

A Developmental Investigation of Children's Imaginary Companions

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Twelve 4-year-olds with imaginary companions (ICs) and 15 without ICs were asked to describe and pretend to interact with the IC or a real friend. Children with ICs readily described them and were more willing than children without ICs to pretend the IC or real friend was in the lab. Children were interviewed about 7 months later, and the IC descriptions were as stable as the descriptions of real friends. Children with and without ICs did not differ in their ability to distinguish fantasy and reality, but IC children were more likely to hold an imaginary object instead of substituting a body part when performing a pretend action and were more likely to engage in fantasy in a free-play session.

During the preschool years, many children create imaginary companions that become a regular part of their daily routines (Mauro, 1991; Singer & Singer, 1990). The definition of an imaginary companion (IC) used by most research on this topic is taken from Svendsen (1934): "an invisible character, named and referred to in conversation with other persons or played with directly for a period of time, at least several months, having an air of reality for the child but no apparent objective basis" (p. 988). Many researchers (e.g., Mauro, 1991, Singer & Singer, 1990) also categorize stuffed animals as imaginary companions, if the child treats the animal as if it has a stable personality (similar to "Hobbes" in the comic strip, *Calvin and Hobbes*). There is evidence that ICs sometimes become part of the family, requiring their own chair at the dinner table and their own space in the child's bed (Mauro, 1991), but we know very little about the possibility that children may sometimes think of their ICs as real. In addition, information about the characteristics of ICs and the roles they play in the cognitive and emotional development of children is very limited.

The extent that children maintain a boundary between the real and the pretend with respect to their ICs is a timely question because of recent theoretical and empirical work on children's developing knowledge about mental life or their "theory of mind" (Harris, 1991; Leslie, 1988). Children are often credited with early competence in distinguishing mental representations from external stimuli in the domain of pretense (for a review, see Lillard, in press). For example, although young children have difficulty distinguishing a real identity from an apparent one (e.g., a sponge that has the appearance of a rock), they have no trouble distinguishing the real identity of an object from its *pretend* identity (e.g., a crayon that an experimenter is

pretending is a toothbrush; Flavell, Flavell, & Green, 1987). In addition, Wellman and Estes (1986) have shown that even 3-year-olds can distinguish real and pretend entities on the basis of criteria such as whether the entity can be touched and seen by others. However, there are other recent findings suggesting that, under some conditions, children may become confused about what is real and what is pretend. For example, Harris, Brown, Marriott, Whittall, and Harmer (1991) claim that Wellman and Estes's results might hold only for relatively prosaic types of pretend entities, such as the ones they used in their experiments (e.g., pretend cookies and cups). Harris et al. asked children to pretend there was a monster in a box and found that subsequently children were apprehensive about the contents of the box. Harris et al. interpreted this result as suggesting that when an imagined entity is emotionally charged and projected outside the head (e.g., in a box), children's ability to think of the entity as entirely imaginary might break down. This hypothesis is consistent with a variety of observations by other researchers (for a review, see Bretherton, 1989).

From the point of view of this controversy, ICs are particularly interesting because children are emotionally involved with their ICs and the ICs are projected into space, rather than thought of as being in the head. However, ICs differ in important ways from the imaginary entities used in past research on the pretend–real distinction. Unlike the imaginary entities in other research, ICs have an existence that predates the test session. Imaginary companions are relatively stable personalities that play a daily role in the child's fantasy life (Mauro, 1991). In contrast to guided fantasies such as Harris et al.'s (1991) monster who likes to bite children's fingers, ICs are spontaneous products of the child's own imagination. Finally, although both imagined monsters and ICs are emotionally charged, the valence of the emotion associated with monsters is negative, whereas the valence of the emotion associated with almost all ICs is positive (Mauro, 1991).

Research on imaginary companions has the potential of providing new information about children's ability to distinguish fantasy from reality, the effect of the emotional content of the fantasy with respect to this distinction and, more generally, the role that fantasy plays in the emotional and cognitive development of young children. However, there are common assump-

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tions about ICs that might have discouraged researchers from investigating this topic: (a) ICs are assumed to be relatively rare; (b) ICs are assumed to be a possible indicator of problems, such as extreme shyness; and (c) ICs are assumed to be private fantasies that children might be reluctant to share with strangers, such as experimenters. All of these assumptions are most likely incorrect. First of all, ICs are surprisingly commonplace. The most recent research shows that as many as 65% of preschool children have ICs (Mauro, 1991; Singer & Singer, 1990). Second, although some clinical case studies describe children who have ICs or disturbed adults who had ICs in childhood (Bender & Vogel, 1941; Benson & Pryor, 1973; Myers, 1976), in most research, the creation of an IC is associated with positive characteristics. For example, in comparison with children who do not have ICs, children who create ICs are more sociable, less shy and have more real friends (Mauro, 1991), are more creative (Schaefer, 1969; but see Manosevitz, Fling, & Prentice, 1977) and participate in more family activities (Manosevitz, Prentice, & Wilson, 1973). The third assumption, that children may not want to discuss their ICs, underlies research strategies such as interviewing parents about their children to find out about the existence and characteristics of ICs (Ames & Learned, 1946; Manosevitz et al., 1973) or interviewing adults and adolescents about their own former childhood ICs (Hurlock & Burnstein, 1932; Schaefer, 1969). However, Mauro's research indicates not only that children are willing to tell an experimenter about their ICs, but that parents are not good informants. One goal of the present research was to determine the extent that it is possible to collect reliable data about ICs by interviewing children and to find out if children are willing to bring their ICs to the lab.

In summary, the purpose of this research was to explore the feasibility of interviewing children about ICs as a way to learn more about early fantasy and to determine the best way to encourage children to interact with their ICs in the lab. We also wanted to learn more about the types of companions children create, the extent that ICs change over time, and if young children understand the fantasy status of their ICs. Finally, we were interested in the possibility that children with ICs might differ from children without ICs in their ability to distinguish fantasy from reality.

Study 1

The main goal of this study was to develop a methodology for learning about imaginary companions and to assess the extent children are aware of their IC's fantasy status. Children were asked about the physical appearance of their ICs to determine if they would readily answer such questions, as well as to learn about the characteristics of ICs. In addition, children were encouraged to interact with their ICs in the lab. While the children were engaged in this pretense, they were questioned about who could see and touch the IC. For comparison purposes, a group of children who did not have ICs were questioned about the physical appearance of a real friend, encouraged to pretend the real friend was present in the lab, and asked who could see and touch the friend.

Method

Subjects

The subjects were 12 children with ICs (M age = 4 years and 2 months, range = 3 years and 9 months to 4 years and 10 months) and 15 children without imaginary companions (NIC; M age = 4 years and 1 month; range = 3 years and 10 months to 4 years and 9 months). There were 6 girls and 6 boys in the IC group and 9 boys and 6 girls in the NIC group. Fourteen of the NIC children and 10 of the IC children were recruited through birth announcements in a local newspaper. Two additional IC children and 1 additional NIC child were recruited by advertisement.

Materials

The materials used in this study were a Snoopy playphone, a purple suitcase, koosh balls (small balls made of rubber bands), and video equipment.

Procedure

When parents were first contacted by phone to set up a visit to the lab, they were asked about the existence and names of any ICs. At the testing session, each child was interviewed individually in a private room with the parent in an adjoining room that was equipped with a one-way mirror. The parent filled out a questionnaire about the child's IC and the child's beliefs in imaginary entities such as Santa Claus, monsters, and ghosts. Children were questioned about an IC in the following way (adapted from Mauro, 1991):

I am going to ask you some questions about friends, OK? Some of the questions will be really easy and you will know the answer right away. And some might be kind of hard, so if you don't know the answer you can say "I don't know" and that's OK. Some friends are real like the kids at your school or the kids who live on your street, the ones that you play with. And some friends are pretend friends. Pretend friends are ones that are make believe, that you pretend are real. Do you have a pretend friend?

Eleven of the children answered "yes" to this question. The youngest child in our sample (3 years and 9 months) answered "no," but the parent had already described an IC named Bla-Bla. This child was asked about the IC by name ("What about Bla-Bla?"). The child immediately answered, "Bla-Bla is my friend," so this child was included in the group of children who had ICs. Three of the children who reported they had ICs had parents who earlier claimed they did not. For these cases, we later asked each parent if the description of the IC provided by the child corresponded to a real person in the child's life. For all three cases, the answer was no. According to research by Schmechel (1975), about a third of the parents of children with ICs are unaware of the IC's existence.

Children who said they had an IC were asked a series of questions about the friend (e.g., name, age, gender, size, hair color, eye color, type of clothing, and how often they played with the IC).¹ Children who did not have an IC were asked the same questions about a real friend of

¹ Specific questions (e.g., "What color is Bla-Bla's hair?") were asked rather than general questions (e.g., "What does Bla-Bla look like?") to elicit comparable types of descriptions for imaginary and real friends. However, in future research on the characteristics of ICs, it would be interesting to ask general questions about the appearance of ICs. In pilot work, we have found that many details of ICs' appearances may not be captured by children's answers to the specific types of questions used in the present research (e.g., long ears that drag on the ground).

their choice. After describing the friend, children were shown an attractive Snoopy playphone and were asked to pretend to phone the friend (either IC or real friend) and invite him or her to the lab. The method of using a phone to contact the IC or real friend was adopted because, in pilot testing, we found the phone helped children make the transition from sitting passively during the interview to active pretending, possibly because introduction of the phone broke eye contact with the experimenter (i.e., the child looked at the phone) and elicited action (i.e., the child immediately started to play with the phone). The phone was particularly useful in pilot research with NIC children who were asked to pretend a real friend was present.

When the children informed the experimenter that the friend was in the lab sitting in the chair provided, they were prompted to interact with the friend and an attractive toy (e.g., "I have a really neat toy in this box and I bet you would really like to see it. Would you like to see it? Well, your friend has the box. Now if you want to see the toy what would you say to him [her]? Now show me how you and your friend would play with the toy"). The purpose of these questions was to facilitate an interaction between the child and the friend. Then a series of questions designed to determine the extent to which the child was aware of the imaginary status of the friend was asked as follows: Can you see (friend's name)? Can you see (friend's name) the way you see me? Do you think I can see (friend's name) right now? Can you touch (friend's name)? Can you touch (friend's name)? Can you touch (friend's name) the way you touch me? Do you think I can touch (friend's name)?

Results and Discussion

Descriptions of Imaginary Companions

The children with ICs had no difficulty describing the physical characteristics of their friends. None of the children responded by saying "don't know" to any of the questions. "Don't know" responses were also relatively rare in the NIC group, although 6 of the 15 children did not know the answer to at least one question. The descriptions children provided of their ICs were tremendously varied, including three nonhumans (a ghost, a bird, and a dog) and two toys (a stuffed dog and a doll). Table 1 gives the descriptions of the ICs from this study in detail.

Six of the 12 children had to select one IC from two or more of their imaginary companions. Three children each had two same-age ICs, one of each gender (i.e., Tippy and Tompy, Bla-Bla and Do-Dee, and Nutsy and Nutsy). Another child only mentioned one friend (Boys), but his parent described two regular ICs (Boys and Grandma). Two children had several ICs, and their accounts were substantiated by their parents. One child invited Little Chop to the lab but also mentioned Jonathan, Starlight, Crudy, and Baby Bat. The other child described Baby but had three other distinctive ICs, Michael, Sara, and Jake.

Pretending Friend Was Present

Children's willingness to pretend to phone their friend, invite him or her to the lab, and interact with the friend in the lab varied as a function of whether or not they had an IC. Children who had an IC did not hesitate to phone the friend and seemed comfortable pretending he or she was present. There were complications for some of the phone episodes, but these did not take the form of children not pretending. For example, one IC arrived with an imaginary father, creating a seating problem that was resolved by having the father sit in the chair and the IC

on the subject's lap. Another IC had to travel from across town, so it took her about 8 min to make the trip. Two children had brought their ICs along (unbeknownst to the experimenter), and so the phone call was not required. The parent of one of these children reported her child had mentioned during the drive to the lab that the two ICs (Nutsy and Nutsy) were riding on top of the car. In contrast to the IC group, children who did not have ICs were often reluctant to pretend to phone the friend and needed considerable prompting. Many initially reported that no one answered the phone or that the friend was too busy to come. Two children completely refused to pretend the friend was present.

To assess the reliability of this observation of group differences, two independent judges viewed the videotaped phone episodes and assigned children a score from 1 to 3 indexing the child's engagement in the pretense (e.g., talking to friend without prompting or readily pretending to have friend visit the lab). There was good agreement between the judges ($r = .91$). Figure 1 shows the proportion of children in each group who were categorized as having a low, medium, or high level of pretense. A t test was performed to compare the judges' overall scores for children in the IC ($M = 2.67$, $SD = 0.49$) and NIC ($M = 1.8$, $SD = 0.68$) groups. This test was significant, $t(25) = 3.72$, $p < .001$, indicating that the children with ICs were significantly more engaged in the pretense than the children without ICs. In addition, the interaction with the friend was divided into five parts (reaction to phone, phone conversation, outcome of phone call, arrival of friend, and interaction with friend), and the judges scored the level of pretense (1–3) for each part. A t test comparing the summed scores (maximum score = 15) for the five parts for IC children ($M = 14.17$, $SD = 1.4$) with the scores for NIC children ($M = 11.0$, $SD = 3.16$) was significant, $t(25) = 3.22$, $p < .01$.

One interpretation of these results is that children with ICs are more willing or able to participate in pretense than children who do not have ICs. An alternative explanation is that children with ICs are used to pretending someone is present and interacting with the pretend person in the presence of others. Thus, children with ICs would have had experience interacting with a friend in a way similar to the type of interaction required in the study. In contrast, children who were pretending to interact with a real friend probably had very little experience interacting with the friend in this way. Thus, the difference between children's willingness to pretend their friend was present could have been due to the nature of the friend (imaginary or real) rather than the nature of the child.

To explore this possibility, we asked 5 additional children (M age = 4 years and 1 month, range = 3 years and 7 months to 4 years and 8 months; 2 girls and 3 boys) who had ICs to pretend to phone and interact in the lab with one of their *real* friends and subsequently to describe their ICs (see ICs of children interviewed in real-friend pilot study in Table 1). Two of the children were subsequently categorized as having a high level of pretense, and 3 children had a medium level of pretense. Their mean score out of 15 was 14.0 ($SD = 0.71$), which is similar to the mean score of the IC children pretending to interact with the ICs. This result weakens the argument that the difference between the IC and NIC children was due to the difference between pretending an IC versus a real friend is present. It

Table 1
Descriptions of the Imaginary Companions (ICs)

Name	Sex	Age	Size ^a	Hair	Eyes	Clothes
ICs of children in Study 1 and Study 2						
Bla-Bla						
Study 1	Male	3 yr 6 mo	Same	Purple	Blue	“###” ^b
Study 2	Male	5 yr	Bigger	White	Purple	“###”
Mr. Ghost						
Study 1	Male	9 yr	Same	White	White	None
Study 2	Male	15 yr	Bigger	White	White	All white
Ruthie						
Study 1	Female	3 yr	Smaller	Yellow	Green	Dress
Study 2	Female	4 yr	Smaller	Yellow	Blue	Dress
Tina						
Study 1	Female	6 yr	Bigger	Black	Shy	Dress
Study 2	Female	6 yr	Smaller	Red	—	Dress
Sara						
Study 1	Female	13 yr	Smaller	Blue	Gray	Pants
Study 2	Female	1 yr	Smaller	White	Blue	Dress
Little Chop						
Study 1	Male	1 yr	Smaller	Grayish-silver	Blue	T-shirt & shorts
Study 2	Male	1 yr	Smaller	Black	Green	T-shirt & shorts
Shedog						
Study 1	Female	4 yr	Same	Brown	Red	None
Study 2	Child does not remember Shedog					
Tompy						
Study 1	Male	5 yr	Same	Blond	Blue	Blue
Study 2	Child says Tompy was “defective” and is dead now					
Thunder						
Study 1	Male	17 yr 6 mo	Bigger	Black	Green	Batman
Study 2	Child says he doesn't have Thunder anymore					
ICs of children in Study 1 only						
Nutsy	Female	3 yr	Smaller	Black	White	Nutsy clothes
Baby	Female	3 yr	Smaller	No hair	Peach	Jammies
Boys	Male	26 yr	Bigger	Gray	White	Green
ICs of children in real-friend pilot and Study 2						
Ariel						
Pilot	Female	6 yr	Smaller	Red	Green	No clothes
Study 2	Female	6 yr	Bigger	Red	Green	No clothes
Jacob						
Pilot	Male	Child did not know the answers to these questions ^c				
Study 2	Jacob was no longer an IC					
Acher						
Pilot	Male	5 yr	Same	Brown	Brown	T-shirt
Study 2	Male	5 yr	Same	Black	Orange	T-shirt
ICs of children in real-friend pilot only						
Chelsea	Female	5 yr	Bigger			
My Girls	Female	4 yr	Smaller	Yellow	Ugly	No clothes
New ICs of children in Study 2						
Steel-Dinosaur	Male	4 yr 6 mo	Bigger	None	Blue	None
Lisa	Female	4 yr	Bigger	Red	Green	Dress
Bazooie	Male	5 yr	Allergic to kittens			
Nothing	Male	1,000 yrs (“older than my mom”)	Bigger	Multicolored	Multicolored	Green
Baby	Female	?	Fatter	Black	?	Yellow dress with black
Gadget	Female	7 yr	Smaller	Blond and dark	Black and yellow	Smaller

^a Child was asked if the IC was bigger, smaller, or the same size as the child. ^b Child used an incomprehensible word to describe the IC's clothes. ^c This description was the most incomplete in the sample, although the IC was the only one that was based on a real person (the child's cousin who lived in another state).

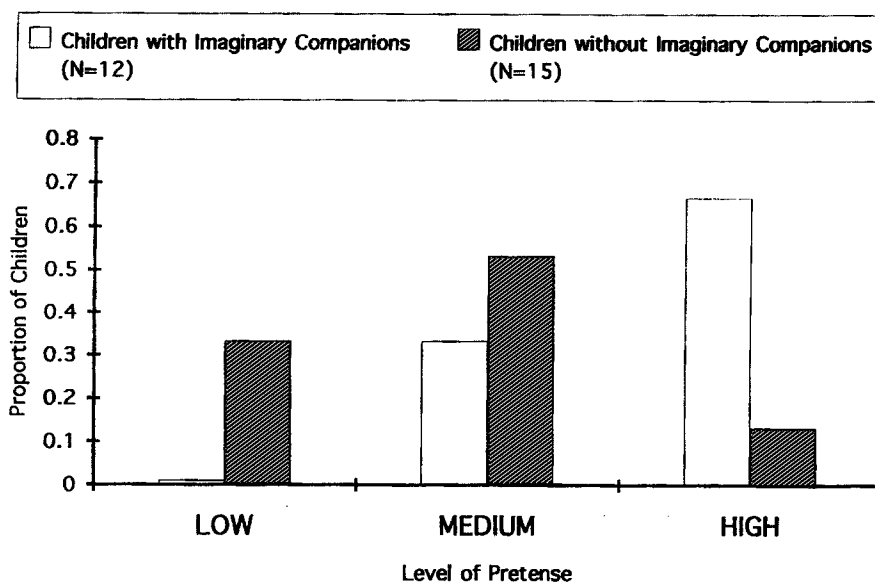


Figure 1. The proportion of children with imaginary companions and children without imaginary companions categorized as demonstrating a low, medium, or high level of pretense (Study 1).

seems more likely that it was the nature of the child, rather than the type of friend, that accounted for the high fantasy involvement of the IC children.

Responses to "See" and "Touch" Questions

Children's responses to questions about who could see and touch the friend are given in Table 2. (For children in the real-friend pilot study, 2 reported both they and the experimenter could see and touch the friend, 1 reported neither they nor the experimenter could see or touch the friend, 1 reported the experimenter could see and touch but the child could only touch, and 1 reported the child could see and touch but the experimenter could only touch.) The responses of the 2 NIC children who refused to pretend the friend was present are not included in Table 2. Inspection of this table indicates the majority of the children in both groups did not answer differently for themselves and the experimenter. In other words, if they reported they could see the friend, they tended to report the experimenter could also see the friend. Only 4 children reported they had a privileged status. This finding is consistent with Mauro's (1991) finding that children willingly share their imaginary companions with their real friends. Only 3 children (all in the IC group) reported that the way they saw and touched their friend was not the same way they saw or touched the experimenter.

Ten of the 13 NIC children reported either they or the experimenter could see or touch the friend. Overall, the responses of the NIC children to the *see* and *touch* questions were similar to the responses of the IC children. This finding suggests such responses are very difficult to interpret. Children without ICs were clearly not confused about whether their friend was actually present. For many of them, it took considerable prompting before they would pretend the friend was present. Eight of the

11 NIC children categorized as low or medium in their level of pretense answered "yes" to at least one of the see-and-touch questions. Thus, answering "yes" to questions about seeing and touching the friend probably should not be interpreted as reflecting a fantasy-reality confusion. This conclusion is substantiated by the spontaneous comments of 4 IC children who explicitly stated that the IC was pretend (e.g., "she's not here for real" or "we're just pretending"), although each of these children answered "yes" to at least one of the questions.

The issue of how to ask about an imagined entity in a nonambiguous way is a difficult methodological problem, because children may easily misunderstand the intentions of the experimenter asking the questions. In this study, the experimenter acted at times as if she could see and hear the imagined friend. In other research investigating children's ability to distinguish what is real from what is imagined, the imagined entity is completely the experimenter's idea (Harris et al., 1991; Woolley & Phelps, in press). Children could easily construe questions about who can see or touch an imagined entity as part of the pretense shared with the experimenter. In future research, such questions should be asked by a second experimenter who does not participate in the pretense in any way.

Parent Questionnaire

The parents of children with ICs in the present study were not well informed about the ICs. Three of the 12 parents did not know the ICs existed. The other 9 parents varied in how well the information they gave matched their child's answers. Of the 8 parents who described the same IC as the children, 8 knew the IC's name and gender, 5 knew if the IC was human, and 2 knew its age.

The responses of the parents who were aware of the IC indicated their children enjoyed sharing the friend with them. All

Table 2
Children's Responses to Questions About Who Can See and Touch the Friend

Description of responses	Children pretending that (friend) is present	
	Imaginary companion (IC children) <i>n</i> = 12	Real friend (NIC children) <i>n</i> = 13
Child and experimenter have same status		
Both can see and touch friend	5	6
Both can see but not touch	1	1
Both can touch but not see	2	0
Neither can see nor touch	1	3
Child has special status		
Can see and touch, experimenter can see	1	0
Can see but not touch	2	0
Can touch but not see	0	1
Experimenter has special status		
Can touch but not see	0	1
Other		
Child can see, experimenter can touch	0	1

Note. IC children = children with imaginary companions; NIC children = children without imaginary companions.

eight parents who answered these questions reported that their children sometimes pretended the parents could see the friend; six of the eight parents reported that their children never said only the child could see the friend, and five reported that their children sometimes pretended they could hear the friend. All eight parents indicated their children reacted with pleasure on the occasions they went along with the child's pretense. These results are consistent with the claim that many children are willing to tell others about their ICs.

The parents provided many anecdotes about the impact of the IC on family life. One parent reported her family usually waited for large tables at restaurants because of the child's insistence that the ICs needed places to sit. Another parent regularly dried off the IC at bathtime as well as her own child, and at her child's request, pretended to fasten a seatbelt around the IC when in the car. One of the children insisted the TV be turned on when the house was left empty so the IC would not be lonely or bored.

There were no clear differences between the two groups of parents' perceptions of their children's beliefs in imaginary characters. Twenty-six of the 27 children in the study were rated by parents as believing Santa Claus was very real. About half of the children in each group also had a strong belief in the reality of at least one character from a cartoon or movie (e.g., Batman, Superman, or Mickey Mouse). Overall, parents' impressions of their children's susceptibility to confusions between reality and fantasy were similar for the parents of children with and without ICs. This result is consistent with research by Prentice, Manosevitz, and Hubbs (1978), who found no relationship between fantasy scores and belief in Santa Claus, the Easter Bunny, and the Tooth Fairy.

Study 2

After Study 1 was completed, we attempted to contact the parents of the subjects to schedule a second interview in the lab.

The purpose for this second interview was to determine if the IC children still had the same ICs and if these children would describe the ICs in the same way to a different female experimenter (who was unaware of the original descriptions of the ICs). Children were asked the same descriptive questions about their friends as in Study 1. For comparison purposes, children without ICs were asked to describe the real friends they had described in Study 1. Presumably, there is more flexibility in the appearance of an IC than a real friend because the former can be changed at will by the child; however, we expected at least some of the ICs to have as stable descriptions as real friends. Mauro (1991) found considerable stability in the descriptions of ICs over a 3-year time span when the same experimenter conducted the two interviews. It was also possible that some children would have new ICs or that the original ICs were forgotten.

The results of Study 1 suggested that IC and NIC children may differ in their inclination to engage in fantasy or in their facility with fantasy play. Another purpose of Study 2 was to explore possible differences between the two groups of children by giving them a variety of tasks assessing their ability to distinguish fantasy and reality and inclination to engage in pretend play. The fantasy-reality measures included a task used by Taylor and Howell (1973) in which children were asked if the events depicted in a series of pictures could happen in real life. Taylor and Howell found that accuracy in discrimination of fantasy pictures from pictures portraying real-life events improved during the preschool period, with 3-year-old children performing quite poorly and 5-year-olds performing quite well. Given that 4-year-olds were at an intermediate level, this task could potentially reveal differences between the IC and NIC children in the ability to distinguish reality and fantasy.

Children were also administered a task used by Wellman and his colleagues (Estes, Wellman, & Woolley, 1989; Wellman & Estes, 1986) to determine if children know the difference between mental entities and physical entities. In the research by

Wellman and Estes, 3-year-old children were able to distinguish a mental image of a cookie, for example, from a real cookie on the basis of sensory evidence, continued existence, and public existence. Wellman and his colleagues have explored children's understanding of a variety of mental entities (images, dreams, etc.). Here we simply asked children about the distinction between a real cookie and a pretend cookie.

To assess pretend play, we asked children to act out three action sequences with imaginary objects. According to research by Overton and Jackson (1973), the majority of 4-year-old children use part of their body to represent an imaginary object to be used in an action sequence (e.g., a finger is used as an imaginary toothbrush when the child is asked to pretend to brush his or her teeth). By 6 years of age, children tend to imagine the absent object rather than substitute a body part (e.g., they pretend to hold an imaginary toothbrush). This sequence has been interpreted as reflecting a developing ability to distance the representation of imagined objects from the gestures used when pretending to use the imagined objects. Given that children with ICs are regularly projecting a representation of an imaginary entity that is quite distinct from their own body movements, we thought the symbolic representation of imagined objects might vary as a function of whether or not the child had an IC. We expected children with ICs to be more likely than children without ICs to use imaginary objects (rather than substitute a body part).

We also videotaped children in a 5-min free-play session to determine if IC and NIC children would differ in the extent that their spontaneous play involves fantasy. Initially, children were given blocks to play with, but in the final 2 min, they were given a plastic stick described by the experimenter as a magic wand. The wand was introduced to increase the incidence of fantasy play.

Method

Subjects

The parents of children who participated in Study 1 were contacted to arrange for a second interview with their children. Of the 15 NIC children in Study 1, we were able to retest 14 children (*M* age = 4 years and 10 months, range = 4 years and 8 months to 4 years and 11 months), 6 girls and 8 boys. Of the 12 IC children in Study 1, we were able to retest 9 children. (Overall, 4 of the 27 parents could not be reached by phone, possibly because of summer vacations.) To increase the number of IC subjects, we contacted the parents of the 5 IC children who were tested after Study 1 took place to assess the extent that IC children could interact with a real friend. We were able to retest 3 of these children. Thus, the IC group in this study included 12 children (*M* age = 4 years and 10 months, range = 3 years and 10 months to 5 years and 2 months), 5 girls and 7 boys. The mean length of time between the first interview (Study 1) and the second interview (Study 2) was 7.3 months for the IC group and 9.1 months for the NIC group. For most of the children, the length of time between visits ranged from 4 to 11 months. However, 1 IC subject and 1 NIC subject were interviewed 1 month and 2 months later, respectively.

Materials

The materials used in this study were two 2 in. \times 2 in. (5.8 cm \times 5.8 cm) pencil drawings of 4-year-old boys, five pictures of fantasy events

(a group of mice having a picnic, a horse serving a glass of water to a child in bed, a fairy flying over some flowers, a mother and child skunk dressed as people preparing food, and a pig playing the banjo), and five pictures of real events (a man serving food to a child in bed, a child doing homework, a bear catching a fish, a girl riding a horse, and a bird feeding its young). The toys used in the free-play task included three 3-in. moldable human figures, a large variety of wooden blocks, and a magic wand (a clear plastic tube with silver sparkles inside and a silver tassel attached to one end). Video equipment was used to record the test sessions.

Procedure

Children were tested individually in the lab. Five tasks were administered in the following order:

1. Wellman and Estes's (1986) task for assessing children's ability to distinguish between real and pretend objects: Two simple drawings of boys were shown to the child. One boy was described as pretending to have a cookie and the other was described as having a real cookie. Children were asked which boy (a) could see the cookie, (b) could not touch the cookie, (c) could eat the cookie, (d) could let a friend eat the cookie, and (e) could save the cookie and eat it the next day. Each question was asked as a forced choice, with *both boys* as one of the options. The order of the questions was randomized for each subject and the order of the choices (Boy A, Boy B, or both boys) was counterbalanced.

2. Description of friend: Children were asked to describe their IC or real friend as in Study 1. If children described a different real or imaginary friend than they had previously described, they were asked to describe the previous friend as well.

3. Pretend actions: Children were asked to pretend to brush their teeth, comb their hair, and drink from a glass. The order of the three actions was counterbalanced. The experimenter recorded whether the child used a body part as the toothbrush, comb, and cup or pretended to hold an imaginary toothbrush, comb, and cup.

4. Taylor and Howell's (1973) task for assessing the fantasy–reality distinction: Children were shown 10 pictures (5 depicting fantasy events and 5 depicting real events) in a randomized order. For each picture, children were asked (a) "What is happening in this picture?" and (b) "Could this happen in real life?"

5. Free-play task: The experimenter gave the child some blocks and three small plastic figures to play with while she was "filling out some papers." The experimenter moved to another corner of the room and busied herself with papers while the child played. After 3 min, the experimenter said to the child, "Oh I forgot to give you this. It's a wand—you know, like a wizard uses to do magic or like the fairy used to change Cinderella's pumpkin into a coach." She handed the child a plastic wand with silver tassels and returned to her chair for another 2 min. When the 2 min were up, the child was given a small toy for participating in the study.

Results and Discussion

Distinguishing Pretend and Real Objects

The mean number of correct responses (out of a maximum of 5) on the Wellman and Estes (1986) task in which children were asked to distinguish between a pretend cookie and a real cookie was 3.42 (*SD* = 1.08) for IC children and 2.93 (*SD* = 1.33) for NIC children. A *t* test comparing performance of the two groups of children was not significant. Thus, children with ICs are as adept as children without ICs when asked to distinguish between a real and pretend object. Overall, children were 64% correct, which is inferior to the performance reported by Well-

man and Estes (86% correct among 4-year-olds).² However, both groups of children performed better than chance, differing significantly from 33% correct: IC children, $t(11) = 5.65$, $p < .001$; NIC children, $t(13) = 3.6$, $p < .01$. There was no sex difference on this task.

Descriptions of Imaginary Companions and Real Friends

Seven of the 12 IC children and 9 of the 14 NIC children still played with the IC or real friend they described in Study 1 and provided new descriptions of this friend to the experimenter. One of the children in the IC group and 3 of the children in the NIC group no longer played with the IC or real friends but agreed to describe them. Four IC children and 2 NIC children no longer played with their ICs or real friends and refused to describe them. All of these children had new ICs or real friends. Of the 4 IC children who refused to describe their former ICs, 1 did not seem to remember the IC and 3 reported the ICs were gone. For example, 1 child reported that his IC (Tumpy) had been a good friend, but he was defective and had died. This child would only talk about his new IC, a small mouse named Gadget, which was present during the interview. Overall, 8 descriptions of the old ICs, 6 descriptions of new ICs, and 12 descriptions of the old real friends were collected (see Table 1).

The new descriptions produced by the children in each group were compared with the responses children gave when first interviewed about their friends. There were changes in the descriptions, but this was true for the descriptions of real friends as well as the ones for ICs. Some of the changes were expected. For example, many of the real friends and ICs were described as older and bigger than they had been at the time of the first interview. The mean increase in age for the ICs (omitting one IC whose age changed from 13 years to 1 year) was 1 year and 3 months (range = 0 to 6 years). For the real friends, the mean increase in age was 1 year and 2 months (range = 0 to 4 years). The changes in eye color tended to be subtle (e.g., eyes described as grey at the first interview were described as blue at the second). More radical changes were reported for hair color of both ICs (e.g., purple hair became white, black hair became red) and real friends (e.g., black hair became blond, dark hair became white).

Each of the 8 IC children and 12 NIC children who produced new descriptions of the friends they had described in Study 1 were categorized as answering the questions in the same way or differently from the first interview. Fisher's exact tests were computed for the answers to each question (age, size, hair color, eye color, and clothing). These tests were not significant for the questions about age, size, hair color, and eye color, indicating that the degree of change from Interview 1 to Interview 2 was similar for real and imaginary companions. Only the test for clothing was significant ($p < .05$). Six of the 8 IC children described their ICs as wearing the same clothing they had mentioned in the first interview. In contrast, only 2 of the 12 NIC children described their real friends as wearing the same clothing.

In addition to the analyses conducted for each question separately, children were given a score that indexed the number of times (out of a maximum of 5) they gave the same response for the two interviews. The mean number of same responses for the

descriptions of ICs was 2.38 ($SD = 1.06$) and for descriptions of real friends was 2.08 ($SD = 1.08$). This difference was not significant.

Assessment of Pretend Actions

For the pretend action task, children were given a score indexing the number of times (out of a maximum of 3) they used an imaginary object when performing the actions rather than substituting a body part. One of the NIC children could not be used as a subject in this analysis because he refused to perform any of the pretend actions. The mean number of imaginary objects for the 12 IC children was 1.58 ($SD = 1.24$) and for the 13 NIC children was 0.77 ($SD = 0.93$). A t test comparing the two groups of children was significant, $t(24) = 1.87$, $p < .05$. Children who had ICs were more likely than children who did not have ICs to use imaginary objects when acting out the pretend actions.

Distinguishing Fantasy From Reality

The Taylor and Howell (1973) task assessed children's ability to distinguish events that were fantasy from events that could happen in real life. This task yielded no significant differences between the two groups of children. A 2×2 mixed analysis of variance with group of children (IC or NIC) as the between-groups factor and type of picture (fantasy or real) as the within-subjects factor was conducted on the number of "yes" responses to the question, "Could this happen in real life?" The main effect for type of picture was significant, $F(1, 24) = 48.58$, $p < .01$. Children were much more likely to claim that the events portrayed in the reality pictures could happen in real life ($M = 3.65$, $SD = 1.26$) than the events portrayed in the fantasy pictures ($M = 0.92$, $SD = 1.47$). Neither the main effect for group nor the Group \times Type of Picture interaction was significant. The mean number of "yes (this could happen in real life)" responses for the five fantasy pictures was 0.79 ($SD = 1.42$) for IC children and 1.2 ($SD = 1.76$) for NIC children. Thus, all the children were able to distinguish between fantasy and reality as instantiated in this task.

Free Play

During the initial 3 min of free play, many of the children tended to stack the blocks and crash them. This type of activity was categorized as reality play after Field, DeStephano, and Koewler (1982), who defined reality play as the "use of objects for their intended function, such as using blocks to construct a tower" (p. 504). Children were categorized as engaging in fantasy play if they acted out some sort of pretend scenario with the figures interacting and the blocks used as props in the fantasy (e.g., beds, cars, and so on). A few children moved the moldable figures briefly in an upright position before putting them down. This action was considered to be closer to the use

² This difference might be caused by the use of birth announcements and advertisements to recruit subjects in the present study compared with Wellman and Estes's (1986) use of children who attend a university preschool.

of blocks to build towers than to the creation of a pretend scenario, and thus the activity of children whose only action with the figures was to briefly "walk" them was categorized as reality play.

Two independent judges categorized the 3-min play session as reality or fantasy play ($r = .91$). The play of 10 of the 12 children with ICs was categorized as fantasy compared with 4 of the 13 children without ICs. (The data from 1 NIC subject could not be used because the videotape ended before her play session was finished.) A Fisher's exact test conducted on these data was significant ($p < .05$), indicating there was a relationship between having an IC and engaging in fantasy play with the blocks. To determine if there were sex differences, we conducted Fisher's exact tests to examine the relationship between the gender of the child and their spontaneous play (fantasy or reality) for the IC and NIC groups. This test was not significant for the IC group (both boys and girls engaged in fantasy play); however, there was a significant relationship between type of play and gender for the NIC children ($p < .05$). All 8 NIC boys were categorized as showing reality play, compared with only 2 of the 6 girls. Boys in the NIC group tended to focus exclusively on the blocks, ignoring the moldable figures.

Our main goal in this part of the study was to determine if toys that were relatively neutral with respect to fantasy would elicit more spontaneous fantasy play from IC children than from NIC children. However, we were also interested in the types of play that a high-fantasy toy would elicit from the two groups of children. Thus, after 3 min of free play with the blocks and figures, the experimenter gave a "magic" wand to the child. Five children in each group (2 boys and 3 girls in each group) were categorized by the two judges as using the wand for fantasy play. These children pretended to change the blocks, figures, themselves, or the room with the wand. For example, 1 child reported that she had made the room grow smaller. All 5 of the IC children had been earlier categorized as engaging in fantasy play with the blocks. Three of the 5 NIC children had earlier been categorized as engaging in fantasy play. The other children either ignored the wand or waved it briefly before continuing their play with the blocks. It is possible the wand would have elicited fantasy from more of the children if it had been included with the other toys at the beginning of the session. In the present study, many of the children were engrossed in what they were doing and did not allow the wand to interrupt their activities. This was true for children engaged in fantasy play as well as children engaged in reality play. It would be interesting in future research to assess children's play when they are given low-fantasy toys like blocks and high-fantasy toys like dress-up hats or a wand in separate sessions. We predict that IC and NIC children would all engage in fantasy with the high-fantasy toys but that only the IC children would tend to engage in fantasy when supplied with blocks.

According to Fein (1981), with development, children become able to make increasing numbers of substitutions of non-prototypical objects in pretend play. Just as the NIC children were less adept at using imaginary objects in the Overton and Jackson (1973) task, they might have required more contextual support for fantasy play than was provided by the blocks and simple figures. Blocks were not optimal toys for eliciting fantasy play from these children, and the figures might have been too much like dolls for the NIC boys. However, it is likely that the

NIC children would spontaneously engage in fantasy play if more fantasy-oriented gender-neutral toys were provided.

General Discussion

Harris et al. (1991) have suggested that children might sometimes become confused about the reality of imaginary entities that are projected outside the head and are emotionally charged. One purpose of this research was to explore this possibility with respect to imaginary companions that satisfy both of these criteria. It turns out to be a difficult hypothesis to test, however, because children's participation with the experimenter in pretense might elicit responses that would be misinterpreted if taken as evidence that children think their ICs are real. We found that many children claimed both they and the experimenter could see and touch their ICs, but these responses did not seem to be the result of a confusion about the reality of the ICs. NIC children who had to be coaxed to pretend a real friend was present often gave the same responses. In addition, 4 of the 12 IC children told the experimenter that the IC was just pretend when answering these questions. Our conclusion is that children's tendency to report another person can see an IC should be taken as evidence that children are engaged in the fantasy rather than that they are confused about fantasy and reality.

In Study 2, we assessed the related possibility that children who have ICs might be less clear about the distinction between fantasy and reality than children who do not have ICs. There was no evidence for this difference. Children with and without ICs performed similarly when asked about the distinction between a real and a pretend cookie. This result is consistent with research by Goy (1990) showing that IC and NIC children do not differ in their ability to distinguish real and imagined people. In addition, the IC and NIC children in Study 2 were equally correct when asked to judge whether the events in a series of pictures could happen in real life. Thus, children who differ in whether or not they create imaginary friends do not differ in their ability to distinguish pretend and real objects or to distinguish fantasy from reality. This pattern of results supports Taylor and Howell's (1973) suggestion that there are two distinct aspects of fantasy behavior in young children, one involving the creation of an imaginary world and the other involving the distinction between fantasy and reality.

In this study, children who had ICs became involved in fantasy very easily and had a strong inclination to engage in fantasy spontaneously. Children with ICs performed differently from children without ICs on all tasks involving pretense. In Study 1, children with ICs readily pretended to phone their friend and pretended he or she was in the room. Many of the children without ICs had difficulty with a similar task in which they were asked to pretend to interact with one of their real friends. In addition, in Study 2, children with ICs spontaneously engaged in fantasy play to a greater extent than children without ICs, and they showed a more mature level of pretense when asked to perform pretend actions.

Questioning children about their imaginary companions is a way to learn more about the richness of their fantasy lives. The ICs in this research played an important role in the daily lives of the children we interviewed and often were described by the parents as a part of the family. Some of the ICs were maintained

over several months. In fact, Mauro (1991) has shown that ICs often persist for as long as 3 years. The present research and Mauro's longitudinal study show that children who have ICs often have more than one at a time or have a series of ICs over the course of early childhood. This type of fantasy play is quite common, but the forms it takes are extremely varied. More research is needed to determine why different types of ICs are created.

At one time, ICs were considered to be the private fantasies of disturbed children. The present research, combined with the findings of recent work by Mauro (1991) and Singer and Singer (1990), paints a very different picture of this phenomenon. Children are happy to share their ICs with others, including the experimenters in this research. According to Singer and Singer, the evidence suggests that having an imaginary companion "seems to be an especially powerful predictor of the likelihood that a child will play happily in nursery school, will be cooperative with friends and adults" (p. 104).

There might be cognitive as well as emotional benefits for children who are inclined to engage in fantasy play. Although we did not find a difference between children with and without ICs on our fantasy-reality measures, it is possible that children who are adept at fantasy have experiences that help them master the relationship between mental life and the real world. According to Flavell et al. (1987), pretending might facilitate an understanding of the distinction between internal mental representations of external stimuli and the stimuli themselves. Once this distinction is practiced and mastered in pretend play, children might be better equipped to think about similar distinctions in other situations or contexts. One piece of evidence for this hypothesis is Chandler, Fritz, and Hala's (1991) recent finding that the report of an imaginary companion is a predictor of an early mastery of false belief. We believe further investigation of individual differences in fantasy play may provide new insights about the relationship between pretense and development in children's theory of mind.

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