

# Links Between Dissociation and Role Play in a Nonclinical Sample of Preschool Children

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**ABSTRACT.** Children's role play activities are included in symptom checklists of dissociative disorders, yet little is known about the potential relation between individual differences in role play and dissociative behaviors in normative development. This issue was examined in a study of 147 children aged 3 and 4 from a nonclinical population. Parents completed the Child Dissociative Checklist (CDC; F. W. Putnam, K. Helmers, & P. K. Trickett, 1993) and a questionnaire about their child's role play, fears, behavior problems, and dreams. Children were also interviewed about these same items. Dissociation was significantly related to parent report of fears, problem behaviors, and nightmares. These results are consistent with the view that CDC scores reflect some degree of difficulty in children's lives. Children who engaged in role play, particularly children with imaginary companions, scored higher on the CDC than other children.

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However, role play was not related to the measures of fears or problem behaviors. The results suggest that a distinction between pathological and nonpathological dissociation is warranted, with role play activities being more closely linked to the latter. Measurement of dissociation in preschoolers is discussed.

**KEYWORDS.** Role play, imaginary companions, nonpathological dissociation, measurement

During the preschool years, many children invent imaginary people and animals that are talked about, interacted with, or impersonated on a regular basis. Harris (2000) referred to these activities as “role play” to distinguish them from pretend play that does not involve imaginary characters (e.g., pretending that a block is a truck). Recent research indicates that role play is common and psychologically healthy. As many as 65% of children have created imaginary companions by the time they are 7 years old (Taylor, Carlson, Maring, Gerow, & Charley, 2004), and children who engage in role play score higher on theory-of-mind tasks (S. M. Carlson, Mandell, & Williams, 2004; Taylor & Carlson, 1997), are rated as producing more smiles and laughter in social play interactions (Singer & Singer, 1990), and outperform other children on tests of creativity (Hoff, 2005).

Nevertheless, there are red flags associated with this type of play. Early research often linked the creation of imaginary companions with psychological problems (Bach, 1971; Nagera, 1969; Sperling, 1954; Svendsen, 1934), and some recent studies have described children with imaginary companions as less socially competent and more anxious than other children (Bouldin & Pratt, 1999, 2002; Harter & Chao, 1992). In particular, vivid interactions with imaginary companions are often interpreted as reflecting a high degree of dissociation or even being a marker of a dissociative disorder. Some of the empirical evidence for this claim comes from retrospective studies. For example, Dierker, Davis, and Sanders (1995) found that college students who reported having at least one imaginary companion during their childhood scored higher on the Dissociative Experiences Scale (E. B. Carlson & Putnam, 1993), and those students who reported having highly vivid images of their imaginary companions scored even higher (but still below the cutoff for pathological dissociation) than students in the low vividness group. In addition, adults with dissociative identity disorder often report having had vivid fantasy

lives as children, such as having a cast of imaginary companions (Bliss, 1984; Lynn, Rhue, & Green, 1988; Sanders, 1992). These imaginary companions are often reported by adult and adolescent patients to be the first signs of what later became alter personalities (Putnam, 1991). However, there are limitations in the interpretation of retrospective data. It is possible that it is the maintenance or availability of personal memories for imaginary companions (e.g., occurring in the context of treatment) that distinguishes these individuals rather than the childhood experiences themselves.

Clinical observations and research with children who have been diagnosed with dissociative disorders also suggest a link between role play activities and dissociative problems (Putnam, 1997; Silberg, 1998b). Dissociative symptoms that involve redefining reality constraints, altering the sense of self, and altering the identities of others (Putnam, 1991) are all apparent in children's role play. For example, a child might save a place for his or her imaginary monkey at the dinner table, then decide to *be* the monkey, and finally designate his or her sibling as the monkey. Thus, it is not surprising that having an imaginary companion is listed as one of the process symptoms of pathological dissociation in children (Putnam, 1991). This link has led some investigators to posit that high fantasy, in combination with childhood trauma, is a predisposing factor for dissociative disorders (Lynn et al., 1988; Powers, 1991; Young, 1988).

What are the characteristics that distinguish dissociative symptoms from normative role play? Children who have been diagnosed with dissociative disorders often provide descriptions of their alter personalities that sound very similar to psychologically healthy children's descriptions of their imaginary companions or pretend identities. On the basis of clinical observations, Silberg (1998b) proposed three main differences between pathological and normative experiences of imaginary companions: whether the child or the imaginary companion has control, whether the child feels bothered by the presence of the imaginary companion, and whether the imaginary companion gives the child competing messages about how to behave. Dissociative children also tend to have vivid visual and auditory images of the imaginary companions that make them seem almost like hallucinations. Although normative role play identities (referred to as *elaborated play identities* by Putnam, 1997) as well as imaginary companions share similarities with alter personality states, Putnam (1997) described normative role play as playful and stated that its crucial feature is that the characters never control, intimidate, or frighten the child.

Although guidelines for distinguishing normative and pathological forms of role play are helpful, the line between the role play of healthy children and activities observed in children who have dissociative disorders is not so clear cut. It is not uncommon for children to describe their pretend friends as not only vivid but also disobedient, bossy, argumentative, and unpredictable (Bender & Vogel, 1941; Jersild, Markey, & Jersild, 1933; Taylor, 1999; Taylor & Carlson, 2002). In particular, children's feelings of being controlled or annoyed by imaginary companions have been underestimated in nonclinical samples. Taylor, Carlson, and Shawber (in press) found that almost a third of the descriptions in a normative preschool sample included elements of uncontrollability (e.g., "He bothers me when I'm trying to read").

So how should children's role play activities, especially interactions with imaginary companions, be evaluated with respect to dissociation? Clearly, it is important to identify dissociative experiences of children from an early age in order to better understand the development of dissociative disorders. In fact, increasing numbers of dissociative disorder cases have been reported for young children as a result of greater awareness of childhood dissociation and the availability of behavioral checklists for clinical screening (Putnam, 1997). Just as important, however, is the study of nonpathological dissociation in its own right (Becker-Blease et al., 2004; Putnam, 1997). Several normative developmental processes might contribute to young children "outgrowing" dissociative tendencies, such as emotion regulation, theory of mind, and conscious control of thought (i.e., executive function). At the same time, our review of the literature suggests that there are likely to be enduring individual differences in nonpathological dissociation that are linked to fantasy proneness and imagination, traits that are often considered adaptive in people of all ages (e.g., Göncü & Gaskins, 2006; Singer, Golinkoff, & Hirsh-Pasek, 2006).

Given the dearth of evidence on dissociation in early childhood and its parallels with role play activities, the goal of this study was to investigate the relation between individual differences in role play and nonpathological dissociation in preschool children. We assessed dissociation with the most widely used tool, the Child Dissociative Checklist (CDC; Putnam, Halmers, & Trickett, 1993). The CDC was developed as both a clinical screening instrument and a research tool designed to quantify dissociative behaviors in children. It was designed to be completed by parents or other adult observers. The CDC has been validated with a dissociative-disordered group of children as young as 3 years old (Putnam & Peterson,

1994) and has been used to assess normative levels of dissociation in preschoolers (Macfie, Cicchetti, & Toth, 2001).

In addition to completing the CDC and answering questions about their children's role play activities, parents in this study provided information about their children's behavior problems, fears, and dreams. Questions about behavior problems and fears were included because these are common difficulties in children's lives, yet, in the extreme, can be symptoms of trauma (Briere et al., 2001). We were interested in the extent to which reports of behavior problems and fears might be related to children's dissociation behaviors as assessed by the CDC. We asked about dreams because nightmares are also a relatively common childhood difficulty that is included in some assessments of childhood trauma (Briere et al., 2001). Finally, to cross-validate and augment parent reports, we collected information about role play activities, behavior problems, fears, and dreams by interviewing the children themselves.

We hypothesized that engagement in role play activities would be correlated with higher dissociation scores on the CDC, even within a non-clinical sample. This result might suggest that dissociative tendencies are both normative in early childhood and best conceptualized along a continuum. We also investigated, however, whether the relation would persist after we removed items in the checklist having to do with imaginary companions and role play explicitly. If the relation holds only with those items included, then it would suggest that a distinction between pathological and nonpathological dissociation is warranted, with role play falling more closely into the latter category. The analyses of behavior problems, fears, and dreams were exploratory, but to the extent that these factors have been associated with both fantasy and dissociation in prior theory and research, we were interested in the possibility that the CDC would be correlated with these measures of everyday childhood difficulties.

## ***METHOD***

### ***Participants***

A total of 152 preschool children and their parents took part in this study. Data from five children were excluded because the parents did not complete the CDC. The remaining 147 children had a mean age of 4.0 ( $SD = 5$  months; range = 3.4–4.8 years; 74 girls and 73 boys). Data on

income and ethnicity were not collected, however, the demographic of the area where the study was conducted was predominantly White and middle class. Children were recruited by posting advertisements in local day care centers and preschools and by sending letters to parents of 3- and 4-year-old children who were identified from birth announcements in the local newspaper.

### ***Child Measures***

Children were tested individually in a university child study laboratory. Once the child and experimenter were seated at a small table, the study was explained and verbal consent was obtained. Because the purpose of the study was to measure individual differences, each participant received tasks in a fixed order, as follows.

*Peabody Picture Vocabulary Test–Revised.* This is a standardized measure of receptive vocabulary (L. M. Dunn & Dunn, 1981). The child's task was to select the picture (out of four) considered to illustrate best the meaning of a stimulus word presented by the experimenter. Testing continued until children erred on 8 out of a set of 12 items. Standardized scores were used in analyses.

*Role play.* Children were asked about imaginary companions in the following way: "Now I'm going to ask you some questions about friends. Some friends are real like the kids who live on your street, the ones you play with. And some friends are pretend friends. Pretend friends are the ones that are make-believe, that you pretend are real. Do you have a pretend friend?"

If children responded "yes" to this question, the experimenter gathered more detailed information about the imaginary companion(s), including its name, gender, physical appearance, whether it was a toy or completely pretend, what the child liked and disliked about the friend, and where the friend lived and slept.

In past research on imaginary companions, it was found that some children described an animal or person they pretended to be on a regular basis rather than an imaginary entity that served the function of a friend. This kind of impersonation is a relatively common pretend activity that some researchers consider to be closely related to the creation of imaginary companions (Ames & Learned, 1946; Partington & Grant, 1984). To find out more about impersonation, we asked all children the following questions:

1. Do you ever pretend to be an animal? What animal do you pretend to be?
2. Do you ever pretend to be a different person? What person do you pretend to be?
3. Have you ever pretended to be anything else, like a machine, airplane, or something like that? What sort of thing did you pretend to be?

*Dreams, fears, and problems.* After completing the questions about role play, children were asked if they have dreams at night when they sleep and, if so, to describe them and indicate if the dream occurred more than once. If children described a bad dream(s), they were asked if they had ever had a good dream (and vice versa) and to describe it.

Children were then asked if they were afraid of any of the following: ghosts, rabbits, monsters, the dark, Big Bird, dogs, and being alone. Two of the items (rabbits and Big Bird) were included so that the list would have at least two items that were likely to elicit “no” responses from the children. This allowed us to identify children who had a “yes” response bias. However, we found that only three of the children said “yes” to the entire list of items. The analysis remained the same with and without these children, so we report the results for the entire sample.

Finally children were told, “Sometimes children do things that their parents don’t like.” They were asked whether their parents ever got mad at them for the following types of behaviors: breaking things, making a mess, making too much noise, fighting with brothers and sisters, and/or not wanting to go to bed. Although there were more children who showed a “yes” or “no” bias in response to problem behaviors than to fears, these children did not differ from those who did not show a response bias, so they were included in the following analyses.

### ***Parent Measures***

Parents completed a questionnaire that asked about a range of behaviors including role play, dreams, fears, and problems.

*Role play.* The role play section of the questionnaire began with the following definition of imaginary companions:

An imaginary companion (IC) is a very vivid imaginary character (person, animal) with which a child interacts during his/her play and daily activities. Sometimes the companion is entirely invisible; sometimes the companion takes the form of a stuffed animal or doll.

An example of an imaginary companion based on a stuffed animal is Hobbes in the popular comic strip “Calvin and Hobbes.”

Parents were asked if their child had an imaginary companion and to provide information about it, including the imaginary companion’s name, gender, and physical appearance; the age of the child when it first appeared; whether it was human; and whether the child makes a special voice for it.

Parents also reported whether their child ever pretended to be an animal, person, or machine, and how often their child engaged in impersonation (everyday, frequently, occasionally, only once or twice).

*Dreams, fears, and problems.* Parents were asked if their child ever reported dreams or nightmares and, if so, to describe the content. Then parents were asked to indicate the extent to which their child was afraid of the following on a scale of 1 (*not afraid*) to 5 (*very afraid*): ghosts, monsters, the dark, dogs, and being alone.

Finally, parents were asked if any of a list of child behaviors caused problems for them and, if so, to indicate how often they reprimanded their child for that behavior (frequently, sometimes, not very much). The child behaviors were as follows: breaking things, making a mess, making too much noise, fighting with brothers and sisters, not wanting to go to bed, not doing what he or she is asked to do, and not wanting to be left at day care or with a sitter.

*CDC.* Parents were told that dissociation is a type of “spacing out” behavior that can occur in a variety of ways, and that it is normal for children to dissociate to some extent and to do so more often than adults. Then they were asked to fill out the CDC, Version 3 (Putnam et al., 1993). The exact wording of some of the items was slightly changed as follows to make the checklist more appropriate for use with young children (see also Table 1): The word *school* was replaced with *preschool* throughout, and three items referring to regressions in maturity level of behavior were changed to include age-appropriate examples (i.e., “gets lost easily” was deleted from Item 4; “skills” in Item 6 was replaced by “motor skills”; “multiplication tables, spelling, artistic ability” in Item 6 was replaced by “numbers and alphabet”; “a 12-year-old use of baby-talk, sucks thumb or draws like a four-year-old” in Item 7 was replaced by “uses baby-talk, wets bed or sucks thumb [when bedwetting or thumb sucking has not occurred for some time]”). Parents were instructed to answer each item according to how well it described their child’s behavior currently or within the past 12 months on a scale of 0 (not true), 1 (somewhat true), and 2 (very true).



TABLE 1. Average endorsement by parents of items in the child dissociative checklist.

Item Number	Item Content	Mean Score (SD)
3	Rapid changes in personality	.82 (.70)
5	Poor sense of time	.68 (.69)
19	Talking to/arguing with self	.60 (.69)
9	Obvious lying	.58 (.61)
11	Rapid-changing physical complaints	.48 (.66)
8	Difficulty learning from experience	.46 (.59)
2	Trance-like states	.38 (.55)
16	Intense outbursts of anger	.35 (.61)
10	Refers to self in the third person	.32 (.54)
6	Variation in skills, knowledge	.30 (.57)
7	Regressions in age level of behavior	.29 (.56)
4	Unusually forgetful, confused	.29 (.47)
15	Vivid imaginary companion(s)	.27 (.54)
1	Forgets/denies traumatic experiences	.16 (.45)
20	Two or more separate personalities	.12 (.39)
18	Unusual nighttime experiences	.10 (.32)
14	Reports hearing voices (may be imaginary companion)	.10 (.36)
13	Unexplained/self-induced injuries	.08 (.30)
12	Unusually sexually precocious	.07 (.25)
17	Sleepwalks frequently	.04 (.23)

## RESULTS

Our goal in this study was to examine the relation between dissociation and children's role play activities in a normative preschool sample. We first present descriptive information about the distribution of CDC scores, followed by the relation of these scores to child and parent reports of children's problem behaviors, fears and nightmares. We then present the descriptive information about children's role play and finally an analysis of the relation between individual differences in dissociation and role play.

### *CDC*

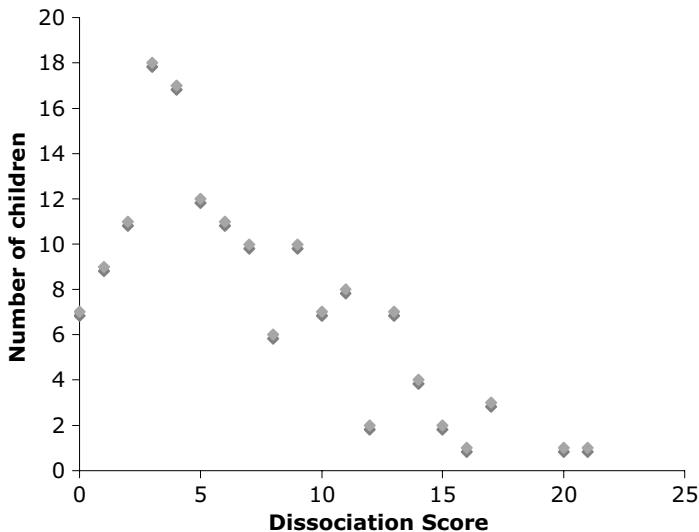
Table 1 lists the 20 items in the CDC in the order of their average endorsement by parents (maximum possible = 2). The method used to analyze the CDC is to add the scores for the 20 individual items to form a

single composite dissociation score out of 40 (Putnam et al., 1993). In the present sample, CDC scores ranged from 0 to 21, with an overall mean of 6.5 ( $SD = 4.5$ ; see Figure 1). The scores for boys ( $M = 6.5$ ,  $SD = 4.4$ ) did not differ from the scores for girls ( $M = 6.5$ ,  $SD = 4.7$ ),  $t(145) = 0.05$ , *ns*. The CDC scores did not correlate with children's age or verbal ability,  $r_s(147) = -.04$  and  $.01$ , respectively.

*CDC and behavior problems, fears, and dreams.* Both parents and children were asked about the children's behavior problems and fears in an effort to collect some information about whether the CDC scores reflected difficulties in the children's lives. These results are discussed first, followed by the parents' and children's answers to questions about dreams.

Child reports for both behavior problems and fears were not significantly related to parent reports on these items,  $r(135) = .14$ , and  $r(140) = .11$ , respectively, or to CDC scores,  $r(136) = .02$ , and  $r(145) = .02$ , respectively. However, the parent reports were more informative. Parent reports of children's behavior problems ranged from 0 to 7, with an overall mean of 3.8 ( $SD = 1.7$ ). This measure was significantly correlated with the dissociation measure,  $r(138) = .25$ ,  $p < .01$ . In addition, parents were asked

FIGURE 1. Distribution of Child Dissociative Checklist Total Scores



to indicate how frequently the child was reprimanded for the problems on a scale of 0 (*not very much*) to 3 (*frequently*). The number of frequent problems ranged from 0 to 5 (out of 7), with an overall mean of .9 ( $SD = 1$ ). The number of frequent problems was also related to the dissociation measure,  $r(147) = .23, p < .01$ .

Parents reported on their children's fears of each item on a Likert scale ranging from 1 (*not afraid*) to 5 (*very afraid*). Items were summed to compute an aggregate score out of 25. Fear scores ranged from 5 to 23, with a mean of 13 ( $SD = 4.1$ ). Parent reports of fears were marginally correlated with the dissociation measure,  $r(142) = .16, p = .052$ .

Eight items in the parent questionnaire had overlapping content with trauma symptoms as listed in the Trauma Symptom Checklist for Young Children (Briere et al., 2001): nightmares, fear of the dark, fear of being alone, problems with parents regarding the issues of not doing what he or she is asked to, breaking things, getting into fights, not going to bed, and making a mess. Given that past research has used these items, we conducted a separate analysis for them. Children received a score of 1 ("yes") or 0 ("no") on each item, and the aggregate score out of eight was computed. These trauma-related scores were significantly correlated with the dissociation measure,  $r(143) = .24, p < .01$ .

Parent reports of children having nightmares were interpreted as another assessment of problems in the children's lives. In all, 61% of the parents said their children had nightmares (39% reported they did not). Parent report of child nightmares was related to CDC scores ( $M_{\text{children with nightmares}} = 7.1, SD = 4.3; M_{\text{children without nightmares}} = 5.5, SD = 4.9$ ),  $t(144) = -2.06, p < .05$ .

In addition, child reports of dreams were analyzed as a measure of the extent to which children remembered and were able to describe their dreams. In order to be coded as a dreamer, the child had to report that he or she had dreams and give details of at least one dream (see Table 2 for examples of children's dreams). A total of 71% of the children met these criteria. A  $t$  test comparing the CDC scores for dreamers and nondreamers was not significant ( $M_{\text{dreamers}} = 6.82, SD = 4.75; M_{\text{nondreamers}} = 5.72, SD = 4.01$ ),  $t(144) = -1.33, ns$ .

We also coded the developmental level that was evident in the children's descriptions of their dreams using Foulkes's (1999) three stages: (1) simple static images (e.g., a dream about "bears"), at 3 to 5 years; (2) simple event sequences with kinematic imagery (e.g., a dream about "bears running through the forest"), at 5 to 7 years; and (3) more complex sequences usually involving active participation of the dreamer

TABLE 2. Examples of children's dreams.

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**Stage 1 Dream Reports**

Koala Bear

Ice cream and popsicles

Little Mermaid

Disneyland

**Stage 2 Dream Reports**

Ambulance ones . . . they take people to the hospital and they are good guys.

I remember one of my dreams. It's about Pepi and big dog down the alley . . . it bites Pepi.

Coyote. That was scary. Dad turned into a coyote.

Little Mermaid . . . There was a storm and a shark. Then I think all go under the sea.

**Stage 3 Dream Reports**

Sometimes I dream about monsters and it's sometimes scary. But I am not scared of it because I am a scientist about monsters. I always dream about monsters a lot.

. . . Vanessa and Rachel were dreaming in my dream. We pulled the curtain down and the monster started jumping. And it was real. And it cut the eyes of kids.

Lions trying to eat me.

Penguin took me up in heaven.

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(e.g., a dream about “bears running through the forest after me”), beginning at 7 to 9 years. In this study, 42% of the dream descriptions were in Stage 1, 18% in Stage 2 and 40% in Stage 3 (see Table 2 for examples). Children reported a higher level of dream content than predicted by Foulkes; however, his procedure involved waking children up at night during REM sleep to immediately report the content of their dreams. In our study children reported the dream content long after the dream had occurred. Thus, we were collecting dreams that were particularly memorable and so might have received a higher score. We do not discuss the stages of the children's dreams further because dream stages were not related to any of the other measures in this study.

***Role Play***

On the basis of information in the child role play interviews and the parent role play questionnaires, we identified children who had invisible friends, personified objects, and/or pretend identities. We first provide descriptive data and relations to age and verbal ability, followed by the relations to dissociation.

*Invisible friends.* A child was categorized as having an invisible friend if the child said he or she had an invisible friend and provided a cogent

description of it. If the parent said the child did not have an invisible friend or reported that the child played with the invisible friend “only once or twice,” the child’s description had to be particularly convincing. The child was categorized as *not* having an invisible friend if (a) the child said that he or she did not have one, (b) the child said that he or she had an invisible friend but provided almost no information about it (e.g., no name, no description, said “I don’t know” to most questions), (c) the child said that he or she had an invisible friend but then described a real friend (according to the parent), or (d) the child gave a minimal description of the invisible friend and the parent said the child did not have one or that the child played with the invisible friend “only once or twice.” In all, 22 of the 147 children (15%; 6 boys and 16 girls) were categorized as having an invisible friend. In this sample, having an invisible friend was not significantly related to age,  $t(145) = -0.77$ , *ns*, or verbal ability,  $t(145) = -0.03$ , *ns*.

*Personified objects.* The criteria for coding personified objects were similar to those for invisible friends, with one additional criterion to differentiate between transitional objects and personified objects: For an object to be categorized as a personified object, the description of the object (in either the child’s or the parent’s report) had to go beyond the physical appearance of the object to include psychological details (e.g., “She is nice to me”). A total of 20 of the 147 children (14%; 9 boys and 11 girls) were categorized as having personified objects. This group was significantly older than children without personified objects,  $t(145) = -3.03$ ,  $p < .01$ , but did not differ on verbal ability,  $t(145) = -1.21$ , *ns*.

*Pretend identities.* The information collected from parents was used to identify children with pretend identities because, as reported in past research (S. M. Carlson & Taylor, 2005), there tends to be insufficient variability in child reports for this type of role play; that is, most preschool-age children claim that they pretend to be another person or animal. A child was categorized as having a pretend identity if the parent reported that the child pretended to be someone or something (an animal, person, or machine) *every day* for a period of at least 1 month. In all, 15 children (10%; 12 boys, 3 girls) were categorized as having a pretend identity. Children who had a pretend identity did not differ in age,  $t(145) = -0.28$ , *ns*, but had significantly higher verbal ability,  $t(145) = -2.80$ ,  $p < .01$ , compared to those without pretend identities.

*Role play and behavior problems, fears, and dreams.* None of the measures that were interpreted as suggestive of problems in children’s lives

(i.e., child report of fears and problems, parent report of number of fears, number and frequency of problems, nightmares, and the eight symptoms that have been used in past research to assess trauma) were significantly related to role play. However, role play was related to child reports of dreams,  $\chi^2(1, N = 147) = 6.38, p < .05$ ; 82% of the children who engaged in role play said they dreamed and described the content of at least one dream, compared with 63% of children who did not engage in role play.

### ***Relation Between Dissociation and Role Play***

Table 3 gives the mean CDC scores for children in each role play group (no role play, personified object role play, pretend identity role play, and invisible friend role play). Overall, there was a trend for children who engaged in any form of role play to score higher on the CDC than children who did not engage in role play ( $M_{\text{role players}} = 7.4, SD = 4.3$ ;  $M_{\text{non-role-players}} = 5.9, SD = 4.6$ ),  $t(145) = -1.96, p = .05$ . However, this trend was mostly due to the CDC scores of children who had invisible friends. The mean CDC score for children with invisible friends was significantly higher than the mean for children who did not engage in role play,  $t(145) = -2.63, p < .01$ . None of the other mean comparisons were significant.

The CDC was designed to assess a range of behaviors that are associated with dissociation, such as amnesia, self-destructive behaviors, disturbed sleep, behavioral fluctuations and depression, as well as fantasy. It is possible that the higher CDC scores for children with invisible friends reflected their higher overall level of dissociation. Alternatively, their higher scores could have been due to the two CDC items that ask explicitly about imaginary companion behaviors:

TABLE 3. Mean child dissociative checklist (CDC) scores (Total) and scores minus imaginary companion items as a function of role play group.

Group	None	Pretend Identity	Personified Object	Invisible Friends
CDC Total	5.91 (4.62)	5.87 (3.80)	7.05 (4.26)	8.77 (4.43)
CDC Minus Items 14 and 15	5.82 (4.55)	5.60 (3.48)	6.75 (4.12)	7.18 (4.13)

Child reports hearing voices that talk to him or her. The voices may be friendly or angry and may come from “imaginary companions” or sound like the voices of parents, friends, or teachers. (Item 14)

Child has a vivid imaginary companion or companions. Child may insist that the imaginary companion(s) is responsible for things that he or she has done. (Item 15)

Therefore, in addition to the total CDC scores, Table 3 shows the mean scores for the CDC excluding Items 14 and 15. With these items removed, there were no significant overall differences in the CDC scores for children in any of the role play groups. However, a two-way analysis of variance with gender and role play as between-group factors yielded an interaction effect,  $F(1, 143) = 3.66, p = .06$ . Further analyses indicated that the CDC scores (minus Items 14 and 15) for girls who engaged in role play were significantly higher ( $M = 7.3, SD = 4.3$ ) than those for girls who did not engage in role play ( $M = 5.1, SD = 4.3$ ),  $t(72) = -2.1, p < .05$ . This comparison was not significant for boys ( $M_{\text{role players}} = 5.8, SD = 3.4; M_{\text{non-role-players}} = 6.5, SD = 4.7$ ),  $t(71) = 0.6, ns$ .

## DISCUSSION

One of the most powerful resources available to young children for coping with stressful situations is their imagination. More specifically, many children create an imaginary companion or impersonate an imaginary character in response to life events ranging from the mundane (e.g., not having a real playmate available) to the traumatic (e.g., being abused by a parent). Important benefits of role play may be that children work through and make sense of events happening to them, explore alternatives to their own reality, and gain a sense of mastery and understanding of their own experiences (Bretherton, 1989; Partington & Grant, 1984).

Given that role play can function as a way to cope with trauma, and given the well-established links between trauma and dissociation, the creation of imaginary companions and pretend identities has been seen as a potential early marker of pathological dissociation. However, the vast majority of fantasy-prone children do not go on to develop a dissociative disorder. In fact, research has shown that children who engage in role play show advantages over other children in social understanding (Taylor & Carlson, 1997; see also Astington & Jenkins, 1995; J. Dunn, Brown,

Slomkowski, Tesla, & Youngblade, 1991) and that having an imaginary companion and other extensions of fantasy are better characterized as early markers of creativity than as the first signs of mental illness (Singer & Singer, 1990). Thus, the usefulness of information about role play in the diagnosis of dissociative disorders depends upon (a) the ability to accurately distinguish the characteristics of normative role play from the role play of dissociative children and (b) a clear understanding of the extent to which normative role play at a given age might influence dissociation checklist scores.

In past research we have argued that some of the characteristics of imaginary companions that are believed to be associated with pathological dissociation (e.g., vividness and uncontrollability) are actually quite common in nonclinical samples (Taylor et al., in press). In the present study, we addressed the issue of how normative role play is related to the most widely used assessment tool for dissociative disorders in young children, the CDC (Putnam et al., 1993). This was of interest because role play falls squarely in the category of “process symptoms” of pathologic dissociation, which include imaginary companionship, auditory hallucinations, and passive influence experiences (Putnam, 1991). Our results showed that 3- and 4-year old children who interacted with imaginary companions or impersonated imaginary characters received higher scores on the CDC than those who did not engage in extensive role play. As well, role play was related to children’s ability to report their dreams. This finding supports previous research showing that individuals with imaginary companions have more frequent and more vivid nighttime dreams (Gleason, Jarudi, & Cheek, 2003; McLewin & Muller, 2006). However, having an imaginary companion or pretend identity was not associated with any of our measures of difficulties in children’s lives (behavior problems, fears, or nightmares), that is, measures that are more likely to tap into the “behavioral,” “affective,” and “posttraumatic” symptoms of dissociation. In the following sections we discuss the results with regard to the development of dissociation, the relation between dissociation and developmental difficulties, and last the relation between role play and dissociation.

### ***The Development of Dissociation***

In this study, dissociation scores did not vary with gender, verbal ability, or age. Our finding of no difference for boys and girls in terms of dissociation replicates previous research with preschool children in which no



gender differences were found, even though dissociative identity disorder appears to be more common in women than men (Putnam, Hornstein, & Peterson, 1996). There is controversy in the literature regarding whether the disorder is associated with higher IQ. In our sample, the correlation was near zero, suggesting no relation in typically developing preschoolers, but it is possible that the relation is stronger in older children and adults. The lack of a relation between age and dissociation is surprising; however, it was probably due to the restricted age range of the children tested. Past research has shown that children tend to exhibit more dissociative behaviors than adults and that CDC scores decrease between the ages of 5 and 16 (Putnam, 1997). The CDC scores of children in our study were higher than those in a control group of children aged 5 to 8 years ( $M = 3.2$ ) tested by Putnam et al. (1993). The relatively high CDC scores in our sample ( $M = 6.5$ ) are consistent with the belief that there is an inverse relation between dissociation and age.

However, CDC scores are not always elevated in young children. In a study of maltreated and nonmaltreated preschoolers, Macfie et al. (2001) reported a mean CDC score of 1.8 for the control (nonmaltreated) group. One explanation for this discrepancy with our results might be the differences in demographics for the two samples. Macfie et al. were interested in examining the link between child maltreatment and dissociation. They recruited families with low socioeconomic status for their control group in order to have a sample that was comparable to the maltreated preschoolers. In previous research, children of low socioeconomic status have been found to have lower levels of pretend play (Youngblade & Dunn, 1995), and it is possible that parents of low socioeconomic status might be less likely to endorse items on the CDC that ask about pretending.

An alternative explanation is that we modified the wording of some items on the checklist (as described in the Method section) to be more appropriate for preschoolers, whereas studies that included a broader age range did not do so. This practice might have resulted in lower scores in previous studies because one is likely to circle 0 or leave the item blank if the example provided is not relevant. We believe that the examples included on the checklist should be age appropriate to better gauge the baseline level of dissociation at a given age or stage of development. Although it is important to be cautious when comparing our results with those of other studies of preschoolers, the present scores might be a more accurate assessment of normative dissociation at this age rather than an artifact of small changes to the wording; in contrast, we argue that other

studies might be *underestimating* nonpathological dissociation due to this factor. A more systematic comparison of the two versions in both clinical and nonclinical samples of preschool children would be necessary to examine this possibility.

In older children, a score of 12 or higher on the CDC is considered indicative of significant dissociative behavior (Putnam et al., 1993). Putnam (1996) found that 6.7% of nonmaltreated school-age children scored in the clinical range. In the study by Macfie et al. (2001), none of the preschool-age control group children scored in the clinical range. However, in our sample, 21 of the participants (14%) received a score of 12 or above. Without the imaginary companion items (Items 14 and 15), there were still 19 children (13%) who score above the clinical cutoff. Note, however, that in pathologically dissociative children, the mean CDC scores can be above 20 (Silberg, 1998a). These results suggest the importance of screening normative samples for trauma history (McLewin & Muller, 2006). Although we did not have a standard assessment of trauma, eight items in our questionnaire overlapped with items on the Trauma Symptom Checklist for Young Children (Briere et al., 2001). In a post hoc analysis (both with and without Items 14 and 15), the children who scored in the clinical range on the CDC also scored significantly higher on the eight trauma items than children who scored below the cutoff ( $ps < .05$ ), suggesting that some children in our sample might have been considered clinical cases with more extensive screening; hence, caution is warranted when examining the mean CDC scores. However, the clinical-range participants did not differ from the remainder on role play or any other measures included in the study, and so including them did not appear to unduly influence the results.

### ***The Relation Between Dissociation, Behavior Problems, and Fears***

To examine the relation between normative dissociation and common difficulties in the preschool years, our questions about behavior problems and fears included a range of everyday issues. Parents' reports of the number of fears, the number and frequency of problems, and whether their children had nightmares were all associated with CDC scores. These findings suggest that the CDC taps into moderate childhood difficulties even in a nonclinical population. However, the information collected from children about their problems and fears did not have any relation to the children's level of dissociation or to the parents' reports of behavior

problems and fears. It is possible that 3- and 4-year-old children are not able to provide coherent information about these difficulties. In contrast, parent reports of behavior problems and fears might be more strongly correlated with dissociation than child reports because the CDC is also a parent-report instrument. That is, one is more likely to find consistency between two parent measures than between child and parent measures. It is also possible that the correlations would have been stronger if we had asked about more serious or non-normative fears or behavior problems.

### ***The Relation Between Role Play and Dissociation***

Our research showed that children who engaged in extensive role play (having personified objects, pretend identities, and invisible companions) scored higher than other children on the CDC; this was especially true for the group of children with invisible companions. When we reduced measurement overlap by omitting the questionnaire items about imaginary companions, this difference was no longer significant in the sample as a whole. It remained significant for girls only, however, despite the fact that girls and boys did not differ on their mean CDC scores. This result is likely due to the higher frequency of imaginary companions among girls versus the higher frequency of pretend identities among boys (S. M. Carlson & Taylor, 2005). Perhaps having imaginary others who are separate from the self is more closely linked with dissociative behaviors than enacting figures like the ones children see on television, at least from a parent's point of view.

These results suggest that one should be very cautious when using role play as part of the diagnosis of dissociative disorders in young children, especially in nonclinical samples. Instead, we argue that the results validate recent proposals to consider pathological and nonpathological dissociation and their sequelae independently (e.g., Becker-Blease et al., 2004). It is likely that individual differences in dissociation and fantasy may be linked throughout development in ways that are healthy and adaptive for coping and creativity (e.g., in actors, fiction writers, and scientists).

We can speculate on how the developmental pathways to high fantasy and dissociation might intersect. Lynn et al. (1988) proposed that there are two routes to the development of high levels of fantasy behavior: (a) encouragement from a significant adult, and (b) escape from an abusive environment (see also E. B. Carlson & Putnam, 1993). The pathway to dissociative tendencies in nontraumatized children might begin with a

fantasy-rich environment leading to a preference for role play activities, which in turn fosters nonpathological dissociation. Pathological levels of dissociation might result from the addition of trauma (e.g., child abuse) to this equation. It is also possible that the groups differ with respect to the ontological distinction, that is, the extent to which they experience imagined entities as real (Silberg, 1998b). Research with typically developing preschoolers suggests children are clear about the fantasy/reality distinction, although they are more prone to appear confused when the content of the fantasy is emotionally charged (for a review, see Harris, 2000; Samuels & Taylor, 1994; Taylor, Cartwright, & Carlson, 1993).

In conclusion, this study provides evidence for links between role play and nonpathological dissociation in preschool children. However, the results do not indicate that role play and dissociative experiences are synonymous. First, more research is needed to fully understand nonpathological dissociation in children. It will be important to test children across a wide age range to trace the developmental course of dissociative capacity in both clinical and nonclinical samples. Second, the ways in which pathological dissociation might depart from fantasy—such as amnesia for the event—remain to be delineated. Finally, potential causal links between role play and dissociation need to be put to empirical test. A longitudinal investigation of the development of role play and dissociation in low- and high-trauma-risk children would help to disentangle normal and pathological developmental trajectories.

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