Miller's (1993) findings and prior work describing the increase in pretend play over the preschool period. The average trajectory in this sample resembles a u-shaped curve, rather than an increasing line. The u-shaped curve for pretend play has been proposed by prior researchers (K. Rubin et al., 1983), but the assumption made by the prior literature is that children are not declining in their pretend play until after school entry. Here, we see a decline in pretending *before* kindergarten entry. Although on average the amount of play at 3 and 4 years old may not be statistically different in our sample, we would expect an increase on average in pretend play during this time. Our sample of children does not follow the trajectory we would anticipate based on prior research.

Exploring the variation in our sample by family, we reveal that some individual children increase their pretend play time between 38 and 50 months, some children pretend rarely at 38 months and remain consistent in pretending little at 50 months, and others pretend a lot at 38 months and then hardly at all at 50 months. Breaking the sample into quartiles, the amount of pretend play time for the 15 most avid players in the sample remains stable on average between 38 and 50 months. None of the quartile groups show a linearly increasing trajectory on average as we would expect. So, our sample differs from expectations on average and also within groups of players, even when groups of players have dramatically different levels of investment in

pretending. We do note, however, that the individual children most likely to show an increasing trajectory from 38 to 50 months belong to the highest quartiles of investment in pretend. Our representative data begin to suggest that the existing literature on pretending at home may have had an overrepresentation of children belonging to this group. Although the literature would lead us to believe that pretending is important for all children, our findings suggest that this characterization of pretend play may not apply for all families. For those who practice pretend rarely, it could be difficult to justify its importance in their lives and its significance for their development.

8.1.1.2 Complexity of pretend stories

The majority of children’s pretend stories during preschool pretending at home are short, concrete and simple in their narratives. We find that the pretend episodes that children produce most frequently across the sample contain the fewest complex features. 90% of stories in this sample last less than two minutes and contain fewer than four story events. In addition, the stories that children produce are not more complex on average at 50 months compared to 38 months, which is once again counter to expectations regarding the developmental trajectory of pretend play. Our data show flat or decreasing trends in episode duration from 38 to 50 months, which contrasts strongly with the patterns in Haight and Miller’s (1993) study. On average children’s stories are not longer, do not contain more complex transformations and do not contain more story events at four years old compared to when children are three years old.

When we examine the groups of individual children, we can see that this pattern holds across three of the four quartiles. The episodes with complex features, both in duration and in story events, are most likely to be performed by the group of children who spend the most time pretending. For this group alone, complexity is related to amount of time spent pretending. For

example, episode length increases for this group on average between 38 and 50 months. When we consider pretend utterances as a proxy for story events, we find that some of the episodes produced by this group are significantly more narratively complex than the majority of episodes in the sample. But, the highly complex and extended episodes are so rare that they could even be considered outliers. These extended episodes stand out when compared with the median duration of episodes performed at 38 and 50 months. Overall, these data continue to suggest that the most avid players are those that most closely resemble the behaviors we would expect based on the pretend play literature. The remaining three-quarters of the sample perform counter to expectations by investing less time and producing less complex pretend play between three and four years old.

8.1.1.3 Fantasy and reality (and children's media)

Children's media plays a major role in children's pretend stories and augments play about reality. This study adds to the literature by examining how children play with fantasy and reality themes, expanding the conception of fantasy to recognize how much the content of children's media feeds into children's pretend play stories. Traditionally, children's media content has been categorized with fantasy play because the scenarios are distant from what the child knows from experience (e.g., playing "cowboys" versus "going to bed"). Fantasy play has been lauded as the "highest form" of children's play where children create "impossible," subjunctive worlds, and create stories that "suspend the laws of time, space and causality," (Bretherton, 1984; Garvey, 1990; Paley, 1987).

Media stories are not about everyday reality, but they pervade children's lives and the characters and worlds they invoke become as familiar to preschool children as everyday routines. Recreating an existing story, however, is not the same as inventing an imaginary world, and it is

this fantasy invention that has most fascinated researchers over many decades. As discussed by Bretherton (1984), we recognize that children can bend reality in order to tell a story about everyday life, employing unusual agents such as animals or objects to perform as human agents. These fantastic elements are simple applications of conventions normalized by children's media, where animals and objects frequently act as protagonists in stories about human life. In many of these stories, the actions performed are familiar, and the "impossible" nature of the agent is ignored by players. Fantasy scripts (i.e., stories with fantasy *actions*) offer a more extreme departure from reality because the actions are impossible for humans. However, in the current study, we highlight how fantasy story actions are an important part of re-telling media stories where "impossible" actions are the norm (e.g., where superheroes fly). It becomes less convincing that children are deliberately and creatively suspending the laws of space, time and causality when we consider that a faithful re-creation of the story of *Superman* includes a person flying.

In the current study we find that many of the "impossible" and fantastic events in pretend play result from conventions that are introduced through children's media, including the capacity for animals and objects to behave as humans, as well as the ability to fly and physically transform. Although we would expect fantasy play to increase over the preschool years (Garvey, 1990), our data suggest that media play and reality play make up the majority of children's storytelling, and that true fantasy scripts are rare. In fact, when children are playing without adults, scripts from everyday routines and children's media far outnumber scripts that employ "impossible" fantasy actions. In some sense, the notion of true fantasy invention is difficult to imagine with preschool children, who have so little experience with reality. Manipulating reality to create fictive worlds represents a considerable cognitive effort, compared to retelling the story

of *Thomas the Tank Engine*, who lives on the fictive (but extremely familiar from books, toys and television) “Isle of Sodor.”

Fantasy play is more prevalent in the pretending of European-American children compared with children from immigrant families, or indeed with children’s pretend play across the anthropological record (Farver & Howes, 1993; Farver & Shin, 1997; Gaskins, 2013). The prevalence of media in children’s lives may partially explain this difference, but also we must emphasize how the larger socio-cultural context contributes to the features of children’s pretend play (Gaskins et al., 2006; Lancy, 1996). Because most U.S. children are not considered legitimate participants in the adult world, the child’s world revolves around the fictional stories and figures that have been provided to fill up that space. Given the expectations set by the literature regarding the prevalence of fantasy, it is somewhat surprising to see that fantasy play scripts are so rare in our sample of pretending at home. But when fantasy invention and media stories are disentangled, children’s preschool pretending becomes a lot less creative and a lot more reminiscent of the everyday routines – including the routines of familiar fictional characters. Therefore, distinguishing fantasy, media and reality play opens up a new conversation about the benefits of fantasy versus reality play in preschool. Based on the data in this corpus, I question whether fantasy play as it has been traditionally defined (including media play) can be more developmentally supportive than other types of play for the reasons cited in the literature, when so much of this play is composed of retelling familiar stories rather than inventing worlds or deliberately suspending of the laws of reality. If this deliberate manipulation of reality is critical to the benefits of fantasy play, the media-inspired play that we find in these observations does not seem to qualify as fantasy invention, and the true departures from reality which are not part of media scripts are rarely observed.

8.1.2 Parent Contributions to children's pretend play

This study recognizes that parents make significant contributions to pretending at home. As in prior work in the home environment, we observed parents introducing and modeling pretend play for children from early on. However, this study also captures the variation in parent investment in pretending with children, the degree to which parents contribute complex content to pretend play, and the means by which parents convey their priorities for children during the play. Parents are a very consistent presence in these data, such that the participation of parents on average never falls below 50%. Consistent with prior literature (Lillard, 2006), parents are contributing complex content to pretend episodes, and episodes with parents are consistently more cognitively complex across the sample, even at 50 months. But parents bring to pretend play more than cognitive complexity. When parents pretend with their children, they bring their beliefs and priorities for what children will gain from play (Parmar et al., 2008). Based on parent approaches to play across societies (Muhonen et al., 2019), I have proposed a framework for identifying parent priorities through their behaviors during pretend play. Below I outline the major findings on each of these topics and their significance for the literature.

8.1.2.1 *Parent investment in pretending with children*

Parents participate often in children's pretending at home throughout the preschool period. Though prior literature acknowledges parents as significant contributors to children's early pretending at home (Haight & Miller, 1993; Haight et al., 1999; Youngblade & Dunn, 1995), this study underscores how consistently many parents are participating in their children's pretending even as children become more capable of pretending on their own at four years old. The number of episodes with parents vastly outweighs the number of episodes without them in this sample, and some children are never observed pretending without an adult play

partner. This prevalence of parents presents a challenge for evaluating claims: so many children in this sample are so rarely playing without an adult that it becomes difficult to separate the impact of pretend play from the impact of interaction with adults.

On the other hand, it is important to recognize that not all parents in this sample invest fully in pretending with children at home. At 18 months, when parent participation is highest across the sample, there are four parents (7%) who we do not observe participating in pretend. The number of parents that do not participate in pretending at all rises to 8 (13%) at 38 months and 12 (20%) at 50 months. When we examine the histogram describing the number of parents participating at each proportion of child pretend time, the most frequent values at 38 and 50 months are zero and one, suggesting contrasting approaches – those who do not pretend with their children, and those who are “all in all the time.” There are also parents all along the continuum of participation. This variation could be an asset in evaluating the correlations between parent participation and child investment in pretending, a point we will return to in later sections. But on its own, we suggest that it is important to consider the high proportions of parent participation which make up the majority of families in this sample. For most children in this corpus, pretending at home is much more likely to be a parent-child activity than an activity led by children alone.

8.1.2.2 Parents scaffold play

Many parents scaffold pretending early and then reduce their contributions as children age. When we examine the contributions of parents and children which are internal to pretend episodes, we begin to see patterns that resemble the more traditional developmental trajectories. Parents are the major contributors of complex (ideational) transformations at 18 months, and the only producers of ideational transformations in 53% of episodes at this time

point. This behavior makes sense based on children's limited capacities at this age. Parents continue to contribute complex transformations at 38 months, but they are much less often doing it alone (only 18% of episodes)— children begin to produce them as well, and children become the only producers of ideational transformations in 29% of parent-child episodes (in the remaining episodes, both children and adults produce ideational transformations). This pattern continues at 50 months, such that children are much more likely to be the only players contributing ideational transformations (56% of episodes), while parent-only ideational transformations have reduced to 10% of episodes, and transformations produced by both players are less likely than transformations produced by children only (32% of episodes). So, we conclude that on average parents are stepping back from driving pretend play over time. By examining both episodes with different partner types and behavior within episodes, we can distinguish here between parents who are committed to being present with their child while they play and parents that are actively participating in supporting the play content. Even if parents are still present for all pretending, they may be serving a different function in play as children become more capable of sustaining their own play.

8.1.2.3 Parent interactions during pretend play

Many parents actively teach through pretend play. The quantitative data on parent contributions cannot tell us the whole story of how parents function in pretend episodes. For example, parents appear to be stepping back from contributing to the play transformations as children age, but they are still present during pretend play. How are they participating in those later play episodes? To begin to address this question I described the qualitative interactions within pretend play using a cross-cultural framework of parent approaches to playing with children drawn from parent interviews (Muhonen et al., 2019). These approaches describe

actions and attitudes that parents take toward children's play more broadly, and appear to be relatively consistent across industrialized societies, though different communities may favor one approach versus another. Based on prior work observing how parent structure activities for children (Harkness & Super, 2006; Parmar et al., 2008), I have argued that the behaviors parents produce during pretend play are derived from their beliefs about play and their own role as a parent in supporting pretend play. Applying the framework of teachers, observers, playmates and facilitators, I identified specific interaction patterns that communicate parents' goals, particularly with regard to the priority of real-world knowledge and skills versus the practice of play "for play's sake."

I found that many parents use the medium of pretend to teach children, as an opportunity for building real-world knowledge or to reinforce standards of behavior. Failing to comply with parent expectations in this context could have real-world consequences, including the extinguishment of pretending. For parents who were present, but not contributing to the story, a common behavior was asking children to label the objects with which they were playing, or to relate the play to real-life personal experiences. Parents also used strategies to extend story narratives by asking questions that elicited story actions from children. Any finally, certain parents were most likely to accept and build on children's proposals, regardless of the content of the proposal, and more likely to participate in role play. These behaviors constituted the different approaches to playing with children based on the literature: teaching, observing, facilitating and playing (as a playmate). Although I found examples of behaviors that aligned with each category, few individuals displayed behaviors of only a single category, which is consistent with the findings from the prior literature, that parents may adopt more than one stance during a play session (Muhonen et al., 2019; Parmar et al., 2008).

This qualitative examination was limited in that only a sample of dyads were analyzed. Future work examining the approaches of parents across the entire sample could be revealing. With a systematic identification of behaviors according to these approaches, it may be possible to relate the patterns of interaction we observed with the quantitative features of play practice. For example, we could examine the interaction style that parents use when pretending in relation to pretend investment over time, and perhaps begin to explain the different levels of pretend investment by parents and children that we observed over the preschool period.

The prevalence of parents in children's pretending has important implications for the field, given that the assumptions about the benefits of pretending for children include the child's direction of their own learning and the degree to which children are generating their own abstractions (e.g., transformations and story scripts). Although there is a substantial discussion on "guided play" in education (Weisberg et al., 2016), which proposes that adults can support children in driving their own play, parents are not necessarily predisposed to behave this way. Indeed, as I describe in chapter 6, parents introduce their own priorities into play, and while for some the priority may be to "let the child lead," for others it is often to explicitly teach. With the current study we emphasize how the involvement of parents can change the experience of play for children, and begin to ask how this change impacts children's pretend play practice at home and relates to the developmental benefits of pretending.

8.1.3 Pretend Play in Context

Throughout this dissertation I have emphasized that the importance of pretend play cannot be fully understood without placing pretend play in context. When we place pretend play in the context of the home environment, we find that the features of the households in which children grow up relate to the investment in pretending at home. We first described parents as a

key feature of the home environment that impacts play, and we note that for most children pretend play is a parent-child activity more often than it is a child-only activity. But we also find that parents' propensity to pretend with their children is promoted by external factors. In particular, socio-economic factors are strong predictors of parent investment in pretend play. The contextual factors that precede pretending at home promote the systems of play that develop within families, and through those systems children become avid, average or minimal players at the end of the preschool period. Children then bring their experiences with pretending at home to kindergarten with a baseline of school-readiness skills. Since building academic skills is highly valued and a major justification for the practice of pretending in preschool, it makes sense that parents would invest in pretend play at home to achieve this goal. But our data do not suggest that these efforts produce the expected results. Below I describe the key findings from this study examining pretend play in the family, community and school context.

8.1.3.1 Systems of play within families

Pretend play is practiced differently across families in ways that have not been addressed by existing theory. After describing the variation across four quartiles of pretend, we derived through mixture modeling formal profiles of how parents and children invest in pretend play according to different patterns. Existing theory accounts for two of the 8 profiles suggested by our model. According to the theory that children are intrinsically motivated to invest time in pretending, children should show an increasing pattern of pretend time over the preschool period. According to the theory that parent scaffolding encourages pretending, we would expect parent investment to begin high and decrease over time as children's investment increases. We do see these two patterns, but we also see patterns that contrast with these theories, such that some children never invest significant time in pretend regardless of age. We also see some children

invest significant time in pretend at 38 months, and seemingly abandon the practice at 50 months. Neither the scaffolding theory nor the intrinsic motivation theory account for these profiles, but children behaving according to these patterns make up 68% of children in the sample.

It remains unclear what drives children to abandon, or nearly abandon, pretending at home by four years. One potential theory is that children are choosing to engage in other activities available to them as they become more capable, such as formal games, as Piaget's theory would suggest, or perhaps construction play or arts and crafts. It may also be that parents are encouraging children in these and perhaps other "skill-building" activities instead of pretend play because the academic or developmental benefits of such activities are more apparent. We know that many parents are concerned with school-readiness when children are four years old, and some parents do not prefer pretend play. For these families, pretend play may be set aside for other activities when possible. A time study of the activities performed during our observations would help to answer this question, in addition to the systematic investigation of parent-child interactions during pretend described above. With additional data we might be able to predict based on approaches to pretend, and child responses to these approaches, whether a dyad will be likely to invest significant time in pretending at four years old. Future studies may serve to resolve these questions. But it is clear thus far that new theoretical explanations are warranted to account for differing patterns of investment in pretending.

8.1.3.2 Family context

Parent education, parent knowledge of child development and child language are the major factors predicting pretend play at 18 and 38 months. We find that the investment of parents in pretend play early on both reflects the environment in which the family lives and

relates to the systems of play that develop within families. It is difficult to overstate how important parents have been shown to be in the trajectory of pretending at home in our sample. At every time period, the major predictors of pretend investment are parent-related, and those parent-related variables seem to set in motion a trajectory for children's later pretend. At 18 months, parent education is the single best predictor of parent pretend. At 38 months, parent knowledge of infant development and child language at 18 months predict child investment in pretend. But while both parent and child factors predict pretend at 38 months, only parent pretend at 38 months predicts child pretend at 50 months. How does this inform our understanding of the declines we see at 50 months? In this sample, parent investment appears to be important for sustaining a commitment to pretend play at four years old.

This investigation reminds us of the anthropological work on the effects of education on parenting (LeVine et al., 2012). Parent education changes the communicative style that parents use with children, practicing the structures used in academic discourse such as using language for instruction. How parents talk to children, including using a variety of words and longer utterances, is a mediating factor between socio-economic status and child language skills. So parent education becomes important to pretend play because it not only promotes spending time in direct interaction with children, it also promotes child language skill, which significantly predicts children's pretend play at 3 years old. I would argue that parents' knowledge of infant development is also related to education, in so much that the two variables are correlated, and that the propensity to develop a pedagogical stance, another outcome of parent education, signals attention to children's learning. But knowledge of infant development suggests something more specific than education in general. Parents who have greater knowledge of infant development have likely come into contact with the recommendations of the field to engage in pretend play

for children's benefit. Therefore, it makes sense that parenting knowledge and child language combine to predict child pretending at 38 months. Children with greater communicative capacities are better able to engage in pretending with a social partner, and parents who believe pretend play is important will be inclined to indulge children in this activity if children initiate it (or these parents may initiate it themselves).

So then, what happens when children reach four years old? From these data, it appears that parents who were willing to invest in pretend play at 38 months continue to invest at 50 months, and parents who were not invested in pretending at 38 months do not become invested at 50 months. At the extremes, dyads appear to remain consistent. But for others, parent beliefs about child development may shift away from pretend play as the important source of learning to activities that showcase more concrete skill-building. On the other hand, some parents may recognize older children as more capable of entertaining themselves and leave children to pursue activities on their own. For some children in these circumstances, solo pretend becomes a regular practice, and for others it does not. Future work might reveal an important distinction between children whose parents continue to interact with them for the entire observation, but don't engage in pretending, with children whose parents leave them to play on their own some of the time. What these data suggest, however, is that parents set the stage for the future investment in pretending at home during preschool.

8.1.3.3 Developmental outcomes

Pretend play does not predict outcomes at kindergarten. As described above, one of the major justifications for the importance of pretend play is the assumption that play supports academic skills. In the current study, however, we did not find that the investment of children and parents in pretending at home relates to children's academic outcomes. Definitive evidence

to support pretend play's role in development has been difficult to show, but parents and teachers nonetheless operate on the advice that pretend play is crucial for development. How can we reconcile these perspectives? To some degree, we explain this conflict in terms of the phenomenon of the "play ethos," that the practice of play is all good for all children, despite sparse empirical evidence. The field may in this case be standing on the grounds of cultural values for play in childhood and values for academic success. Therefore, it is not surprising that arguments would be made to link pretend play practice with outcomes that are most valued by our modern society. These values drive the types of questions we pursue in pretend play research as well as the interpretation of the findings.

But pretend play need not promote academic skills in order to be considered valuable for children (or even potentially valuable for parents and children to do together). Much of the current work strives to demonstrate academic importance despite the variety of functions pretend play can and does serve, including the exploration of emotional experiences, understanding social roles and behaviors, not to mention positive interaction and bonding with play partners, whether they be parents or peers. Based on these findings, it is not at all clear that prioritizing school outcomes as a primary goal for pretend play supports positive or beneficial play experiences for children and parents.

8.2 Contributions and Future Directions

The findings of this study change the conversation regarding the importance of pretend play in children's lives. Based on a large representative sample, our findings do not support the assumption that children are intrinsically motivated to invest significant time in pretend play, nor do we find in this sample that pretending becomes more prevalent or more complex for most children over the preschool years. As a result of examining the variation in our sample, we

present alternative trajectories of children's play and play systems within families which existing theory does not address. We propose a new framework for considering fantasy and reality play, placing media into a category of its own and recognizing how it is used by children to support reality play more than fantasy invention in this sample. We challenge future research to consider how media content and fantasy content are considered when evaluating the benefits of different types of play.

We also propose a new framework for examining how interactions between parents and children during pretend play reflect parents' beliefs and objectives, and may impact later investment in pretending at home. This framework has the potential to provide a structure for future investigations into the role of parents in promoting play based on the interactions internal to pretend play in each family.

These findings align with other studies that have shown relations between the social context and pretending at home. According to our findings, parents are a major contextual factor that predict pretend play. However, these findings do not support relations between pretend play at home and developmental outcomes selected for this analysis. Our findings align with other studies reporting similarly inconsistent (or non-existent) relations between pretend play and cognitive development, although these studies have been less emphasized.

In 1981, Greta Fein reviewed the existing literature on pretend play and concluded that the developmental benefits of practicing pretend play remained unclear (Fein, 1981). In 2012, Angeline Lillard and colleagues concluded that the evidence for relations between practicing pretend play and improving developmental outcomes were inconsistent, and causal claims were generally not supported (Lillard et al., 2012). Today, in 2021, after many similar reviews by other scholars in the field (Nicolopoulou, 2018; Pellegrini, 2009; P. K. Smith, 2005), definitive

evidence supporting the role of pretend play in enhancing developmental outcomes remains elusive. The findings of the current study align with the conclusions made by these many scholars over many decades. At what point can we conclude that the decades of inconsistent findings tell a different story than what has become the accepted wisdom on the importance of pretend play?

8.3 Final Thoughts

Pretend play is one of few activities in modern American childhood where children can be masters of their own destiny, seek out the answers to their own questions and try on the future pathways that they might explore. If the imperative to engage in pretend play were relaxed, it could be a relief to both parents and children. In her recent book for parents, Alison Gopnik suggests that parents should play with their children if both they and their children will enjoy it (Gopnik, 2016). This recommendation remains, of course, embedded in cultural assumptions that adults playing with children is beneficial in general. However, I agree with the underlying message: perhaps pretend can be left to children to satisfy their own needs, and parents can reclaim confidence in their decision to participate or not, knowing that children will not be left behind in school or in development, if they allow preschool children to engage in pretending at home as they see fit.

Appendix I: Reliability Metrics

1. Transformation Constructs

Transform	Mean Kappa	Min	Max	Ideational		
Partner type	0.92	0.87	0.96			
First transform	0.84	0.80	0.87			
Object	0.88	0.84	0.90			
Object initiator	0.84	0.80	0.89			
Object replica	0.81	0.79	0.85			
Object substitution	0.87	0.84	0.94	0.87		
Object character	0.82	0.77	0.87			
Object pantomime	0.96	0.95	0.97	0.96		
Imagine character	0.86	0.77	0.98	0.86		
Role	0.84	0.74	0.90	0.84		
Role initiator	0.87	0.80	0.90			
Role body	0.92	0.86	0.99	0.92		
Role object	0.88	0.83	0.92			
Role imagine	0.93	0.90	0.99	0.93		
Action only	0.82	0.71	0.89	0.82		
Setting	0.91	0.89	0.94	0.91		
Setting initiator	0.95	0.94	0.97			
Setting agent	0.96	0.92	0.99			
Partners	0.93	0.91	0.96			
Number transform	0.95	0.90	0.99			
				0.89	0.82	0.96
				MEAN	MIN	MAX

2. Story Constructs

Construct	Kappa
Media content	0.75
Media initiator	0.83
Fantasy content	0.71
Fantasy initiator	0.84
Story Script	0.76
Script initiator	0.68
Number events	0.85

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