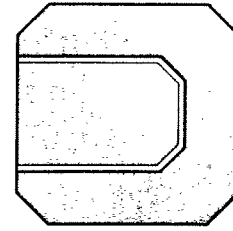# Understanding and Assessing the Play of Children with ASD

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QUESTIONS TO CONSIDER

In this chapter, principles of early play development will be identified, and definitions of play will be provided. You will discover some of the interrelationships that have been identified to explain the development of play, language, and cognition in children and the implications these interrelationships have for children with autism spectrum disorders (ASD). You will learn about the challenges in play development that affect the ability of children with ASD to engage in a range of play activities. Strategies for observing and profiling play will be discussed as part of assessment, leading to intervention planning and goal setting. The disablement framework described in Chapter 3 will be applied to this aspect of assessment for children and adolescents with ASD. As you read this chapter on play assessment, consider the following questions:

1. What principles guide early play development, and how is play defined?
2. What are the relationships among play, language, and cognition that have implications for children with ASD?
3. What are the challenges in play reported for children with ASD?
4. How can play profiles be used to assess the strengths and challenges of children with ASD in this core deficit area?
5. What areas of play assessment should be considered across the three dimensions of the disablement framework?

Introduction

Several theoretical perspectives have been influential in our understanding of play. Two theorists in particular, Piaget (1962) and Vygotsky (1978), have described the central role of play in the overall development of children. Piaget's constructivist view suggests that play is an intrinsically motivated and self-initiated activity that supports the acquisition of different ways of thinking and behaving (Wolfberg, 1999). Children achieve satisfaction and joy in the independent experience of constructing their knowledge through actions on objects and within events.

Although Vygotsky shares Piaget's recognition of play as part of a child's developing symbolic function, he conceptualizes play as a more social activity, in which a child represents behavior characterized by rules and imagination. This Vygotskian, or sociocultural, view suggests that a child in play constructs and transforms shared meanings and skills, values, and beliefs inherent in his or her culture (Wolfberg, 1999). Vygotsky further defines a "zone of proximal development" created by play. This zone is "the distance between the child's developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (1978, p. 86).

It seems that children's play development is socially connected to adult scaffolding, which supports the children's ongoing experiences and learning. A social-constructivist view seems to best explain my experience with the development of play—that is, children construct their knowledge through their experience with objects, actions, and events, sharing the meaning, values, and beliefs of a familiar social context. For children with ASD, the construction of knowledge may be limited or constrained in form and content because of their difficulty connecting with the social context. The use of adult support becomes highly important if children with ASD are to expand their experiences and increase their learning.

Impairment in play is described as part of the communication deficit defined for autism in the *Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition* (DSM–IV; American Psychiatric Association [APA], 1994) and its text revision (DSM–IV–TR; APA, 2000). Specifically, "lack of pretend play" has been characterized as having a central role in the diagnosis of and intervention with children with ASD. It is important to recognize the interrelationships between play, language and communication, and social development, as mentioned in Chapter 4. However, this entire chapter is devoted to the assessment of play in children with ASD so that practitioners can understand the powerful role that play has in the overall development and social success of this population.

Principles of Play Development

Play is an ongoing, complex area of exploration influenced by culture, history, and religion (Sutton-Smith & Kelly-Byrne, 1984). It has been a difficult area to define because of the variable theoretical orientations described in the literature and the heterogeneous nature of play (Wolery & Bailey, 1989). It is not time, age, setting, or form specific.

Some basic characteristics or principles of play have been identified, however. Play is voluntary, pleasurable, and intrinsically motivated; it requires active engagement and is flexible and nonliteral (Burghardt, 1984; Garvey, 1990; King, 1986; Sutton-Smith & Kelly-Byrne, 1984; Weininger & Daniel, 1992; Wolfberg, 1995, 1999). Children are active learners who explore their world to make sense of it. Early on, children use their motor learning (reaching out, pulling up, moving around, seeking stimulation) to figure out actively what is happening in the world. This learning is also affected by environmental variables, such as the context in which the exploration takes place and the stresses experienced by children during their active learning.

Children also learn through physical experience, social interaction, and reflection. They have a powerful need to make sense of everything they encounter through manipulation, smell, taste, and performing actions on objects. Children use their own activities to construct and reconstruct their understanding of their world. Further, they need feedback from the physical and social environments to either confirm or challenge their understanding of the world.

Some have made a distinction between early exploration and play, suggesting that children learn how to use the information they gather through exploration in their actual manipulation of objects or situations in play (Hutt, 1979; Nourot, Scales, Van Hoorn, & Almy, 1987). Others believe play begins the moment a child is able to take an object in hand and bring it to the mouth or before the eyes (McCune, 1986). Whether making a distinction between exploration and play is important or not, it is valuable to consider the ways in which play has been classified and the importance of symbolic or pretend play in assessment.

Classifications of Play

Whatever perspective is held for describing the nature of play, it is important to understand the different ways that play has been categorized. Notions of play taxonomies or stages of play provide a useful framework for play assessment. For example, Parten (1932) classified play in the context of social participation. She defined six types of play:

- unoccupied (no real evidence of play other than standing, sitting, moving around others);

- onlooker (watching other children play, possibly talking and providing suggestions without engaging in the play);
- solitary (independent play with toys, with no effort to engage with other children);
- parallel (independent play alongside or among other children);
- associative (engaged in common activities and interests with other children, although loosely organized); and
- cooperative (organized with other children around a particular purpose involving making something, dramatizing a situation, or playing a game).

Piaget (1962) described three sequences or stages of play, which begin with sensorimotor practice play in the first year of life, move to symbolic play in the second year of life, and then to games with rules by the fourth year of life. Smilansky (1968) also proposed sequences of play, indicating that one stage of play would predominate at any given time, although overlap was likely. She defined four play stages, three of which mirrored those proposed by Piaget:

- functional—simple motor activities, including repetitious manipulations (similar to Piaget's sensorimotor practice play in year 1);
- constructive—sustained creative activity around a simple theme;
- dramatic—also described as symbolic, an accumulation of the skills and experience from the previous stages, with increased social awareness (similar to Piaget's symbolic play in year 2); and
- games with rules—play organized around rules and requiring a child's ability to adjust (similar to Piaget's games with rules in year 4).

Based on their observations of 40 infants, Belsky and Most (1981) developed a play sequence that recognized the relationship between play and exploration in very young children. Twelve different stages were defined in their study, several of which shared the characteristics specified by Piaget (1962) and Smilansky (1968). These stages included:

- mouthing (indiscriminate),
- simple manipulation (visually guided and lasting at least 5 seconds),
- functional (visually guided with information gained),
- relational (relating play materials in unexpected ways),
- functional–relational (relating play materials in expected ways),
- enactive naming (unconfirmed pretense activity like holding a phone to the ear without making talking sounds),
- pretend self (pretense behavior related to self like drinking from an empty cup), and
- pretend other (pretense behavior related to others like having a doll drink from an empty cup).

McCune (1986) classified play into two broad categories, sensorimotor exploration and pretend play. She further classified pretend play into several subcategories, including presymbolic schemes, self-pretend, decentered pretend, pretend play combinations, and planned pretend. Her subcategories of pretend play were similar to those proposed by Belsky and Most (1981). A *presymbolic scheme* involves a young child's first meaningful encounter with objects. The action is the meaning held for the child, since the child is not able at that point to represent meaning. In *self-pretend*, a child is aware of "pretend," but the activity focus is the child's body. When pretend is extended beyond the child, it is known as *decentered pretend play*. Once several actors or receivers of action occur, the activity is a *pretend play combination*. The final subcategory of pretend, *planned pretend play*, exists when a child indicates that the activity was preplanned. That level of play also requires symbolic identification of one object with another.

Symbolic or Pretend Play

The classification of play as symbolic or involving pretense is of particular interest in the assessment of children with ASD, because a lack of pretend play has been suggested as part of the core deficit (APA, 1994, 2000; Wetherby & Prizant, 1992, 1993). Symbolic play is referred to by several terms, including *pretend (pretense) play*, *representational play*, and *sociodramatic play*. The common element is the expectation that a child is representing or substituting objects in play (Belsky & Most, 1981; Bergen, 1988; Piaget, 1962; Wetherby, 1992). Leslie (1987), however, proposes two less traditional expectations. The first is that symbolic play involves *primary representation*, in which a child codes objects or events as they are. The second involves *meta-representation*, in which a child recodes the primary representation. At the very least, pretend play is a reflection of children's ability to manipulate their external world through symbols or representations made internally. A suspension of reality allows children to treat objects as if they were something else.

It is generally agreed that symbolic or pretend play begins during the second year of life, around 14 to 19 months of age (Bates, O'Connell, & Shore, 1987; Belsky & Most, 1981; Bergen, 1988; Fewell & Kaminski, 1988; McCune, 1986; Piaget, 1962; Wetherby, 1992). A shift or progression toward pretense becomes evident at about 12 months, beginning with object decontextualization and moving to self–other relationships, object substitutions, and sequential combinations (Bergen, 1988). Early on, pretend play is described as more solitary play, in which children substitute realistic pretend objects for the actual objects. With advancement in pretend play, the social context becomes more important than the representation of objects (Saltz & Saltz, 1986). Even further advancement leads to the development of fictional characters and situations, as is characteristic of sociodramatic play. In that

context, rules are established based on the roles that are assigned and assumed. The rules typical of pretend play provide an internal consistency to the play that supports problem solving.

Examples of pretend play are frequently observed in preschool classrooms as children use a variety of play materials and props in different activities. Some of these activities might include

- make believe (child takes on characteristics of an object or person and acts out a sequence);
- exploration of an object;
- creation of stories supported by graphic representations using art materials;
- use of construction material to support a pretend theme or action sequence;
- manipulation of buildings and people as the environment and characters for a story;
- implementation of a sequence of events or actions that are related to one another, as in dramatic play; and
- implementation of more complex schemes sustained for longer periods, involving several children negotiating a narrative play scene with established rules, as in sociodramatic play.

The preschool environment is an obvious context in which to assess not only the opportunities for pretend play but also those play activities in which children engage. It is a setting for highly imaginative play among peers, which supports the development of children's social competence (Singer & Singer, 1990; Wolfberg, 1999). Through play, children are able to express intimacy and affection toward their peers and begin to establish friendships (Hartup & Sancilio, 1986).

Little research has been done on the development of play as children approach middle childhood, although children are thought to abandon make-believe for somewhat more complex play experiences around that time (Piaget, 1962; Wolfberg, 1999). The opportunity for pretend play is often limited in elementary school, where organized sports and games with rules are substituted. But the desire to pretend is sustained through children's individual fantasies, imaginary characters, and dramatic play with miniatures, dolls, and peers (Wolfberg, 1999). The establishment of friendships and associations with particular peer groups becomes a priority during this time.

Relationships Among Play, Language, and Cognition

Play is an important medium for the intellectual, linguistic, emotional, and social development of children (Fewell & Kaminski, 1988; Wolfberg, 1999).

More important, there also appears to be a developmental sequence characteristic of play that parallels that of language and cognitive development (Bates et al., 1987; Fewell & Kaminski, 1988).

Wetherby (1992) describes progressive levels of play comparable to the major stages of language development. Under the age of 12 months, children are exploring objects and performing actions on those objects at the same time that intentional communication is developing. Around 12 to 18 months of age, when children are using realistic objects directed toward self and combining two objects in play, their first words appear. At 18 to 24 months, children are using realistic objects directed toward others and demonstrate single-action schemes with several objects and receivers of actions, combining at least four objects (Bates et al., 1987; Wetherby, 1992). It is at this time that word combinations are observed. During the transition from 2 to 4 years, children begin to use objects symbolically and engage in related action schemes combining four to six objects and pretending without props. Linguistically, this is a time when children exhibit sentence grammar. By the time children reach age 4, they are engaging in sociodramatic play, taking on roles and cooperating with others, as they develop their skills in discourse.

Westby (1980, 1988) highlights similar parallels in the development of play and language, describing 10 stages of play and associated linguistic skills. These parallels are presented below:

- Stage I (9–12 months), appropriate toy use—no true language; some communicative intent and joint attention
- Stage II (13–17 months), purposeful toy exploration, multiple motor schemes—first words are variable and context dependent (e.g., saying "swing" when sitting on a swing but not when seeing it); communicative functions increase
- Stage III (17–19 months), symbolic play directed toward self, such as pretending to drink from a cup—true verbal communication; using words with several functional and semantic relationships
- Stage IV (19–22 months), play moves beyond the child, such as feeding a doll—word combinations; expanding semantic relationships
- Stage V (24 months), routine and familiar events or experiences are represented in play—functional and semantic relationships appear in short phrases and sentences
- Stage VI (30 months), less familiar events or experiences are represented in play using realistic props—responding to wh-questions, using wh-question forms (excluding "why") at the beginning of sentences
- Stage VII (36 months), play themes combined into episodes with multiple schemes—use of past tense and future verbs
- Stage VIII (36–42 months), play is less dependent on realistic props; includes scripts that have been observed but not experienced—vocabulary expansion; use of dialogue and indirect requests

- Stage IX (42–48 months), play themes are more organized and elaborate—use of modals and conjunctions; appropriate response to "why" questions
- Stage X (60 months), play themes include events never observed or experienced; play is planned and monitored—use of relational terms like *when, first, next*

More recently, Westby (2000) redefined her developmental play scale to include two phases, presymbolic and symbolic. In the presymbolic phase, there are two levels roughly commensurate with Stages I and II of her original *Symbolic Play Scale Checklist* (Westby, 1980). In the symbolic phase, there are eight levels relatively paralleling Stages III through X in the original scale. Westby continues to refine her description of the development of symbolic play, specifying the props, themes, organization, roles, and language used in play and highlighting the form, content, and function of language (Patterson & Westby, 1998; Westby, 2000). The framework for examining play and language that Westby describes has valuable implications for assessment.

The theoretical relationship between play and language has at its foundation the work of Piaget and Vygotsky (G. Fein, 1979). It is clear that these theorists shared some assumptions about development. For example, both saw mental development as constructed and organized through a sequence of qualitative changes in experience. They also recognized the role of symbolic play in preschool language, literacy, and art activities (Berk & Winsler, 1995). Differences are evident, however, in the influence they assigned to biological and cultural factors. G. Fein (1979) described those differences as stemming from Vygotsky's belief that symbolic play reduced the tension between unrealizable desires and substitutes for gratification and Piaget's view of symbolic play as a consolidation of past experience. Vygotsky also believed language had an important referential function in play; Piaget saw a minor role for language in play, suggesting that language and play are independent of one another in both development and use. Thus, although there is support for a relationship that suggests play contributes to the development of language, the parallels are not exact. Further, play and language can and do operate independently of each other. Nevertheless, it is important for practitioners to consider potential relationships between play and language in their assessment of individual children with ASD. Such relationships may provide some insight into intervention strategies that can support the children's play, language, and social interaction.

Considering the relationship of play to cognition, play helps children recognize that objects have functions other than those originally intended. That recognition facilitates children's ability to solve problems, imagine, and create (Libby, Powell, Messer, & Jordan, 1998). The flexibility and creativity characteristic of play foster innovation in how children think and problem solve. Pretend play, in particular, helps children to think differently about objects, supporting their ability to generalize their learning and to develop more abstract conceptual relationships.

Piaget's constructivist view of development recognized the role of children's self-regulated and independent play in the construction of knowledge (Piaget, 1962; Van Hoorn, Nourot, Scales, & Alward, 1993). Through children's self-effort and initiative, they learn to modify what they know and how they interpret their experiences. Vygotsky's view—that every function occurs first at a social level and then at an individual level (Van Hoorn et al., 1993; Vygotsky, 1978)—adds to the understanding of the development of play and its role in cognition. Consistent with Vygotsky's notion of the "zone of proximal development," play with capable peers stretches children's learning. Play experiences lead to more ideas, enhanced associations, and greater opportunities to make logical connections.

Challenges in Play for Children with ASD

Reflecting on the core deficits and behavioral symptoms often reported for children with ASD, it is not difficult to understand the challenges this population experiences in using play to support their language and learning. The transactional nature of play includes an expectation of joint attention and contingent responding (Wolfberg, 1999). In addition, a certain social finesse is required when children are planning, coordinating, and cooperating within group play activities. These expectations for participating in the play experience place children with ASD at a great disadvantage. Particular areas of challenge exist in the principles of play and in the development of symbolic play and creativity or imagination in children with ASD. Several views are offered in the literature to explain the play impairment in autism.

Applying the Principles of Play to Children with ASD

As stated earlier in this chapter, play is voluntary, pleasurable, and intrinsically motivated for most children. Repeated experiences and familiarity with objects, routines, and events increase the pleasure of and motivation for playing in those contexts. For children with ASD, who often limit their novel experiences and have difficulty initiating across contexts, the pleasurable, voluntary, and motivating aspects of play may not be realized. Motivation in play might also be dictated by the predictable, repetitive nature of activities that do not require shifts in attention or abstract or symbolic connections. Further, it may be difficult to recognize the pleasure children with ASD do experience in play activities because of their poorly developed affective signaling.

In addition to the voluntary, pleasurable, and motivating aspects, other principles define children's play as flexible, nonliteral, and requiring active engagement—characteristics that are frequently absent in children with ASD (Wolfberg, 1999). Given the opportunity to play freely, children who

have ASD are most likely to isolate themselves socially and exhibit repetitive or stereotypic actions on objects with few variations (Wing, Gould, Yeates, & Brierly, 1977). Lack of flexibility and a tendency toward isolation in play are evident in the following example of a 4-year-old boy with ASD:

> Mark was playing with a small train that he pushed around a small round track over and over again. When peers or adults approached him, he moved the train set closer and closer to a corner of the room where no one else could interfere with his play with the train. When an adult attempted to add a variation to his play by placing a character in one of the cars for a ride, he removed the character and said, "No!"

Children with ASD tend to play less and exhibit less diverse functional play. They also demonstrate less elaborate functional play and fewer actions than do other children with and without a variety of disabilities (McDonough, Stahmer, Schreibman, & Thompson, 1997; Riguet, Taylor, Benaroya, & Klein, 1981; Stone, Lemanek, Fishel, Fernandez, & Altemeier, 1990; Ungerer & Sigman, 1981; Williams, Reddy, & Costall, 2001). An example of less elaborate and diverse functional play is shown in the following example of Brian, a 5-year-old boy with ASD:

> Brian was in a kindergarten classroom composed of children with and without disabilities. The teacher had set up a sociodramatic play area that was a house with a kitchen and living room. As the other children engaged in a variety of dramatic play episodes, taking on roles as Mom, Dad, Baby, or Sibling, Brian stood near the kitchen set. He placed a spoon in each of the cups that were on the table. When given a baby doll to feed, he pushed the doll aside.

The perspective of individuals with autism is also informative about why they might exhibit particular play behaviors. Barron (2001), an adult who has described his life experiences with autism, characterized his early play as being less diverse and elaborate, isolating, and serving a functional need. His actions on objects and tendency to manipulate objects in a certain way were attempts to gain comfort, control, and security in his life. It seems important, then, for practitioners not only to observe play and its context during assessment, but also to determine the possible function the play may serve for the child with ASD.

Challenges in Symbolic Play and Creativity or Imagination in Children with ASD

Children with ASD are also described as specifically impaired in their symbolic play (Baron-Cohen, 1987; Charman et al., 1997; Libby et al., 1998; Riguet et al., 1981; Rutherford & Rogers, 2003; Stone et al., 1990; Ungerer & Sigman, 1981; Wulff, 1985). Studies in symbolic play in autism, however,

are plagued with methodological problems, particularly related to the matching of groups, the definitions of symbolic play, and the conditions under which play is assessed (Jarrold, Boucher, & Smith, 1993). Some research investigating ways to elicit, teach, or model play in children with ASD indicates that a capacity for symbolic play that is not spontaneously exhibited may exist in this population (Charman & Baron-Cohen, 1997; Jarrold et al., 1993; Lewis & Boucher, 1988; McDonough et al., 1997; Riguet et al., 1981). Children with ASD appear to have an understanding of the notion of pretense similar to that of children without ASD (Jarrold, Smith, Boucher, & Harris, 1994). Further, research indicates that more formal or structured assessments of play may yield better performance in children with ASD than assessments under spontaneous conditions (McDonough et al., 1997; Ungerer & Sigman, 1981). Consider the following example of play behavior in Carla, a 4½-year-old with ASD in an integrated preschool classroom:

> The sociodramatic play area was designed to represent a doctor's office. There were also a kitchen set and a dollhouse in close proximity. While most of the children were engaged in a variety of sociodramatic play episodes related to a visit to the "doctor's office," Carla stood on the outside of the group near the dollhouse. She typically took the people characters and slid them off the roof of the dollhouse. When an adult approached, she looked and then continued having the people characters climb to the top of the roof and slide off. The adult took one of the people characters to the front door of the house and knocked on the door, asking if anyone was home. Carla opened the door, and when the adult asked, "Can I come in?" Carla said "Yes!" The dialogue continued as the adult modeled the character sitting on the couch. Carla then brought one of the characters she had been sliding off the roof to sit on a chair that was next to the couch.

Although Carla initially had a less diverse and more perseverative interaction with the objects of play, increased variation in use of the objects and in type of play occurred following the modeling and prompting strategies of the adult play partner.

Creativity, a frequently reported deficit of children with ASD, requires an ability to generate novel representations through various manipulations of images (Craig & Baron-Cohen, 1999). In three experiments examining the imagination and creativity of children with autism and Asperger syndrome, Craig and Baron-Cohen found that children with ASD can generate novel changes to objects but do so to a lesser extent than children without ASD. Additionally, these novel changes are based more in reality than in imagination. In the following example, Carla (the little girl with ASD described in the previous example) shows some creativity in her ability to imagine a different way to use a particular play object, although it is reality based:

> Carla removed the roof from the dollhouse. She set it on the floor and slid over it just as she had done with the wooden characters previously.

She then turned the roof upside down. She stepped into it and rocked it back and forth while calling it a "boat."

The experimental results on creativity in children with ASD reported by Craig and Baron-Cohen (1999) suggest important connections to theory of mind (the ability to understand another's perspective) and, thus, to social understanding and communication. Rutherford and Rogers (2003) confirm connections between deficits in pretend play and theory of mind for children with ASD. The creativity and imagination component of ASD, however, requires further research.

Explanations for Impairment in Play in Children with ASD

Jarrold et al. (1993) summarized several hypotheses to explain the play impairment in autism, based on an assimilation of the methodological concerns and the experimental evidence gained through play research in children with ASD. The broad categories include a deficit in competence, performance, or both. Meta-representational and social impairments are used to explain the competence deficit. From a meta-representational perspective, children with ASD are perceived to lack the symbol system necessary to form second-order representations and solve problems that require an understanding of the mental state of others (Brook & Bowler, 1992). Children with ASD may either fail to develop theory of mind, for which symbolic play is an important prerequisite, or take longer to reach that capacity than other children of a similar developmental age (Baron-Cohen, 1989). The explanation that children with ASD fail to develop theory of mind falls short, however, when one considers their ability to demonstrate play in more structured situations (Jarrold et al., 1993). From a social impairment perspective, the argument is that the failure to engage in social situations and the inability to form social-affective relationships, as well as a poorly coordinated representation of self and others, impair symbolic play development (D. Fein, Pennington, Markowitz, Braverman, & Waterhouse, 1986; Rogers & Pennington, 1991). This account suggests differences in the level of impairment for physical and social pretends (Jarrold et al., 1993).

Jarrold and colleagues (1993) describe a motivational, central executive and generative impairment to explain a specific performance deficit in the play of children with ASD. Some clinical researchers suggest that reduced interest in play, poor task completion, and difficulty generalizing skills hint at a lack of motivation in children with ASD (Koegel & Mentis, 1985; Lord, 1985). Although evidence to support that view is lacking, it could explain positive changes noted in play following intervention. Difficulty carrying out volitional acts and decreased saliency of mental schemas versus physical reality indicate a central executive impairment in the development of symbolic play (Lewis & Boucher, 1988; Russell, Mauthner, Sharpe, & Tidswell, 1991). Similar to the central executive impairment, the generative impair-

ment indicates difficulties for children with ASD in the creation of internal representations, even without the interference of external actions like perseverations. The repetitive, stereotypic nature of play, the lack of spontaneous play, and the ability to respond to prompted play reported for children with ASD support both a central executive impairment and a generative impairment view (Jarrold et al., 1993; McDonough et al., 1997).

It may be that the deficits in symbolic play described for children with ASD have both competence and performance components. The combination view hypothesizes that children with ASD have later developing symbol systems (competence) that are poorly used (performance) (Jarrold et al., 1993). The implications are that symbolic play would be affected in spontaneous contexts for those children who have developed a symbol system and that children who have yet to develop a symbol system are less likely to benefit from elicited or instructed contexts (Jarrold et al., 1993). Given the variation in communication profiles for children with ASD and the relationships between language and play, assessment needs to consider the potential interactions and create contexts in which both play competence and play performance can be assessed. It is also important to assess the generalization of play skills across contexts, given the rigid, more gestalt-like learning style of children with ASD, as discussed in Chapter 4.

Creating Profiles of Play Strengths and Challenges

Preparation for intervention around play requires a clear understanding of both the knowledge and the execution of play that children with ASD exhibit. There are several considerations for practitioners as they develop play profiles for children with ASD. First, a child's understanding of the world must be defined. This can be done through observation by practitioners who can identify the interactions among play, language, and social cognition and describe the strategies children use to problem solve. Second, a clear understanding of the child's ability to explore and experiment with objects is needed. Practitioners must be able to describe how children with ASD learn about the physical properties of objects, the range of strategies they use for exploration (e.g., tactile, visual, auditory), and their attempts to combine strategies in their exploration and experimentation. Third, a child's learning through play is affected by environmental variables. Therefore, practitioners must know the environment and the stresses characteristic of that environment that are likely to affect the play competence and performance of a child with ASD. Fourth, children with ASD often lack the social competence to establish a mutual play focus with peers and may not be able to communicate their play interests or interpret those of others (Wolfberg, 1999). Practitioners must carefully observe the opportunities for peer play and the impact of the social context on the play of children with ASD. Finally, the play of children with ASD may be different in structured and unstructured situations.

Research suggests that symbolic play, in particular, may be facilitated under prompted or modeled conditions (Charman & Baron-Cohen, 1997; Jarrold et al., 1993; Lewis & Boucher, 1988; McDonough et al., 1997; Riguet et al., 1981; Wolfberg, 1999). Therefore, practitioners need to observe spontaneous play, as well as play that is elicited through prompting or modeling.

Profiling the play strengths and challenges of children with ASD requires practitioners to ask at least the following questions:

- In what ways does this child use objects?
- In what ways does this child explore objects?
- How does language affect this child's play?
- How does the social context affect this child's play?
- How does this child's independent play look in comparison to peer play?
- Does this child's play look different in structured versus unstructured situations?
- What happens when play is prompted or modeled?
- What might happen if the context was changed?
- Have the duration and contexts of observation been sufficient to create a valid profile of this child's play behavior?

These questions guide practitioners in their pursuit of learning what children with ASD know about their world through play.

Play Assessment Across Impairment, Activity, and Participation

Play assessment is useful for learning how children play with practitioners versus how they play in their own world. Play assessment that addresses the ICF (World Health Organization [WHO], 2001) dimensions of disability (as described in Chapter 3) takes multiple forms, including record review, interview, observation in structured or natural environments, and the use of formal assessment tools appropriate for the age of the child. It is important that assessment in this area of deficit for children with ASD consider all three dimensions of disability—impairment, activity, and participation—in light of personal and environmental contextual factors. This ensures that interventions developed and planned for a child with ASD will be responsive to each of the levels. Table 5.1 describes the dimensions of disability proposed by the WHO and the relevant play assessment areas for children with ASD.

Record Review

A current and historical perspective on the play development and performance of children with or suspected of having ASD is an important component of the assessment process. The development of play has a role in early

TABLE 5.1

Dimensions of Disability and Aspects of Play To Be Assessed in Children with ASD

Impairment: Function and Structure at the Body Level	Activity: Performance at the Person Level	Participation: Involvement at the Societal Level
• Motivation • Joint attention • Understanding of use of objects and actions • Functional use of objects and actions • Understanding of symbolic use of objects and actions • Symbolic use of objects and actions • Pretend with self • Pretend with others • Variation in the use of objects • Variation in actions performed on objects • Flexibility in play themes • Social competence • Theory of mind • Understanding and use of nonliteral language • Negotiation	Quality and quantity of skill performance; what child can and cannot do in everyday activities: • simple activities (e.g., independent play with objects or toys, filling and emptying containers, block building, running on the playground, climbing, throwing a ball) in structured and unstructured situations; and • complex activities (e.g., board games, organized sports, drama, role playing, storytelling, drawing, writing, constructing, dialoguing) in structured and unstructured situations.	Compared to the standard or norm for participation of other children without disabilities, participation in typical activities: • school, • home, • play dates and overnights, • recreational programs, • sports programs, • friendships, and • other community activities or programs.

Context

• Personal: Age, gender, other health conditions, past and current experiences, educational level, fitness, lifestyle, habits, coping styles, or other personal–social characteristics.

• Environmental: Societal attitudes, cultural norms, laws, educational systems, architectural characteristics, or other environmental conditions.

and differential diagnosis (see Chapter 1). The lack of symbolic play development early on raises concerns (Baron-Cohen, Allen, & Gillberg, 1992; Baron-Cohen et al., 1996). Practitioners should carefully examine early reports and records of play development, as well as changes in development following intervention. Documentation of children's early play experiences is also critical.

Interview

As mentioned in Chapter 3, interviewing is an important component of the assessment process, and it has a critical role for obtaining valuable information

about a child's play competence and performance. Interviews should be conducted with those individuals (e.g., parents and teachers) who have had a consistent opportunity to observe a child's play and know how a child engages in play with a variety of partners across multiple environments. Further, it is important to have an understanding of the child's early social play experiences with other children.

A sample format for completing a home or school play assessment interview for children with ASD can be found in Figure 5.1. Both grand and mini tour questions (as described in Chapter 3) are identified to facilitate gathering information about a child's play through general descriptions and specific examples.

Observation

To gather relevant information that will guide a practitioner in intervention planning, it is important to observe play during both elicited and spontaneous conditions. Research suggests that the potential for play in children with ASD might not be realized in unstructured contexts and that play can be elicited in more prompted or modeled conditions (see Jarrold et al., 1993, for a review). Therefore, it is important to assess play across several contexts. Further, the practitioner needs to observe long enough to have an accurate picture of the behavior.

Due to the potential play strengths and challenges experienced by children with ASD across a variety of situations, observations should be made in the following contexts:

- in elicited contexts, through prompting or modeling,
- in unstructured situations,
- in independent play,
- in peer play, and
- at home, at school, and in the community.

The observer must carefully examine the symbolic, social, and language dimensions of play to begin defining the steps that may facilitate play performance.

Wolfberg (1995) developed a framework for observing play, noting that many play-based assessments fail to consider more subtle and individual variations in the play of children with ASD. Typically, play-based assessments follow a linear process, examining play from simple to complex activities. That approach fails to consider the dissociations in development reported for children with ASD, however. Wolfberg's framework for observing play includes both a symbolic and a social dimension. She recommends that the practitioner identify the play of children with ASD across four categories in the symbolic dimension:

- no interaction (no play with toys; self-stimulatory actions that do not involve toys);

Play Assessment Interview

Child's name: _____ Date: _____

Interviewee: _____ Interviewer: _____

Grand Tour Questions

I'd like to talk about _____ play experiences.

1. Tell me, in general, how _____ plays: _____

   _____

   _____

   _____

   _____

   Probes: with objects: _____

              with siblings or peers: _____

              in structured situations: _____

              in unstructured situations: _____

              with familiar toys: _____

              in predictable activities: _____

              with new toys: _____

              in new activities: _____

2. Yesterday, at this time, did _____ play? Tell me what happened.

   _____

   _____

   _____

   _____

Mini Tour Questions

You gave me a general description of _____ play. Now I'd like to talk about it more specifically.

1. Tell me about who _____ plays with and how they play: _____

   _____

(continues)

FIGURE 5.1. Play assessment interview.

2. Tell me about what kinds of things _____ plays with and how _____ plays with them:

_____

3. Tell me about what _____ does when _____ plays: _____

_____

4. Tell me about how long _____ plays: _____

_____

5. Tell me about what _____ says when _____ plays: _____

_____

6. Tell me what you think _____ is feeling when _____ plays: _____

_____

7. Tell me how you know that _____ is having fun when _____ plays: _____

_____

8. Tell me what you think makes _____ excited or happy when _____ plays:

_____

9. Is there anything that bothers _____ when he plays with _____?

_____

10. Tell me what you think motivates _____ to play with _____?

_____

FIGURE 5.1. *Continued.*

- manipulation of toys (including a motivation to control the physical world and an interest in unconventional exploration);
- functional play (using toys in conventional ways with delays in imitation); and
- symbolic play (pretending to be someone or to do something).

Wolfberg also describes four categories in the social dimension that the practitioner should consider:

- isolation (children are essentially unaware of others, occupying themselves by watching situations of interest or playing alone);
- orientation (children are aware of others by looking at them or their play but not entering the play activity);
- parallel (simultaneous use of play space as peers with some imitation and showing but generally independent play); and

- common focus (engagement in and attention to play activities with one or more peers).

Taking the time to observe the play of children with ASD, including reflecting on the symbolic and social dimensions of play they exhibit, provides practitioners with an enhanced understanding of the children's individual strengths and challenges in this aspect of development.

Two observation tools, the *Play Preference Inventory* and the *Profile of Individual Play Characteristics,* have been created by Wolfberg (1995) to facilitate the recording and evaluation of observations made of children with ASD and peers without ASD. The *Play Preference Inventory* records all the children's (both novice and expert players') play preferences, including preferred materials, themes, playmates, interactions on objects, and activities. It is used to identify shared patterns of play interests for an entire play group. The *Profile of Individual Play Characteristics* more carefully examines the play preferences of the novice player. It provides an opportunity to identify the symbolic and social dimensions of play exhibited by children with ASD, as well as their communicative functions and means and their individual play preferences.

Another useful framework for observing play in children with ASD is proposed by Howlin, Baron-Cohen, and Hadwin (1999). Their framework requires analyzing videotaped observations. They describe five types of play that are similar to Wolfberg's (1995) symbolic dimensions of play:

- sensory motor play (simple manipulation of toys);
- emerging functional play (conventional use of toys but without pretense);
- established functional play (conventional use of toys without pretense that occurs more than three times in a 10-minute interval);
- emerging pretend play (object substitution, attribution of pretend properties, and use of imaginary objects or events); and
- established pretend play (spontaneous use of three or more examples of object substitution, attribution of pretend properties, or use of imaginary objects or events).

Although Howlin and colleagues define levels of functional and pretend play to a greater extent than Wolfberg (1995) does, they do not specifically propose identifying the social dimensions of play in children with ASD.

Observations by teachers who interact with children in play on a daily basis can contribute much to understanding the play behavior of children with ASD. Teachers can use a *Play Observation Diary* (Van Hoorn et al., 1993) to record children's spontaneous and guided play and to identify the learning (e.g., science play) and social (e.g., small-group) contexts in which the play occurs. Documentation through this diary format allows teachers, families, and other practitioners to review the levels of play a child is engaged in and to identify the changes occurring over time. This type of assessment is a powerful intervention planning tool.

It is important for practitioners and family members to recognize the potential role of the environment in understanding and observing the play exhibited by children with ASD. Comprehensive play assessment involves a careful and reflective look at the environment in which a child has opportunities for play. Several questions should be asked:

- What is the climate for play in this environment?
- How is play accepted and encouraged?
- What opportunities are there to incorporate make-believe into interactions with peers?
- How is pretend play encouraged?
- How adequate is the space for play?
- What materials are provided to enhance pretend play?
- How much time is given for pretend play in this environment?

Answers to these questions guide the practitioner or family member in determining some environmental changes extrinsic to the child with ASD that may be needed to support the development and use of play.

Assessment Tools

Assessment in the context of play has several benefits (Linder, 1993). First, it provides a measure of a child's behavior that is both reliable (what one observes will be similar from time one to time two) and valid (what one observes is relevant to what one is interested in). Second, it is holistic, in that the child is seen as an integrated being across several developmental domains simultaneously. A functional picture is provided that considers motivation, interaction patterns, and learning style. Third, play-based assessment accommodates each child's unique characteristics. That is, children are able to move at their own pace, practitioners can follow their lead, there is no need for establishing a basal or ceiling, and there is little negative impact on self-esteem. Fourth, it is strength-based, looking at what children can do instead of what they cannot do. Fifth, this type of assessment involves those who know the child best and actively engages family members. Sixth, play-based assessment ensures that useful information will be gained for children typically described as "untestable." Finally, it creates a comfortable, unobtrusive environment for children, their families, and the practitioners who are involved in the assessment.

Several play-based assessment tools have been used to evaluate the play of children with ASD. Linder's (1993) *Transdisciplinary Play-Based Assessment* (TPBA) is a particularly dynamic assessment model that considers the total child and requires practitioners to share information and roles across disciplines. The TPBA provides a flexible structure for assessing developmental skills in young children that considers the individual needs of children by changing event sequences, participants, and content. The format

is especially responsive to the play characteristics of children with ASD who have generally less organized play with fewer play sequences, more interest in objects and functional play than symbolic and peer play, and more rigid play themes and interests. The TPBA examines six developmental play levels from 6 months to 6 years:

- birth to 24 months—exploratory play
- 9 to 24 months—functional play
- 24+ months—constructive play
- 21 to 72 months—symbolic play
- 36+ months—rough-and-tumble play
- 60+ months—games with rules

The TPBA involves a number of participants. The parents act as informants and often participate in the play. A parent facilitator informs parents about the TPBA process and supports their involvement. The play facilitator follows the child's lead to obtain a spontaneous and interactive sample of play behavior. Other team members observe and document behaviors and cue the play facilitator to perform specific tasks so that all aspects of development are probed.

Six phases of assessment are designed in the TPBA to probe cognition, communication, sensory–motor, and social–emotional development in the context of play (Linder, 1993). The role of the players is defined for each phase, so that opportunities to probe all aspects of play, language, and learning are provided. Play is facilitated through both structured and unstructured tasks, as well as child-to-child and parent-to-parent interactions. Observation worksheets and an outline of observation guidelines across domains of learning are included with the TPBA manual.

Westby's (1980) *Symbolic Play Scale Checklist* is another assessment tool that can be used to examine not only the play of children with ASD but also the relevant language observed at each stage of play. As described earlier, Westby defines 10 stages of play that can be observed in children from 9 months to 5 years of age. This checklist is accompanied by an observation form that identifies the type of play observed along both social (onlooking, solitary, parallel, associative, cooperative) and symbolic (practice, symbolic imitative, symbolic spontaneous, game) dimensions of play.

In 1988, Westby refined her original checklist and developed the *Symbolic Play Scale* to include an evaluation of the props used in play; the content represented; the organization of the play script; the roles the child and others take on; and the language form, content, and function represented in play. As practitioners evaluate a child's play using Westby's framework, the questions outlined in Figure 5.2 may be useful probes to guide the assessment.

The *Autism Diagnostic Observation Schedule–Generic* (ADOS–G; Lord, Rutter, DiLavore, & Risi, 1999), a commonly used diagnostic tool described in Chapter 1, assesses specific information about a child's play and probes elements of imagination and creativity. Although typically used as a diagnostic

Play Assessment

Child's name: _____ Date: _____

Observer: _____ Location: _____

Questions To Guide Play Assessment	Yes	No	Comments and Examples (explain how the child demonstrates observed behaviors)
Decontextualization—dependency of the child on a realistic prop: • Does the child require a realistic prop to engage in play? • Does the child substitute one object for another? • Does the child use language to prepare the play scene?			
Theme—familiarity of the child with the content of the play: • Has the child previously experienced these events on a daily basis? • Has the child previously experienced these events on a periodic basis? • Has the child seen or read about these events but not personally experienced them?			
Organization—ability to organize and plan play: • Does the child fail to organize play and include unrelated activities? • Does the child incorporate sequences of temporally related activities? • Does the child plan activities prior to beginning play?			
Self–Other Relationships—ability to define roles, feelings, and beliefs of self and others: • Does the child relate "pretend" only to himself or herself?			

(continues)

FIGURE 5.2. Questions to guide play assessment.

Questions To Guide Play Assessment	Yes	No	Comments and Examples (explain how the child demonstrates observed behaviors)
Self–Other Relationships (continued) • Does the child pretend to take on familiar roles (e.g., mommy, daddy, baby brother or sister)? • Does the child give voice to dolls and puppets in play? • Does the child use multiple roles for a single character (father, brother, son, fireman)?			
Communication—ability to use a variety of language functions and gestures in play: • Does the child use language to meet a need in play? • Does the child use language to describe activities? • Does the child use language to report or narrate what is going on in play? • Does the child use language to solve problems or predict in play?			

FIGURE 5.2. *Continued.*

measure for children through adults suspected of having autism, its structured and semistructured interaction format makes it an appropriate instrument for learning about and probing a child's play and imagination.

Although this is not an exhaustive list, and not specifically designed for children with ASD, the assessment tools mentioned here have value in supporting practitioners in their effort to identify formally the play strengths and challenges for this population. They also provide a means for observing change in development over time.

Summary

This chapter has discussed the development of play and the deficits in specific areas of play frequently described for children with ASD. The principles that

guide play development; the relationships that exist among aspects of play, language, and cognition; and ways practitioners might approach a meaningful play assessment have been described. The following paragraphs refer to the questions at the beginning of the chapter and highlight key points one should be familiar with when assessing play in children with ASD.

What principles guide early play development, and how is play defined?

Several principles guide the play of children. Play is voluntary and occurs spontaneously. It is fun and provides pleasure, often accompanied by signs of positive affect (Wolfberg, 1995). Intrinsically motivated, play seldom requires external demands or rewards to occur. Play actively engages children in a chosen activity. It is also characterized by a flexible and nonliteral nature that allows children to manage the unexpected, to change the rules, and to imagine something different. Each of these principles poses particular challenges for children with ASD.

Several classifications are used to describe the play of children who are developing in a typical manner. Both symbolic and social dimensions and a range of interaction with objects and other people, from simple manipulation to highly complex pretending, characterize children's play.

What are the relationships among play, language, and cognition that have implications for children with ASD?

Play is a natural vehicle for examining how children understand, think about, and learn from their experiences. It has been described as an important medium for the intellectual, linguistic, emotional, and social development of children (Fewell & Kaminski, 1988; Wolfberg, 1999). It also follows a developmental sequence that seems to parallel that of language and cognitive development (Bates et al., 1987; Fewell & Kaminski, 1988). The specific relationships between play and language are complex. Although there is support for the idea that play contributes to the development of language, the parallels are not exact. Play and language also operate independently of each other.

The relationship of play to cognition is supported in children's early exploration and manipulation of objects and their later representation of objects and actions in pretend play. Play helps children recognize that objects have functions other than those originally intended, which facilitates problem solving, imagination, and creativity (Libby et al., 1998). Pretend play, in particular, supports children's ability to think differently about objects, to generalize their learning, and to develop more abstract conceptual relationships.

What are the challenges in play reported for children with ASD?

Children with ASD often isolate themselves socially and exhibit repetitive or stereotypic actions in their play with objects, using fewer variations (Wing et al., 1977). They tend to play less often and exhibit less diverse and elaborate functional play (McDonough et al., 1997; Riguet et al., 1981; Stone et al., 1990; Ungerer & Sigman, 1981; Williams et al., 2001). Children with ASD are also described as specifically impaired in their symbolic play, al-

though they may be responsive to elicited or prompted symbolic play. Given the difficulties that children with ASD have with a variety of play activities, they might not act on play materials without a cue, external facilitation, or instruction. This makes access to play and expansion of play skills difficult.

How can play profiles be used to assess the strengths and challenges of children with ASD in this core deficit area?

To accurately assess play in children with ASD, practitioners must first possess an understanding of the typical stages of play development and the variables that affect a child's ability to perform in a particular context. An assessment of play must account for diversity in children's cultural, linguistic, and family backgrounds and individual differences in interests and behavioral style (Van Hoorn et al., 1993). In their development of play profiles for children with ASD, practitioners must define children's understanding of their world, observe their ability to explore and experiment with objects and play with peers, understand how their play is affected by environmental variables, and assess play in both structured and unstructured situations.

What areas of play assessment should be considered across the three dimensions of the disablement framework?

Play assessment should address all three areas of disability—impairment, activity, and participation—as described by the World Health Organization (2001). Practitioners can use records review, interviews, observations, and a variety of assessment tools to describe the play of children with ASD. It is critical to engage in a holistic play assessment of children along the spectrum if practitioners are to support them to participate fully in their community. Factors both intrinsic and extrinsic to the individual child must also be considered. Play assessment following the disablement framework ensures that interventions designed to enhance play in children with ASD will be responsive to their actual needs.

Practice Opportunities

1. Create a profile of the strengths and challenges in play noted for a child with ASD.

2. Using one of the observation or assessment tools described in this chapter, define the following:

   • symbolic level of play observed
   • social level of play observed
   • language accompanying the play observed

3. Ask the teacher of a child with ASD to complete a play observation diary, and use that information to help in intervention planning.

4. Probe the play of a child with ASD in both structured and unstructured situations to determine whether his or her capacity for play is enhanced by modeling, prompting, or direct instruction.

Suggested Readings

Jarrold, C., Boucher, J., & Smith, P. (1993). Symbolic play in autism: A review. *Journal of Autism and Developmental Disorders, 23*(2), 281–307.

This review article examines the research that has attempted to define the nature of the deficit in play experienced by children with ASD. The authors make a case for specific challenges in spontaneous symbolic and functional play for children with autism. Interestingly, however, the research also indicates the potential or capacity for symbolic play in children with ASD when prompted or instructed.

Wolfberg, P. (1995). Enhancing children's play. In K. A. Quill (Ed.), *Teaching children with autism: Strategies to enhance communication and socialization* (pp. 193–218). Albany, NY: Delmar.

In this chapter, Wolfberg defines the principles inherent in play that may pose particular challenges for children with ASD. She also describes play that is characteristic of early and middle childhood. In addition, she identifies the variations in play that have been observed for children with ASD and develops a framework for observing both the symbolic and social dimensions of play.

Wolfberg, P. J. (1999). *Play and imagination in children with autism.* New York: Teachers College Press, Columbia University.

This book describes the role of play in typical development and offers perspectives on the play of children with autism. Using ethnographic child stories, Wolfberg establishes an understanding of the play culture that emerges for children along the spectrum. She ends the book with valuable theory-to-practice implications.

Resources

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Glossary

Associative play. Play that is loosely organized around shared interests, materials, or activities.

Cooperative play. Play that is sustained and complex, including common goals and a variety of roles among players.

Decentration. In pretend, moving from self to other as agent.

Decontextualization. In pretend, moving away from using real objects.

Functional play. Play that includes appropriate use of an object or the conventional association of two or more objects.

Game. Play that includes understanding of rule-governed behavior.

Onlooking. Observing but not participating in play.

Parallel. Play among children using similar materials but with no interaction.

Practice play. Play involving fine-motor (e.g., stringing beads, putting together puzzles) and gross-motor (e.g., running, bike riding) activities.

Solitary play. Playing alone.

Symbolic imitative play. Pretend play initiated or guided by another.

Symbolic/pretend play. Play behavior that is nonliteral, acting as if something is the case when in reality it is not.

Symbolic spontaneous play. Pretend play that a child initiates on his or her own.

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