

THE IMAGINARY  
COMPANION  
PHENOMENON:  
AN ANALYSIS OF  
PERSONALITY  
CORRELATES AND  
DEVELOPMENTAL  
ANTECEDENTS

Lisa C. Dierker, Ph.D.

Kristie F. Davis, M.A.

Barbara Sanders, Ph.D.

Lisa C. Dierker, Ph.D., is a postdoctoral research associate in the Department of Epidemiology at Yale University in New Haven, Connecticut. Kristie F. Davis, M.A., is a graduate student in the Department of Human Development and Family Studies at the University of Connecticut, Storrs, Connecticut. Barbara Sanders, Ph.D., is Professor of Psychology at the University of Connecticut in Storrs, Connecticut.

For reprints, write Barbara Sanders, Ph.D., Department of Psychology, U-20, 406 Babbidge Road, University of Connecticut, Storrs, Connecticut 06269-1020.

#### ABSTRACT

*In the present studies, both the incidence of recall of an imaginary companion and the remembered vividness of the experience were assessed in college students. The purpose of the research was to ascertain the extent to which individuals in a nonclinical population who recall having a childhood imaginary companion share characteristics and negative life experiences with individuals diagnosed with Dissociative Identity Disorder (DID); in this clinical group childhood imaginary companions are reported fairly frequently, and the experience is described as extremely vivid (Sanders, 1992). Two studies were carried out. In Study 1, students of both sexes who remembered an imaginary companion (IC+) were found to be more dissociative than those who reported not having a companion (IC-). The IC+ women also scored higher on an Imaginative Involvement Inventory than IC- women. This difference did not reach statistical significance among the male students. Study 2 screened a new population of female students in order to compare three groups of women: A High Vividness group (HV), a Low Vividness group (LV), and a no-companion group (IC-). The HV group was comprised of IC+ women who said they had been able to see and hear their childhood imaginary companion, and who remembered believing the companion was real; the LV group consisted of IC+ women who answered "no" to these 3 vividness questions, and the IC- group was defined as in Study 1. The HV women were found to be significantly higher in imaginative involvement than the LV group, and also more dissociative. The LV group did not differ significantly from the IC- group. In both studies, students who reported remembering an imaginary companion, even those whose experience was perceptually vivid, did not report significantly more lonely, stressful or traumatic childhoods than comparison groups.*

#### INTRODUCTION

Characteristics associated with Dissociative Identity Disorder (DID) have received a great deal of attention in recent years. Case studies suggest that individuals in this diagnostic category are extremely hypnotizable and also that they exhibit many characteristics incorporated under the general rubric of imaginative involvement (Bliss, 1984; Lynn, Rhue & Green, 1988). One indication of high imaginative involvement is the seemingly high incidence of childhood imaginary companions. In the only quantitative study of this phenomenon in DID subjects, Sanders (1992) found that 14 of the 22 adults surveyed (64%) recalled one or more imaginary companions from their childhood. For nearly all of these, the experience was described as extremely real and vivid: 13 of the 14 (93%) said that they had been able to see their companion, 12 (86%) could hear their companion, and 11 (78%) believed their companion was real.

Although the incidence of childhood imaginary companions in the DID group seems high (a commonly cited estimate for the general populations is about 1/3 in children between the ages of three and ten), it is difficult to evaluate such data without a comparison group. The present studies provide comparison data for one normal population. In these studies, the incidence of retrospectively recalled imaginary companions and the reported vividness of the imaginary companion experience was assessed in college students, using the same imaginary companion questionnaire used with the clinical group. In addition, we also obtained data on the personality correlates of the experience and on childhood antecedents. We hypothesized that the imaginary companion experience, particularly when it is extremely vivid or real, requires capabilities similar to, or even identical with, those associated with DID. Accordingly, we assessed the degree to which this experience is associated with the capacity to become intensely absorbed in an imagined reality, J. Hilgard's "imaginative involvement" (Hilgard, 1974); with dissociation; and with negative or stressful experiences in childhood, including severe punishment, sexual abuse, and neglect.

In Study 1, college students who remembered having at least one childhood imaginary companion (IC+) were compared with students who reported not having an imaginary companion (IC-). In Study 2, a new sample of students was

screened in order to evaluate the importance of the perceptual vividness of the imaginary experience. Three selected groups of women were compared: High Vividness (HV) subjects were IC+ women who described their imaginary companion experience as perceptually vivid; Low Vividness subjects (LV) were IC+ women who described an imaginary companion experience that was not perceptually vivid; and IC- women, who reported not having had a childhood imaginary companion.

## STUDY 1

### Method

The IC+ and IC- groups were selected from a sample of 1045 students (403 males and 642 females), aged 17 to 22, enrolled in introductory psychology courses at the University of Connecticut, who completed the imaginary companion screening instrument as part of a large-scale testing procedure. Fifty-one men (13%) and 150 women (23%) reported that they had had an imaginary companion; of these, 39 men (10%) and 118 women (19%) said they actually remembered their companion. A chi-square test revealed that significantly more women than men recalled having imaginary companions (Chi squared = 15.74,  $p < .0001$ ).

The IC+ group consisted of 52 women and 11 men recruited from among the students who reported first-person memory of an imaginary companion. The IC- group consisted of 39 women and 19 men recruited from the student group who reported that they had not had an imaginary companion.

Six to eight weeks after screening, the IC+ and IC- subjects completed an imaginative involvement inventory, a dissociation scale, and a negative home environment scale. These measures were administered in small mixed group/mixed gender sessions, and were completed anonymously. The IC+ subjects also completed additional portions of the imaginary companion questionnaire devised by Sanders (1992), providing descriptions of companions, functions of companions, family response to companions, and activities engaged in with companions. The imaginary companion information used in the present study was limited to questions about possession and firsthand memory of an imaginary companion, which were used to verify group status, including: "Did you ever have an imaginary playmate or companion?"; "Do you actually remember your companion or were you only told about this?" and questions concerning the vividness of the imaginary companion experience: "As a child could you actually see any of your imaginary companions?"; "Could you actually hear any of your imaginary companions?"; and "As a child, did you believe that any of your imaginary companions were real?"

The three dependent measures — imaginative involvement, dissociation, and negative home environment — are described in the following paragraphs.

*Imaginative Involvement.* Imaginative involvement was assessed using an Imaginative Involvement Inventory, (3-I) (Sanders, Green, Dierker, Davis, & Giolas, 1992), which taps the various interests, activities, abilities, and beliefs that have been associated with imaginative involvement (J. Hilgard, 1974; Wilson & Barber, 1981; Lynn & Rhue, 1987). The scale contains 56 items along with 10 unrelated control items, interspersed nonsystematically. For each item the subject is asked to respond on a 5-point scale ranging from 0 "not at all true" to 4 "describes me perfectly." The test-retest reliability of the scale in the college population is .90. Factor analysis of the 3-I identified three subscales: imagination, subjective paranormal experiences, and imaginary companions. The 3-I score and the scores for each of the subscales are the calculated means of the subject's responses. The three subscales of the inventory are described in greater detail below.

The imagination scale of the 3-I contains 27 items reflecting an interest in, or capacity for, involvement in fantasy, both as a child and currently. Examples are: "When I was a child I was 'off in my own world'"; and "My fantasies are very real to me." The 17 items that make up the subjective paranormal experiences scale all describe somewhat unusual experiences, many though not all of which can be said to reflect a belief in the paranormal. Some examples from this scale are: "I have psychic abilities," "I've been able to know that something will happen before it happens, even though there is no rational way I could have known," and "I feel I have some ability to control my heart-rate, blood pressure and rate of bleeding."

The four 3-I items that deal specifically with an imaginary companion comprise the imaginary companion subscale. All of these presume the existence of a companion and in various ways assess the extent of involvement with that companion: spending time with the companion, seeing and hearing the companion, being comforted by the companion, and talking to the companion. Since these items pertain directly to the bases on which subjects in the present studies were selected, they serve to some degree as a check on the selection measures. That is, one would expect that subjects selected for recall of an imaginary companion would have higher scores than those who did not recall a companion; similarly one would expect subjects who report a vivid imaginary companion experience to have higher scores on the imaginary companion scale than those reporting a less vivid experience. On the other hand, we also wished to demonstrate that differences on the 3-I as a whole were not produced only by differences on the imaginary companion subscale; for this reason, all analyses on the 3-I scores were also carried out with the imaginary companion items removed.

Examples of control items are: "As a child I enjoyed games of chance," and "I know what it feels like to have everything anyone could ever want in life."

*Dissociation.* The Dissociative Experiences Scale, or DES,

TABLE 1  
Means and Standard Deviations for the Overall Imaginary Companion Groups and for the  
Imaginary Companion Groups Separated by Gender on the 3-I and its Subscales (Study 1)

Variable	IC+		IC-		IC+ (Females)		IC+ (Males)		IC- (Females)		IC- (Males)	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
3-I	1.32	(±.63)	.71	(±.39)	1.39	(±.64)	1.02	(±.52)	.66	(±.36)	.82	(±.43)
Imagination Scale	1.76	(±.70)	1.05	(±.53)	1.82	(±.69)	1.50	(±.71)	.98	(±.50)	1.21	(±.56)
Paranormal Scale	.66	(±.72)	.35	(±.36)	.71	(±.76)	.41	(±.35)	.32	(±.33)	.41	(±.42)
Imaginary Companion Scale	1.51	(±.97)	.06	(±.18)	1.65	(±1.01)	.89	(±.65)	.08	(±.22)	.01	(±.06)

devised by Bernstein and Putnam (1986), was used to measure dissociation. The scale assesses the frequency of various dissociative experiences. Subjects respond by making a mark for each of the 28 items to indicate how often they have had various sorts of experiences when not under the influence of drugs or alcohol (0% to 100% of the time).

*Negative Home Environment.* The Child Abuse and Trauma Scale (CAT) (Sanders & Becker-Lausen, 1995) was used to measure the frequency and severity of stress and neglect in the home environment. The CAT assesses the subject's perception of the degree of various forms of maltreatment in childhood. For each of 38 items, subjects respond on a 5-point scale ranging from 0 "never" to 4 "always," to indicate the frequency of particular feelings and events occurring during childhood and adolescence. Test-retest reliability of the scale in the college population is .89 and the internal consistency as reflected in Cronbach's alpha statistic is .90. Factor analysis has established three subscales: sexual abuse, punishment, and negative home atmosphere/neglect. Each subject's CAT score is the mean of the 38 items; and subscale scores in each case are the means of the items in the particular scale.

## RESULTS

### *Imaginative Involvement*

The means and standard deviations of scores on the 3-I and its three subscales for men and women in the two groups are presented in Table 1. A two-way ANOVA revealed that the IC+ group scored significantly higher than the IC- group on the overall 3-I ( $F(1,111) = 37.81, p < .0001$ ), a result which was not altered when the four items comprising the imaginary companion scale were omitted from the inventory. The IC+ group was also found to score significantly higher than the IC- group on each of the three subscales: imagination ( $F(1, 113) = 37.24, p < .0001$ ), paranormal

TABLE 2  
Means and Standard Deviations for Selected Vividness Groups on the 3-I, DES, and CAT Scales (Study 1)

Variable	High Vividness IC+		Low Vividness IC+		IC-	
	Mean	s.d.	Mean	s.d.	Mean	s.d.
3-I	1.76	(± 0.65)	0.91	(± 0.33)	0.71	(± 0.39)
DES	34.37	(± 18.42)	10.94	(± 6.49)	11.82	(± 9.83)
CAT	0.97	(± 0.53)	0.63	(± 0.28)	0.71	(± 0.37)

( $F(1,113) = 7.59, p < .01$ ) and, as expected, imaginary companion ( $F(1,115) = 113.32, p < .0001$ ), confirming the reliability of the screening instrument. Scores for the IC+ and IC- groups on the ten control items were not significantly different.

In addition to the significant main effects, the ANOVAs revealed significant sex by group interactions on the overall inventory ( $F(1,111) = 5.37, p < .05$ ), the imagination scale ( $F(1,113) = 4.18, p < .05$ ), and the imaginary companion scale ( $F(1,115) = 5.13, p < .025$ ). Scheffe post hoc tests of these interactions revealed the following: 1) the group difference on the overall inventory was statistically reliable for women ( $p < .001$ ), but not for men; 2) the group difference on the imagination scale of the inventory approached statistical significance for women subjects ( $.05 < p < .10$ ), whereas the difference for men did not; 3) On the imaginary companion scale the expected group difference was obtained for both sexes ( $p < .001$  for females,  $p < .025$  for males), and the IC+ women scored significantly higher than IC+ men ( $p < .025$ ), reflecting a greater involvement with their imaginary companions. Overall, effect sizes were found to be moderate.

#### Dissociation

The IC+ group (mean = 22.6) scored significantly higher than the IC- group (mean = 11.8) on the DES ( $F(1, 116) = 15.6, p < .0001$ ). No sex difference or sex by group interaction was present.

#### Negative Home Environment

No differences were found between the IC+ group (mean = .77) and the IC- group (mean = .71) on the CAT or

on its subscales. Further, no sex difference or sex by group interaction was present.

#### Post Hoc Analysis of the Vividness of the Imaginary Companion Experience

Post hoc analyses were performed to explore differences between the IC+ subjects whose imaginary companion experience was perceptually vivid and those who reported a non-vivid experience. Examination of the data revealed a great deal of variance in the vividness with which individuals experienced their companions: 44% reported that they could see their companion; 41% reported that they could hear their companion; and 38% reported that they believed their companion was real. Twenty-one percent of the IC+ group ( $n=13$ ) responded positively to all three vividness questions, (i.e., these subjects said they could see their companion, could hear their companion, and believed that their companion was real). This group, which resembled the DID subjects studied by Sanders (1992), was designated a high vividness imaginary companion group (HVIC+). The fourteen IC+ subjects (22%) who responded "no" to the three vividness questions were designated a low vividness imaginary companion group (LVIC+). Both the HVIC+ and LVIC+ subjects were compared with the originally selected IC- group.

The means and standard deviations for each of these three groups on the 3-I, DES and CAT are presented in Table 2. The protected  $t$ -tests performed on mean pairs revealed that the HVIC+ group scored higher than the LVIC+ on both the 3-I and the DES ( $p < .0001$ ). The difference between these groups on the CAT approached statistical significance in favor of the HVIC+ group ( $p < .057$ ).

The results of these post hoc analyses support our

TABLE 3  
Means and Standard Deviations for the Vividness Groups on the 3-I and its Subscales (Study 2)

Variable	High Vividness IC+		Low Vividness IC+		IC-	
	Mean	s.d.	Mean	s.d.	Mean	s.d.
3-I	1.78	(± 0.72)	1.30	(± 0.58)	0.93	(± 0.47)
Imagination Scale	2.33	(± 0.75)	1.78	(± 0.69)	1.35	(± 0.61)
Paranormal Scale	0.95	(± 0.78)	0.66	(± 0.56)	0.51	(± 0.53)
Imaginary Companion Scale	1.69	(± 1.03)	0.86	(± 0.83)	0.06	(± 0.22)

TABLE 4  
Means and Standard Deviations for the Vividness Groups on DES and its Subscales (Study 2)

Variable	High Vividness IC+		Low Vividness IC+		IC-	
	Mean	s.d.	Mean	s.d.	Mean	s.d.
DES	28.13	(± 14.34)	21.90	(± 15.18)	17.31	(± 10.53)
Imaginative Involvement Scale	39.00	(± 20.24)	30.63	(± 21.45)	25.15	(± 16.09)
Depersonalization/ Derealization Scale	14.52	(± 14.79)	7.56	(± 9.10)	5.04	(± 7.57)
Amnesia Scale	8.07	(± 7.86)	8.51	(± 9.75)	7.33	(± 10.12)

hypothesis that the vividness of the imaginary companion experience is an important variable contributing to differences in dissociation, imaginative involvement and possibly childhood trauma. In Study 2, vividness was investigated directly by screening a new population of students to select equal numbers of HVIC+, and IC- subjects for study. In view of the sex differences noted in Study 1, and in view of the greater availability of female subjects in our student population, as well as the greater likelihood of having an imaginary companion among female students, this initial study of perceptual vividness was carried out only with women.

## STUDY 2

### Method

Participants were selected from 706 female introductory psychology students at the University of Connecticut, aged 17 to 22 years, who responded to the imaginary companion screening instrument used in the previous study. Subjects who had firsthand memory of an imaginary companion (IC+) were eligible for the study if they met either the high vividness or the low vividness criteria. Subjects were designated as high vividness (HVIC+) subjects if they answered "yes" to the three vividness questions: "As a child, could you actually see any of your imaginary companions?"; "Could you actually hear any of your imaginary companions?"; and, "As a child, did you believe that any of your imaginary companions were real?" Subjects who reported firsthand memory of an imaginary companion, but responded negatively to all of these questions were designated as low vividness (LVIC+) subjects.

Thirty-five subjects were identified as being HVIC+ subjects, representing 24% of the females who remembered having an imaginary companion. Twenty-seven subjects were identified as being LVIC+ subjects, representing 19% of the females who remembered companions. [Note: about half of the subjects who remembered imaginary companions did not meet selection criteria either for high or low vividness groups.] A sample of women who reported not having an imaginary companion was also randomly selected for participation. These IC- subjects were recruited from the 538 subjects who did not remember an imaginary companion during childhood.

Twenty-four women from each of the three comparison groups participated in the study. These students completed the 3-I, DES, and CAT anonymously six to eight weeks after screening, in small, mixed group sessions. Additionally, the data analytic procedures used were similar to those used in the previous study with the exception of supplemental analysis carried out to examine differences according to the factor structure of the DES. A recent factor analysis of the DES with a college population revealed three subscales: imaginative involvement, depersonalization/derealization and amnesia (Sanders & Green, 1994). Because of the statisti-

cally reliable sex differences that were found for this factor structure, group differences were examined in this exclusively female sample.

## RESULTS

### Imaginative Involvement

The means and standard deviations for the three groups on the 3-I and its subscales are presented in Table 3. An ANOVA revealed a significant difference among the three groups on the 3-I ( $F(2,65) = 11.74, p < .0001$ ), a result which was not altered when the four items comprising the imaginary companion scale were omitted from the inventory. A significant difference was also found among the three groups on the imagination scale ( $F(2,69) = 11.52, p < .0001$ ) and, as expected, on the imaginary companion scale ( $F(2,70) = 26.47, p < .0001$ ). Differences on the paranormal scale approached, but did not reach significance at  $p < .06$ .

Post hoc protected *t*-tests between pairs of groups indicated that each group was significantly different from the others in the predicted direction on the overall 3-I and on the imagination and imaginary companion subscales. The HVIC+ group scored significantly higher on the 3-I than the LVIC+ group, which in turn scored significantly higher than the IC- group ( $t(45) = 2.44, p < .02$ ). Overall, effect sizes were found to be moderate.

### Dissociation

The means and standard deviations for the three groups on the DES and its subscales are presented in Table 4. Analysis of variance revealed a significant difference among groups on the overall DES ( $F(2,67) = 3.87, p < .026$ ). Post hoc protected *t*-tests indicated that the HVIC+ group scored significantly higher on this measure than the IC- group. However, no significant differences were found between LVIC+ and IC- groups or between HVIC+ and LVIC+ groups. Analysis conducted on the DES subscales revealed significant results for both the imaginative involvement subscale and the depersonalization/derealization subscale. Specifically, the HVIC+ group was found to have significantly higher scores on both of these subscales than the IC- group. For the depersonalization/derealization subscale, the HVIC+ group was also found to have significantly higher scores than the LVIC+ group. The three comparison groups were not found to differ on the amnesia subscale. Effect sizes for significant comparisons were again found to be moderate.

Due to the partial overlap between the imaginative involvement factor on the DES and the imaginative involvement construct measured by the 3-I and its factor structure, a Pearson correlation was calculated between these measures. Findings revealed a correlation of  $r = .72$  between the imaginative involvement factor on the DES and the overall 3-I, showing that the constructs measured by this scale and subscale are related, but not identical. Further correlational anal-

ysis between the imaginative involvement factors from both the DES and 3-I gave this finding further support ( $r = .63$ ). The "imaginative involvement" questions contained in the DES seem to address a kind of dissociative absorption rather than the more general involvement in imaginative activities measured by the 3-I factor.

#### *Negative Home Environment*

An ANOVA revealed no significant differences among the HVIC+ group (mean = 1.02), the LVIC+ group (mean = .91) and the IC- group (mean = .91) on the CAT scale or on its subscales.

## DISCUSSION

Thirteen percent of male college students and 23% of females reported having an imaginary companion as a child, and 10% of the men and 19% of the women reported a first-person memory of their a companion. As expected, these percentages are much lower than that reported by the clinical group surveyed by Sanders (1992) in which 64% percent of the DID respondents reported having an imaginary companion whom they could remember firsthand.

The hypothesis that college students who remember a childhood imaginary companion would be more dissociative as well as higher in imaginative involvement than those who do not was clearly confirmed for women, and was partially supported for men. Though the IC+ men were significantly more dissociative than IC- men, the difference in imaginative involvement associated with recall of an imaginary companion did not reach statistical significance. However, the sample of IC+ men was extremely small. Additional research with larger samples and equal numbers of IC+ students of both sexes is needed to pursue the suggestion that the correlates of the imaginary companion phenomenon may be different in men and women.

The degree of vividness with which imaginary companions are experienced has been given little systematic research attention, yet the topic has often been discussed as an interesting facet of the phenomenon. Imaginary companions may be very vividly imagined, and possess a sense of reality for their creators. Through retrospective report, Hurlock and Burstein (1932) found that 81% of female subjects with imaginary companions and 60% of male subjects testified that their companions were real to them, while 79% of females and 43% of males imagined conversing with their imaginary companions. Svendsen (1934) reported that 33 of the 40 children IC+ he studied, (i.e., over 80% of them) played with their companions in a way that suggested that the companion occupied space. "They were spoken to directly, were chased in games, and were brought to the table where a place was set for them" (p. 995). While some children describe their companions as endowed with apparent reality and marked vividness, others describe characters that are much less per-

manent and vivid (Jersild, Markey, & Jersöld, 1933).

In the present studies the imaginary companion experience was designated as vivid if the student reported being able to see as well as to hear the imaginary companion, and also believed (in childhood) that the companion was real. This was the sort of experience described by nearly all of the DID respondents who reported imaginary companions. This vivid experience was reported far less frequently in the normal college population. Only about 5% of the women students surveyed — roughly one quarter of the IC+ women — endorsed all three vividness items. Those who did were significantly more dissociative than IC- women. Not surprisingly, those whose experience was vivid and real were also more involved with their companions: talking to them, taking them along with them, and being comforted by them. Our results suggest that individuals from the normal population who have a vivid imaginary companion experience are similar to DID groups in having elevated dissociative and imaginative capacities.

Jaynes (1977) reported that about half of the adults that he surveyed said they had been able to hear the voice of their imaginary companion. Our findings indicate that his estimates may have been high, but confirm his observation that for many, the experience is indeed very real. Marjorie Taylor's recent work (Taylor, Cartwright, & Carlson, 1992), and observations of others (Svendsen, 1934, in particular) attest to the vivid imaginary companion experience in many children. It should be noted, however, that the vividness of the imaginary companion experience may be defined in several ways. Earlier studies have included discussion of the individual's ability to touch the companion, the individual's ability to describe the companion in detail or the companion's ability to occupy various types of space. Future research on the vividness of the imaginary companion experience should not be limited to a restricted set of vividness variables, but should encompass various dimensions of the experience.

All of the results suggesting a relationship between a vivid imaginary companion experience and DID, including our own, are based on retrospective reports, and the possibility remains that it is the memory of the experience which is critical rather than the experience itself. Particularly since one characteristic of imaginative involvement is vivid autobiographical memory, this possibility should not be minimized, despite the difficulty of resolving the issue empirically. Procedures for investigating subjective aspects of the imaginary companion experience in young children (Taylor et al., 1992) offer a means of addressing the question by determining correlates of the vivid imaginary companion experience in childhood.

Despite conflicting views regarding the degree of adaptation of children with imaginary companions, the creation of imaginary companions, even in normal children, is often seen as a defensive phenomenon (Nagera, 1969; Meyer & Tuber, 1989). Nagera (1969) notes that the most apparent

critical function of an imaginary companion is to guard the child from rejection, loneliness, and/or neglect. Twenty-four of Svendsen's forty subjects with imaginary companions were reported to have had very limited contact with other children before kindergarten (1934). Similarly, Bairdain (1959) found that adolescents who remembered having imaginary companions reported playing alone more during childhood than adolescents who did not report having imaginary companions. Many have speculated that if environmental conditions are marked with neglect and loneliness, a child with highly developed imaginative skills might utilize such talents to escape this aversiveness by creating an imaginary companion. Although this speculation is amply supported in the clinical literature, the college students in the present studies who reported a vivid imaginary companion experience did not have significantly more lonely childhoods than comparison groups, nor were their childhoods more stressful.

There are several possible explanations for the failure to find a significant difference between IC+ and IC- college students in the negativity of the home environment. First, one might question the sensitivity of the abuse scale. Although the CAT has been shown to correlate with dissociation in college students as well as in disturbed adolescents (Sanders & Becker-Lausen, 1995; Becker-Lausen, Sanders, & Chinsky, 1992; Sanders & Giolas, 1991), it may not have been sufficiently sensitive to the degree or types of negative experiences that are relevant to the imaginary companion phenomenon. A second possibility is that our college sample might not have had a sufficient number of students who exceeded a necessary threshold of stress or neglect. A third possibility is that our target group was not abused or neglected, but that their experience reflects a genetic propensity for imagination which was largely independent of these factors. Though this capacity might be increased by abuse, severe punishment, or neglect, as well as by encouragement for fantasy, it may also develop in environments which lack these provocations. Imaginative involvement and dissociation should be maximal in those with a genetic predisposition who also encounter the relevant environmental factors.

We suspect that in many cases the vivid imaginary companion experience in normal children may mark a predisposition for involvement in realms of the imagination, an involvement which may differ in form as well as intensity later in life, depending on the nature of intervening experiences. It is this hypothesis which guides our continuing study of this phenomenon. ■

## REFERENCES

- Bairdain, E. F. (1959). Psychological characteristics of adolescents who have had imaginary companions. *Dissertation Abstracts International*, 20, 747-748.
- Becker-Lausen, E., Sanders, B., & Chinsky, J. (August, 1992). *A structural analysis of child abuse and negative life experiences*. Paper presented at the 100th Annual Convention of the American Psychological Association, Washington, DC.
- Bernstein, E., & Putnam, F. (1986). Development, reliability and validity of a dissociation scale. *The Journal of Nervous and Mental Disease*, 174(12), 727-735.
- Bliss, E. (1984). Spontaneous self-hypnosis in MPD. *Psychiatric Clinics of North America*, 7, 135-148.
- Hilgard, J. (1974). Imaginative involvement: Some characteristics of the highly hypnotizable. *The International Journal of Clinical and Experimental Hypnosis*, 22(2), 138-156.
- Hurlock, E.B., & Burstein, M. (1932). The imaginary playmate: A questionnaire study. *Journal of Genetic Psychology*, 41, 380-392.
- Jaynes, J. (1977). *The origin of consciousness in the breakdown of the bicameral mind*. Boston: Houghton Mifflin Company.
- Jersöld, A.T., Markey F.V., & Jersöld, C.L. (1933). *Children's fears, dreams, wishes*. New York: Teachers College, Columbia University.
- Kluft, R. (Ed.). 1985. *Childhood antecedents of multiple personality*. Washington, DC: American Psychiatric Press
- Lynn, S., Rhue, J., & Green, J. (1988). Multiple personality and fantasy proneness: Is there an association or dissociation? *British Journal of Experimental and Clinical Hypnosis*, 5(3), 138-142.
- Meyer, J.R., & Tuber, S. (1989). Intrapsychic and behavioral correlates of the phenomenon of imaginary companions in young children. *Psychoanalytic Psychology*, 6, 151-168.
- Nagera, H. (1969). The imaginary companion: Its significance for ego development and conflict solution. *Psychoanalytic Study of the Child*, 24, 165-169.
- Putnam, F., Guroff, J., Silberman, E., Barban, L., & Post, R. (1986). The clinical phenomenology of multiple personality disorder: Review of 100 recent cases. *Journal of Clinical Psychiatry*, 47(6), 285-293.
- Rhue, J.W., & Lynn, S.J. (1987). Fantasy proneness: Developmental antecedents. *Journal of Personality*, 55(1), 121-137.
- Sanders, B., & Giolas, M. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *American Journal of Psychiatry*, 148(1), 50-54.
- Sanders, B. (1992). The imaginary companion experience in multiple personality disorder. *DISSOCIATION*, 5(3), 160-163.
- Sanders, B., Green, J., Dierker, L., Davis, K., & Giolas, M. (1992). *Imagination in multiple personality disorder: Development of an imaginative involvement inventory*. Unpublished manuscript, University of Connecticut at Storrs.
- Sanders, B., & Green, J.A. (1994). The factor structure of the dissociative experiences scale in college students. *DISSOCIATION*, 7(1), 23-27.
- Sanders, B., & Becker-Lausen, E. (1995). The measurement of psychological maltreatment: Early data on the child abuse and trauma scale. *Child Abuse and Neglect*, 19(3), 315-323.
- Singer, J.L. (1973). *The child's world of make-believe: Experimental studies of imaginative play*. New York: Academic Press.
- Svendsen, M. (1934). Children's imaginary companions. *Archives of Neurology and Psychiatry*, 32, 985-999.



Taylor, M., Cartwright, B., & Carlson, S. (1993). A developmental investigation of children's imaginary companions. *Developmental Psychology*, 29, 276-285.

Wilson, S., & Barber, T. (1981). Vivid fantasy and hallucinatory abilities in the life histories of excellent hypnotic subjects ("somnambules"): Preliminary report with female subjects. In E. Klinger (Ed.), *Imagery, Volume 2: Concepts, results and applications* (pp. 133-149). New York: Plenum Press.