Parent-Child Social Play in a Children's Museum*

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Two studies examined pretend play in families visiting a children's museum. In Study One, families were observed visiting an exhibit inviting visitors to try on roles. Parent-child play was found to be brief, sporadic, and non-contingent. In Study Two, families were invited to visit four exhibits and parents were interviewed. Parents were found to prompt, support, and observe more than engage in pretend play. Implications for family educators and museum designers are discussed.

Children's museums, on the rise since the 1970s (Judd & Kracht, 1997), seek to provide opportunities for both parents and children to engage in participatory activities together (Brown, 1987; Disinger, 1987; Donald, 1991; Judd & Kracht, 1997). One of the most widely used means of encouraging families to participate in exhibits in children's museums is through the recreation of either a novel or familiar environment such as a doctor's office, grocery store, rocket ship, or Indian village (Cohen, 1987; McNamee, 1987). These "contextual" exhibits, complete with props, costumes, and written explanations, invite visitors to try on roles suggested by the setting and to engage in social pretend play (Danilov, 1986; Fialkowski, 1991; Judd & Kracht, 1997).

Research supports the underlying basis for encouraging play as a means of engaging in a topic. Piaget (1976), Erikson (1976), Vygotsky (1967), and others (Garvey, 1990; Howes, Unger, & Matheson, 1992; MacDonald, 1993) maintain that engaged play facilitates a child's impulse to recapitulate or re-invent experience; that is, in play, children construct increasingly sophisticated representations of the world (Tamis-LeMonda & Bornstein, 1993), such as those encouraged by the social, technological, and natural environments recreated in children's museums. Smilansky (Smilansky & Shefatya, 1990) argues that in pretend play children gain new understanding from their experiences, such as those offered by exhibits where children can "discern the main characteristics of roles, combine scattered experiences in new ways, concentrate on a given theme, [and] observe reality in relation to themselves" (p. 30). In social play, Bateson (1976) argues, children learn that humans continuously take on different roles which correspond to certain frames, such as the multiple roles suggested by contextual exhibits.

Research also supports the particular advantages of parent-child pretend play. Parent-child play is thought to have a positive effect on children's exploration of social relationships (Carson, Burks, & Parke, 1993; Carson & Parke, 1996; Howes, Unger, & Matheson, 1992) and family play relationships (Fiese, 1990; O'Connell & Bretherton, 1984; Slade, 1987; Sutton-Smith, 1993; Van der Poel, de Bruyn, & Rost, 1991). Sutton-Smith (1993) and Singer (1995) support the idea that children benefit from participating on equal terms with adults in ways that exhibits, such as a grocery store or a doctor's office, are designed to invite. Benefits are thought to stem from engaged parent-child pretend play, described as nondidactic, warm, verbally responsive (Göncü & Tuermer, 1994; Haight & Miller, 1992, 1993; Levenstein & O'Hara, 1993; Van der Kooij, 1989), and mutually interactive (Howes, Unger, & Matheson, 1992).

Family educators, including those at the museum in this study (Shine & Acosta, 1999), anticipate that parent involvement in pretend play at the museum will enhance parent-child time at the museum, encourage children to reveal their thoughts about the world to parents (Acosta, 1997), allow children to be on an equal footing with parents (Eaton, 1989; Gallagher & Dockser, 1987; Regnier, 1987; Robinson & Quinn, 1984), and carry over into other settings, such as the home (Acosta, 1997).

Although family participation in social pretend play is a goal of children's museums, parent-child play interactions in this setting is an unexplored area of study. Researchers have begun to study family interactions at traditional museums but for the most part have focused on families' learning and teaching behaviors rather than the social play encouraged by contextual exhibits in children's museums (e.g., Donald, 1991; Gelman, Massey, & McManus, 1991; Henderlong & Paris, 1996; Paris, 1994; Sabar & Shamir, 1988; Sandifer, 1997; Stevenson, 1991; Tunnicliffe, 1996).

To discover the nature of family interactions at museum exhibits intended to elicit social pretend play, we designed a naturalistic observational study, asking how parents and children visiting a grocery store exhibit at the museum responded to the invitation to engage in pretend play together. The invitation to engage in play, or the "message set," refers to the salient aspects of the physical environment which encourage participants to act in particular ways (Shine & Acosta, 1999). In a previous study, the message set of the grocery store exhibit was found to include non-literal materials (plastic fruits and vegetables), dress-up aprons and bags, written explanations of employee duties, real equipment, and expository text about grocery procedures, inviting participants to engage in pretend play (Shine & Acosta, 1999). Qualitative analysis of the interactions at the exhibit led us to focus on the ways in which parent-child play was initiated, maintained, and ultimately disrupted at the exhibit.

The results of Study One led to further investigation of the parental role at the museum. To better understand why parents and children did not fully engage in the pretend play suggested by the exhibit, we set up planned observations of parents in Study Two, focusing specifically on the contribution of parents to the play interaction and the parental view of the interaction. In this study, we observed parent-child dyads visiting several contextual museum exhibits and interviewed parents on their perceptions of the visit. Qualitative analysis led us to analyze parental contributions within the play frame and parental support of children's play outside the play frame, while parent interviews revealed the extent to which parents felt comfortable participating in the exhibits. Together, both studies give us a view of

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parent-child play at the museum, Study One showing the process and dissolution of play interactions and Study Two taking a narrower look at the role of parents in the interactions. Considering the parent-child play interactions observed in Study One and parents' roles revealed in Study Two, we discuss implications for family educators and museum designers.

Study One: Parent-Child Interactions in a Contextual Museum Exhibit Designed to Invite Pretend Play

To explore parent-child play interactions at a contextual museum exhibit, we asked: How do parents and young children respond to the invitation to engage in pretend play in a grocery store exhibit?

Method

Participants and context. Participants were 30 parent-child dyads who were observed as they visited a facsimile of a grocery store in a children's museum in central Texas. Twelve mother-daughter, five mother-son, eight father-daughter, and five father-son dyads of apparent Caucasian ethnicity were observed, reflecting attendance to the exhibit during the observation period. We selected dyads with children estimated to be between four and six years of age because pilot observations indicated that this age group verbalized the most during play. Observations were made on 14 observation days, including weekdays and weekends; one-third of the dyads were observed on Sunday afternoons when the entrance fee was waived to encourage attendance of families with lower incomes.

The exhibit was a facsimile of a local Grocery Store measuring 120 square feet. It contained bins of artificial fruits and vegetables, boxed goods, model dairy and freezer cases, a toy hanging scale, check out counter with cash register, price guns, child and adult-sized aprons, cloth grocery bags, and child-size grocery carts.

Procedure. An observer (female graduate student) positioned herself unobtrusively in a corner at the entrance of the grocery exhibit. Once a parent-child dyad with one child estimated to be between four and six years old entered the exhibit, it was observed until they left the exhibit. Only one dyad was observed at a time. Conversation and actions, including variations in voice (an indicator of pretend play; Garvey, 1990) were recorded continuously by hand. Visits to the exhibit ranged from 4 to 15 minutes; the average visit was 9 minutes. The observer did not address parents unless parents asked what she was doing or looked at her quizzically; in the four cases when this happened, the observer explained that she was studying the exhibit. While the effect of an observer cannot be entirely assessed in this study, parents only rarely glanced at the observer during their visit, and visitors at the exhibit on nonobservation days did not reveal notable differences in parent behaviors.

Analysis. To discover how parents and young children responded to the invitation to engage in pretend play at the exhibit, transcripts of parent-child interactions were analyzed according to grounded theory, in which categories of analysis are inductively derived from data (Strauss & Corbin, 1990). Data was coded in four phases: an initial phase of open coding to determine categories of analysis, a second phase of selective coding to determine the core category of analysis, a third phase of organizing the data around a story line, and finally, the placement of the data in a conditional matrix to reflect the strategies of the participants and the consequences of the strategies to the play interactions (Strauss & Corbin, 1990).

Table 1
Example of a Play Narrative Placed in a Conditional Matrix in Study One

Narrative	Strategies	Consequences to Play
Upon entering, C (age 4), points to register indicating M's role. M identifies C's actions, "Buying fish?," naming each item C takes. At register, M says, "Your fish is dripping all over your other products. They're gonna stink. Why don't you put them in a plastic bag?" M asks C to name a tomato; C says "salami;" M prompts C to repeat label to no avail. C indicates switching roles; M hurriedly complies while C punches register. C silently checks out M; M rapidly directs C to replace items.	As child initiates play sequence, M identifies C's actions within play frame, and then moves to labeling C's items. M enters pretend and elicits a response but C does not pick up M's cues. M attempts to make C label; C does not respond. C ends sequence by directing M to exchange roles; M rushes through sequence while C engages in solitary play.	C remains in control of play sequence. Except for role distribution, no contingent exchanges take place within the play frame.

Note. M refers to mother; C refers to child.

In the first phase of open coding, each utterance, defined as a single comment contributed by one participant (Martinez, Roser, Hoffman, & Battle, 1992), was coded. The categories of analysis that emerged were pretend play, exploring, and self-regulatory guiding. Exploring materials referred to children and parents manipulating the mechanical objects; exploring logicomathematical concepts consisted of parents trying to engage children in classifying, counting, and weighing; and exploring social concepts included parents explaining the names and uses of items and the sequence of shopping procedures. Self-regulatory guiding referred to parents helping children negotiate the exhibit and share the materials and space with others. Indicators of pretend play were role-taking, object transformation, and variations in voice and language (Garvey, 1990). Interrater reliability of coded utterances in 30% of the transcripts was 96%.

In the second phase of selective coding to determine the core category, pretend play emerged as the central phenomenon. Role-taking and pretend play appeared to be the means for many of the other activities, including exploring concepts and self-regulatory guiding. In the third phase, in order to organize the data into a story line reflecting the pretend play of each parent-child dyad, each dyad's transcript of interactions was rewritten into a narrative reflecting the flow of play, yielding 30 narratives. In the fourth phase, the play narratives of each dyad were placed in a conditional matrix to reveal the relationship between the strategies for initiating and maintaining play and the consequences to the play interaction (Strauss & Corbin, 1990). See Table 1 for an example of the play narrative of one parent-child dyad.

Results

Consistent with grounded theory, the results of our study are based on the process of organizing the data into a conditional

matrix in the final phase of analysis. As the strategies the participants used to initiate, maintain, and disrupt the pretend play sequence, and the consequences of these strategies to the play interaction are described, the "story" of parent-child play at the grocery story exhibit emerges (Strauss & Corbin, 1990).

Initiating, maintaining, and disrupting play. While children entered pretend play immediately without explicitly organizing the roles, activities, or sequence of a play script (Nelson & Seidman, 1984), parents initially encouraged children to play by organizing roles or by interpreting their child's actions (e.g., "You're checking out?"). While children initiated play and parents encouraged children to take roles, neither maintained play by responding to the other's cues.

Parents' cues were seen as any effort to initiate or extend the pretend sequence, as in the above interpretation of the child's actions ("You're checking out?"), while children's cues were seen as their pretend play actions or utterances. Parents attempted to respond to children's cues by briefly taking on roles or commenting on children's actions, but their comments rarely elicited acknowledgment or elaborations from children (Haight & Miller, 1993). An elaboration was seen as a response that extended play by adding new material. As the shopping sequence progressed, parents continued to encourage children in their role-play (e.g., "Can you afford all that?"), maintaining the play sequence without engaging in role-play, while children continued to play. Parents occasionally entered into the pretense for brief moments (e.g., "You're gonna have ice cream soup by the time we get home"), but rarely engaged in pretend play for more than one exchange.

Following is an example of a play narrative between a mother and her four-year-old child; the child immediately begins to play while the mother interprets her actions. Each offers cues to the other; for example, the child shows an interest in selecting the fish, an interest her mother responds to in a way which is not picked up by the child. Similarly, when the child moves to the cash register, her mother's response does not encourage the child to extend the play sequence. The mother also offers cues which are not picked up or elaborated upon by the child.

> Upon approach, the child initiates the shopping sequence by taking a cart; the mother interprets, "Oh, you want to go shopping." As the child fills the cart, her mother directs her actions, "Push your cart. Don't put everything in it!" and cues her, "Here's some milk." When the child instead places a fish in her cart; her mother responds, "Want fish for dinner?" and continues, "Want some cheese or salami? Want to have steak?" The child takes another fish, making it "dive" into the cart, then responds, "I like cheese." Her mother hands her some fruit and comments, "Want some lemons or some fruit? This is nutritional food! Garlic, apple, an apple a day." The child takes an apple and moves toward the cash register. Her mother responds, "Got enough money for all that?" The child responds softly, "yeah," unloading the food, tapping at register. Her mother then directs the child to clean up, "Now we gotta put it all away," picking up items from the counter and replacing them. When the child continues to tap at the register, her mother directs her, "Come help put it back. Where does the apple go? There's the fish over there." The child mimes swimming the fish back to its place, saying "fish food." Her mother interprets, "Fish food means food for fish," and adds, "Crystal food means food for Crystal." (Dyad 17)

When parents began to teach concepts such as counting or classifying, children either ignored them, attempted to integrate the request into solitary play or stopped playing; therefore, attempts to teach interrupted or inhibited pretend play. Clean-up time also brought an end to a play sequence. Parents rarely framed this activity as play even though guiding children to put away their materials took up much of the time they were in the exhibit. In the following example from the end of a play narrative, the mother attempts to convince her four-year-old daughter to put away items and to count them; the child first avoids the request, then integrates it into her play, and then abandons her play.

> Her mother directs the child to clean up, "You're gonna hafta put up those eggs." The child responds, "I'm working," then puts away fruit by taking one at a time from the shopping cart to the bins. Her mother continues to direct the activity by moving the shopping cart closer to the bins. The child continues to replace one item at a time, pretending to eat each one, "banana, um, um." Responding, "peel it," and then, "you're gonna be full," her mother replaces the fruit the child has arranged into correct bins. When the child begins to replace the eggs one at a time, walking jauntily, pretending to eat each one, her mother urges her to count them. As the child continues to pretend to eat the eggs her mother persists. "How many eggs you got there?" When the child counts up to four, her mother tries to get her to correct her mistake, "How many? Come back! Why did you skip one?" The child counts up to five and brings another egg, pretending to eat it. Her mother continues to prompt her to count the eggs, "Eight. Say eight," until the child repeats the correct number, walking slowly, no longer pretending to eat the eggs. (Dyad 22)

Consequences to the play interaction. Parents and children can be seen as having divergent play strategies: while children engaged in role play (shopper, cashier, stocker), parents seemed to remain outside the play scenario, directing, prompting, and guiding children through the shopping sequence, particularly during the clean-up time. Consequently, parent-child play was brief, that is, parents and children engaged in no more than one conversational turn at a time instead of engaging in an extended sequence of interactions. Play was also sporadic because pretend interactions were isolated moments rather than a continuously elaborated scenario. Finally, play interactions were noncontingent, meaning the actions of one person were independent of the other, rather than built upon and sustained by each participant (Garvey, 1990).

Discussion

Despite the intent of the museum and family educators to design a setting to invite families to engage in social pretend play, our results show that parent-child play at the grocery exhibit consisted of brief, sporadic, and noncontingent interactions rather than mutually engaging, verbally responsive role-play (Göncü & Tuermer, 1994; Howes, Unger, & Matheson, 1992). The lack of mutual pretend play interactions we observed at the museum exhibit contrasts to reports of parent-child pretending at home. For example, while the children in our study always initiated the play sequence at the exhibit, Haight and Miller (1993) found that parents and four-year-olds pretending at home each initiated about half of all play episodes. Further, while most of the parent and child actions and verbalizations we observed

were not contingent upon the play partner's, Haight and Miller found that a majority of mothers and children pretending at home responded to one another's initiations of play with talk or actions supportive of continued pretending. Most of mothers' responses were contingent on the child's previous verbal or nonverbal pretending and nearly all of mothers' responses were elaborations, that is, they extended the play by adding new material (Haight & Miller, 1993).

Our results suggest that rather than becoming immersed in an imaginary scenario (Eaton, 1989; Gallagher & Dockser, 1987), parents attempted to guide the play scenario as well as to teach children logicomathematical and social concepts and to direct them in prosocial behaviors. The focus on learning may account for parents' and children's divergent play strategies and lack of contingency in interactions. For example, parents' attempts to join the pretend scenario may have failed because their efforts were too grounded in reality (e.g., elaborating on characteristics of foods rather than suggesting inventive scenarios) or because they narrowly followed a shopping script rather than an imaginary story line. Anecdotal evidence of peers playing in the grocery store, on the other hand, suggests a wide variety of story lines, including building and managing the store, directing employees and helping customers. Finally, parental attempts to teach concepts or guide children inevitably signaled the end of pretend play.

Compared to the possibilities for engaged pretend play scenarios invited by the grocery store exhibit, envisioned by museum educators, and practiced by families at home, the parent-child pretend play observed at the museum was found to be rather limited in breadth, depth, and scope. To discover more about the unexpected type of parent-child interactions we observed, we designed another study to look more closely at the parental role in several contextual exhibits at the museum. In Study Two, our analysis of play interactions focuses specifically on parental contributions to play and perceptions of their role as play partners.

Study Two: Parent Contributions to Play and Parental Constructions of Play in Four Contextual Exhibits

To learn more about the parental role in the parent-child play interactions in the museum setting, the following research questions were posed: (a) What are parental contributions to play in four contextual exhibits? and (b) How are parental contributions constructed by parents?

Method

Participants and context. Participants were 14 parent-child dyads, including seven mothers, seven fathers, eight girls, and six boys. Children ranged from 4.0 to 5.7 years with a mean age of 4.8. Participants were recruited at several preschools and child care centers where parents were invited to participate in a study of parent-child play. Parents were graduate students (3), staff (1), faculty (1), and spouses of students, staff, or faculty (9). All parents described themselves as of European descent and all parents, except for one mother, worked outside the home.

Participants visited four exhibits in a children's museum designed to invite social pretend play, one of which, the Grocery Store, was described in Study One. The others were a Doctor's Office, an EMS vehicle, and a recording studio known as the Music Gallery. The Doctor's Office measured 55 square feet, and contained an X-Ray lamp with X-Ray prints, examination table with dummy patient that came apart layer by layer, lab coats, and real instruments to check ears, eyes, heart/breathing, and reflexes. The EMS vehicle measured 75 square feet and contained a seat, steering wheel and dashboard with buttons in the front, and lab coats, stethoscope, telephone, bandages, bed, dummy patient, and pretend EKG machine in the back. The recording studio measured 125 square feet, and contained play guitars, real tambourines and percussion instruments, a wooden stage surrounded by stage lights, carpeted audience area, and facsimile sound engineering booth with levers that controlled stage lights and music.

Procedure. Each parent-child dyad met the researcher at the museum where parents were asked to visit the four exhibits designed to invite pretend play. Parents were told that the researcher would take observational notes of parent and child at each exhibit. Dyads were followed as unobtrusively as possible; when they reached each exhibit, the researcher stood in a corner observing actions and verbalizations for 15 seconds and recording for 15 seconds by hand. Parents reported in later interviews that the presence of the observer was not inhibiting. The average amount of time spent at the exhibits was 6 minutes at the Doctor's Office, 7 at the EMS, 10 at the Music Gallery, and 15 at the Grocery Store. Field notes were typed on the same day as the observation and delivered to parents the following day to review for accuracy. The fourteen dyads, visiting four exhibits each, yielded a total of 56 transcripts. Two days later, parents were interviewed individually on their views of play (Standard Interview), and on their own behaviors at the museum (Reflection Session). Interviews lasted 1 to 1.5 hours, and were audiotaped and transcribed.

Analysis. Data were analyzed according to naturalistic inquiry, in which theoretical categories and relational propositions are derived inductively (Lincoln & Guba, 1985). Transcripts of museum interactions were unitized into segments of social events, the "smallest possible social-interactive episode having meaningfulness" (Petit, Raab, & Harrist, 1988, p. 1). Following is an example of a social event:

> [Child picks up a play lobster and runs over to father with a grimace on his face, and pokes the lobster into father's leg.]
> Child: (in a gruff, loud voice) You wanna buy a lobster?
> [Father smiles.]
> [Child puts the lobster in a cloth grocery bag.]

Interrater reliability for social event determination in 40% of the transcripts was 94%. The 704 social events were recorded on index cards and categorized according to the constant comparative method (Glaser & Strauss, 1967) in which events are grouped according to similarity of content, in this case, parental contributions to play. Each category of parental contribution was given certain properties and a rule of inclusion. A list of distinct categories of parental contributions was developed and each social event was coded; interrater reliability for category coding in 40% of the transcripts was 92%. These categories provide the results of our analysis and are described in the results section. To develop relational propositions between social event categories and type of exhibit, frequencies of behaviors in each exhibit were calculated, forming a matrix of social event category by exhibit.

Transcripts of parent interviews were analyzed for patterns of response and compared to the propositional statements developed from the observational data (Glaser & Strauss, 1967). After several readings of the parent interviews, patterns (Glaser & Strauss, 1967) in answers and statements emerged. All patterns in the interview data were compared to the general propositional statements that had been developed for the observation data. Comparing allowed for negative case analyses, or alternative interpretations of the data to be considered (Erlandson, Harris, Skipper, & Allen, 1993) and for propositional statements to be altered as necessary.

Results

Parental contributions to play. Seventy-five percent of all parental contributions were play related. However, when we broke down behaviors into *in-frame contributions,* that is, participating in the pretend scenario, and *out-of-frame contributions,* that is, involvement outside the pretend scenario, only 18% of social events were classified as in-frame play, whereas 57% were outside of the play frame, contributions which encouraged play but were not pretend (Bateson, 1976). Below, definitions, examples of social events, and frequencies of in-frame and out-of-frame play are given.

In-frame play contributions included *pretending* (15%) and *play scaffolding* (3%). In-frame pretending referred to parents' "as-if" behaviors, that is, acting, speaking, and using objects nonliterally (Bateson, 1976). Following is an example of a social event in which a father is pretending with his son in the EMS exhibit:

> [Son (5 years, 7 months) is turning the wheel of the EMS vehicle and father is crouched down beside him acting as the navigator.]
> Father: (calls out excitedly) Ok, take a left, then a right. Ok, we're here! Let's pretend we can take the stretcher out. (Dyad 14)

When pretending, parents transformed objects, defined the situation, assigned roles, took a role, enacted, spoke in character and gave signals of play, characteristics of play defined by Garvey (1990). While children were engaged in pretend activities almost constantly, parents responded in play to a much lesser degree (15%).

In-frame scaffolding (3%) consisted of correcting or guiding children's thinking within the play frame. Following is an example of a social event in which a mother play scaffolds for her daughter in the EMS exhibit:

> [Daughter: (4 years, 9 months) and mother are in the EMS vehicle. Mother is lying on the bed pretending to be in pain.]
> Daughter: Ok, what hurts?
> Mother: My leg, I think I hurt my leg.
> [Daughter pulls down a brace from the shelf and puts a brace on mother's leg.]
> Daughter: Maybe this is good for your leg. Ok, now get up.
> Mother: Should I walk with my leg hurt?
> Daughter: You can go to the doctor's (office) over there.
> [Daughter points out of the EMS exhibit in the direction of the Doctor's Office exhibit.]
> Mother: But I can't walk, I hurt my leg. (Dyad 5)

When scaffolding, parents attempted to make play conform to facts and procedures of reality, using pretend as an instrument to stimulate their children's thinking.

Out-of-frame play contributions included *prompting* (13%), *supporting* (20%), and *observing* (24%). Prompting referred to suggesting ideas for play without taking a role. Below is an example of a father prompting his daughter in the EMS exhibit:

> [Daughter (4 years, 4 months) and father walk into EMS vehicle. Daughter looks at the dummy on the bed with blood pressure cuff on its arm.]
> Father: Do you want to take his blood pressure?
> [Daughter lifts the dummy's arm and moves the cuff up and down. Father stands to the side and watches. Daughter begins squeezing the cuff and looking at the EKG screen. She pulls a neck brace down from the shelf and puts it on the dummy's neck.]
> Daughter: He hurt his neck.
> [Father does not respond but watches.] (Dyad 11)

Prompting encouraged pretend, though most prompting contributions went unheeded. Despite children's low level responses to parental promptings for pretend play, parents continued to prompt; parents seemed encouraged if children responded to one of dozens of their suggestions. Prompting allowed parents to interact with their children when they were immersed in pretending—without engaging in play themselves.

Out-of-frame supporting (20%) referred to parents' encouragement of children's play by smiling, nodding, following, commenting, or assisting. Following is an example of a father supporting his son in the Doctor's Office.

> [Son (4 years, 6 months) brings a lab coat from the EMS vehicle to father in the Doctor's Office and tries to put it on himself.]
> Father: Want some help?
> [Son does not respond but continues to struggle with the coat. When it gets caught on the hat he is wearing, father removes the hat for him and son is able to put the coat on.] (Dyad 11)

Out-of-frame observing (24%) consisted of watching children's play without comment. Observing, like supporting, seemed to be a means of staying connected to a child and expressing interest in what she was doing; neither supporting nor observing suspended pretend play.

Parent constructions of play. When patterns in the interview data were compared to categories of analysis that had been developed from the observation data, we found explanations for the high percentage of out-of-frame play, both in reference to play at the museum in general and in reference to play at specific exhibits. Parents explained why they remained outside of the play frame, referring not only to a social obligation to teach but also to their own reluctance to role-play, as seen in the following comments by a father:

> . . . it's fairly uncommon that I take on a role. What it is, you step out of your role as an adult and become a child for a little bit when you pretend. Not that it's not okay, but as a parent, you teach to help them understand about their world and to involve yourself. Sometimes it's about being too self-conscious to let go and just be a kid, but it's also social pressure, social agenda, to teach. And sometimes it's fatigue, I just want to sit and relax. I don't want to role-play. (Parent 12)

While parents reported being aware both of their children's desire to play and of their children's aversion to overt teaching,

they acknowledged an inclination to make suggestions, ask questions, and comment on their children's play, as seen in the following father's remark:

> With the children's museum and the exhibits there which do emphasize imagination and pretend, there is some purpose as to why they are set up, consequently, there is a desire to talk to him as we are doing it but not come totally out of the role and disrupt the creative process that's going on. Our pretend playing is a way for us to relate to the world. . . . I would say [I teach during play] because I want him to know that I'm sensitive to his developing mind. . . . I want him to know there is some reflection going on, there is some comprehension, it's not just some kind of pretend play that is totally devoid of any kind of real life experience. But at the same time it's still play and play is important. Children ignore a lot of what parents say to them when they are playing. (Parent 1)

Finally, parents described their desire to progress beyond play, as seen in the following comment of a mother talking about the Grocery Store exhibit:

> . . . she really got comfortable in there so we could just be talking and making comparisons to fruits and vegetables beyond play. And she likes to count and I'm trying to get her to move from counting to adding but she's really not interested. As far as counting goes, I know she knows the right answer. (Parent 2)

Thus, as illustrated in these examples, parents attributed their low level of pretend response to a disinclination to engage in pretend play and to a desire and duty to teach their children.

Parental explanations of their contributions to play were also specific to certain exhibits. Parents invoked the privacy of the EMS exhibit as an inducement to engage in play. Following is an example of a mother attributing her participation in pretend play in the EMS exhibit to its small size and provision of privacy:

> I think from going over it with you, those exhibits that are a little more cozy, like the ambulance one, tend to encourage more participation, less inhibition on my part. (Parent 5)

Parents also cited the open-ended and public nature of the Music Gallery as a constraint on participating in play, as seen in the following mother's remark:

> . . . it was the environment. I felt a little exposed. When you're in the ambulance, it's a little place and there aren't other people and the Doctor's Office and Grocery Store are contained, but I was a little uncomfortable in such a large space. . . so I just watched her. (Parent 7)

Indeed, consistent with parental perceptions, the amount of play parents engaged in varied by exhibit: The EMS exhibit had the greatest parental involvement in play, 19% pretend play and 8% scaffolding, while the Music Gallery had the least, 12% pretend play and 0% scaffolding, compared to the other exhibits. The Doctor's Office and the Grocery Store had 14% and 15% pretend play and 3% and 2% scaffolding respectively. A chi square test confirmed a significant association ($\chi^2 = 64.82$, $df = 12$, $p < .001$).

Discussion

Our findings on parental contributions to play, notably their participation in out-of-frame play, are similar to those of other studies (Beizer & Howes, 1992; Dunn & Dale, 1984; Fiese, 1990; O'Connell & Bretherton, 1984) in which mothers made suggestions, narrated play episodes, explained props and told children what to say during play episodes more than they pretended. However, these studies focused on mother-toddler interactions whereas ours focused on mother and father interactions with four to six year olds. Howes (Howes, Unger, & Matheson, 1992) suggests that parents prompt toddlers' play to teach them about pretending and to support their early attempts to share pretend ideas. Our results indicate that after children no longer needed prompting to engage in pretend play, both mothers and fathers still engaged in significant amounts of prompting and supporting play even when the physical context and child interest strongly suggested engaging in pretend play.

By focusing on the proper details of the role the child chose, it may be that parents were attempting to move their child to a higher level of pretending. As they endeavored to inform their child about terminology and actions pertaining to a role, parents seemed to move the child beyond what he or she already knew about the given role. Bateson (1976) reasoned that the importance of play is not that children learn about specific roles, but that children learn that humans take on roles which correspond to frames of action. Our results indicate that in the children's museum, parents of young children were more concerned that they learn about particular roles than that they experience the flexibility of role-playing in social pretend play. This may be due to the fact that four to six year olds have become proficient at pretending and parents are fine-tuning role-playing by scaffolding the details or knowledge needed for the role they are currently taking on. An alternative explanation for parental out-of-frame play is that by staying outside the pretend play scenario, parents were avoiding being drawn into negotiations with their children over themes, roles, or scripts (Howes, Unger, & Matheson, 1992). As Howes notes, mothers of older preschoolers may encourage independence in play interactions rather than actively collaborating in the construction of play.

Our findings on parental perceptions of their contributions to play suggest that parents, even while acknowledging the pretend play environments at the museum, were not always inclined to engage in pretend play; further, parents felt a strong desire or duty to teach, in spite of the recognition that children at play resisted overt attempts to teach. Unlike the expectations of family educators, parents did not express an interest in playing to become immersed in an imaginary scenario, allow children to reveal their thoughts, reverse parent-child roles, or develop family relationships (Acosta, 1997; Eaton, 1989; Gallagher & Docksер, 1987; Regnier, 1987; Robinson & Quinn, 1984). Instead, parents described their wish and obligation to structure children's experiences at the exhibits to take them beyond play and toward "real life experience." Our findings converge with Snow Dockser's (1990) analysis of parental perceptions of their roles at children's museums. Snow Dockser described thirteen overlapping and sometimes conflictual roles including planner, learning enhancer, social mediator, protector, and rule-maker; however, parents in her study did not perceive their role to be one of play partner, even though they spent time with their children in contextual exhibits designed for pretend play.

Although parents expressed a disinclination to spend much of their time role-playing, they referred to certain characteristics of the exhibits, such as a sense of privacy, which enhanced their inclination to engage in pretend play. Thus, while exhibits were

designed to invite parents and their children to engage in pretend play, not all exhibits were equally inviting to adults, a finding with implications for museum planners.

General Discussion

Family educators and museum designers set up contextual exhibits in children's museums to invite parents and their young children to explore social and physical environments while engaging in social pretend play. Goals have included encouraging children to discover these environments by taking on adult roles (Eaton, 1989; Gallagher & Dockser, 1987; Regnier, 1987) and enhancing parent-child interactions at the museum (Acosta, 1997). Research has supported the benefits of parent-child play; not only are children found to construct representations of the world through pretend play (Tamis-LeMonda & Bornstein, 1993) but also they develop positive family play relationships when they engage in warm, mutual engaged, verbally responsive play with their parents (Göncü & Tuermer, 1994; Howes, Unger, & Matheson,1992; Sutton-Smith, 1993).

However, the combined results of our studies on the process of play at the museum suggest that the parent-child play interactions we observed may have been too structured, too didactic, or too brief to engender the benefits of engaged social pretend play. Parents, while acknowledging children's propensity to learn through play, nonetheless, seemed either disinclined to engage in play or compelled to teach their children about the environments of the exhibits.

Although the parents in our study did not engage in contingent pretend play with their children, they did serve as organizers of the experience, both by framing pretend play scenarios and by informing children about procedures, drawing their attention to equipment, and probing their knowledge of concepts. In fact, parental guidance in bridging the gap between the children's knowledge and information in the exhibit is a goal of children's museums (Frank; 1992; Kent; 1992; Snow Dockser, 1990). However, because many museum exhibits are designed to respond to young children's tendency to learn, explore, and make discoveries while engaged in pretend play, educators may want to consider ways of facilitating parents' entrance into the play frame so that parents and children can get the most out of a visit to the children's museum.

Our suggestions for encouraging parent involvement in pretend play include the following recommendations. (1) To allow parents to feel comfortable playing with their children, small, enclosed pretend settings should be designed. (2) To make it easier for parents to engage in role-play, clear, unambiguous sites in which roles are well-defined should be designed. (3) To allow parents to join in the play scenario, adult sized props and clothes should be provided. (4) To encourage players to go beyond a prescribed play script, open-ended materials, such as paper and pencil, should be provided. (5) To remind parents to enter into pretend play and to offer suggestions signage should be posted.

Educators may also invite parent involvement in play by soliciting or sharing ideas for pretend play with parents, modeling pretend play, providing lectures or classes to explain the benefits of parent-child play, and extending classes into exhibits to give parents ideas for play. Finally, educators may improve upon exhibit designs and services to families by seeking to resolve the discrepancy between the museum goal to invite families to engage in pretend play and the parental tendency to teach children through more structured interactions. Parent focus groups, for example, would allow museum planners, designers, and educators to learn about the goals, expectations, concerns, and wishes of parents who visit children's museums.

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