

## A STUDY OF PRESCHOOL CHILDREN'S LINKING OF GENITALS AND GENDER

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*The author describes a study that investigated what three- and four-year-old girls and boys know about the link between genital difference and gender difference by asking them to construct both a girl doll and a boy doll, using any of an assortment of anatomical features, including both male and female genitals. The results were interpreted as supporting the assumption of a normal early developmental period of psychological bisexuality; as contradicting the theory that when genital difference is discovered, girls are more distressed than boys about their genitals; and as evidence that both girls and boys envy the genital of the opposite sex.*

### INTRODUCTION

Children discover their own genitals at an early age and those of the opposite sex a little later. They realize, later yet, that there is a link between having a male genital and being a boy and having a female genital and being a girl. Implicit in this discovery, under normal conditions, is that they have the body of one sex and not that of the other. To be a boy means to have a boy body, and likewise for the girl. This linking of genital difference to gender difference is a cognitive milestone that impresses itself on psychological structuring from that point forward.

This paper reports the results of a study designed to clarify aspects of this developmental juncture. Several theoretical controversies are involved. First, in Freud's (1905, 1923b) theory of

psychosexual stages, three-year-olds enter into a period of genital primacy in which the anatomical difference between the sexes is discovered. That discovery impacts on and henceforth patterns a child's sense of being a girl or a boy. Cognitive-developmental researchers (Eaton and Von Bargen 1981; Emmerich et al. 1977; Gouze and Nadelman 1980; Kohlberg 1966; McConaghy 1979; Slaby and Frey 1975) differ with Freud and argue that sex difference is not meaningful for a child until a later age.

Second, early psychoanalytic theory assumed that, at ages three and four, the penis dominates psychological structuring for *both* boys and girls. In Freud's (1923b) view, the anatomical difference between the sexes is that of either having a penis or not having one. What is vital to a boy's sense of self as male is his fear of castration, and crucial to a girl's sense of self (not of herself as female, because Freud thought that that did not exist for a girl until puberty) is her envy of the penis. However, beginning with Horney (1924, 1926, 1933), revisionists of female developmental theory have asserted that, to the contrary, the young girl *is* aware of her own genital anatomy, and that this awareness furthers her positive self-regard and may enhance her identity as a girl.

Third, Freud (1933) also assumed that because the girl lacks a male genital, she has a more difficult time than does the boy in accepting her body as it is. Recently, many writers (D. Bernstein 1990; Krausz 1994; Mayer 1995; Richards 1992; Torsti 1993; Wilkinson 1991, 1993) have taken issue with this assumption and have proposed that girls' genital anxieties emanate from the structure of their own genitals, rather than from the lack of a male genital. A few writers (Fast 1990, 2001; Tyson and Tyson 1990) have even turned the tables and argued that, indeed, one gender may encounter more difficulty at the time of the discovery of sexual difference, but that the vulnerable group is boys rather than girls.

Both Freud (1933) and Horney (1933) charged researchers with the task of helping psychoanalysis to sort out the facts:

[There] . . . are the very weighty conclusions with regard to the whole psychology of women, which follow from Freud's

account of early feminine sexuality . . . . It seems to me that analytic experience alone does not sufficiently enable us to judge the soundness of some of the fundamental ideas that Freud has made the basis of his theory. I think that a final verdict about them must be postponed until we have at our disposal systematic observations of *normal* children. [Horney 1933, p. 59, italics in original]

The present study provided an opportunity to gather empirical data that might help to work out some of these theoretical controversies. I was interested in collecting evidence from preschool children about their nascent concepts of *girl* and *boy* as they relate to genital anatomy. To do this, I conducted an experiment with three- and four-year-old children. These were children who had been able to demonstrate at least a rudimentary understanding of gender (see section on "Design of the Study," p. 300). I expected that the research task would reveal the following: (1) whether or not children of these ages use genitals as a defining characteristic of gender categories; and (2) whether or not there are any differences between boys and girls in that respect, and/or with respect to the ways in which the genitals are employed in depicting a gendered body.

Literature relevant to this venture resides within both the psychoanalytic and the cognitive-developmental frameworks. I have drawn upon the riches of both these theoretical resources in designing this research and in interpreting its results.

## DEFINITION OF TERMS

Sex and gender terminology is confusing. The words *sex* and *gender* are frequently used interchangeably, both in daily life and in professional literature. In this paper, *sex* refers to the biological, including anatomical, distinction between the sexes (Money and Ehrhardt 1996; Stoller 1976). *Gender* refers to the inner psychological representation of biological sex, but, parenthetically, it may be independent of biological sex (Money and Ehrhardt 1996). It should be kept in mind that, for the purposes of this research,

*gender* more specifically refers to the child's *early* conceptualization of gender as a mental category.

*Masculine* and *feminine* (like *masculinity* and *femininity*) refer to gender, while *male* and *female* refer to biological sex (Tyson 1996). Although the composite terms of *man*, *woman*, *boy*, and *girl* refer to gender, they also include sex. In actuality, sex and gender are inextricably interrelated. The distinction between the biological and the psychological may become especially blurred when what is being considered is exactly that interrelationship, as in this study. Additionally, because that interrelationship is the focus of this research, it has been necessary, for the most part, to limit the scope of my examination of gender specifically to that interrelationship, leaving out other important components of gender. Lastly, when I use the term *bisexual*, I am referring to body concept with regard to sexual anatomy, not to choice of sexual object.

## LITERATURE REVIEW

### *Mental Development, Categorization, and Body Experience*

Before age three, children develop a rudimentary concept of gender, consisting of mental categories comprised of gender labels coupled with culturally stereotypical gender characteristics (Leinbach and Fagot 1986). These mental categories grow out of the early structuring of a psychological organization via processes of categorization (Edelman 1987, 1989; Rosch 1978; Schore 1994). Evidence from cognitive-developmental research indicates that a three- or four-year-old child's ability to mentally organize perceptions so as to create meaning reflects a psychological organization that evolves out of a substrate of earlier global experiential categories and hinges on structuring experience via a process of categorization.

Mental organization in the earliest months coalesces through the infant's formation of global contextual categories that are based on the linking of spatiotemporally associated objects (Mandler and Bauer 1988; Mandler, Fivush, and Reznick 1987; Rosch 1978).

This categorization seems to occur not only on the basis of visual and tactile input, but also—and importantly—on the child's conflation of the kinesthetic experience of those objects with their spatio-temporal contiguity (Lucariello, Kyratzis, and Nelson 1992; Mandler and Bauer 1988).

Thus, early mental development, at least in part, proceeds from the structuring of patterns of kinesthetically and viscerally based information. The cognitive studies cited above actually provide further confirmatory evidence for the earlier work of Piaget and Inhelder (1969) and Spitz (1955), both of whom proposed that the infant's intellectual functioning originates in perception of body experience. These cognitive studies also appear to lend support to their assumption that body experience, including the experiencing of one's own anatomy, is a crucial element of early psychological organization.

Historically, psychoanalysis has emphasized the importance of body experience for psychological development (Freud 1923a). Representations of that body experience are considered to be crucial elements, intertwining with a myriad of other formative influences, in the creation of the fabric that is each child's unique identity (Hartmann 1950; McDevitt and Mahler 1989; Schilder 1935). When a child is able to recognize genitals as distinct anatomical features, their inclusion in the body schema enhances body representation as a whole (D. Bernstein 1990; I. Bernstein 1975; Blum 1976; Fast 1984; Greenacre 1950, 1971).

### *The Relationship of Body Experience to Gender Conceptualization*

Anatomy differentially shapes the ways in which girls and boys learn about their bodies. Consequently, genital difference, in and of itself, crafts gender differences (Erikson 1951, 1964; Horney 1924, 1926, 1933; Tyson and Tyson 1990). Avenues for experiencing, exploring, and generating mental representations of one's body other than visual cues are especially important for the girl as she learns about body structure. Richards (1992) suggested that in girls, self-representation and body image are based on body ac-

tivity rather than on visual images alone. Tactile and kinesthetic perceptual modes furnish her with valuable paths for self-discovery (Irigaray 1990; Kalinich 1993; Kestenbergr 1982; Richards 1992). These modes play a crucial role in the girl's ability to psychologically represent her genital anatomy, to experience it as an integral part of her body, and to establish her sense of herself as female and as feminine (D. Bernstein 1990; Krausz 1994; Mayer 1995; Torsti 1993; Tyson 1994; Wilkinson 1991, 1993).

### *Cognition and the Genital Basis of Gender*

A child's sense of self as being male or female and as belonging to a particular gender, i.e., the early evolution of gender identity, is closely tied to the overall level of the child's cognitive development (Kleeman 1976; Silverman 1981). Cognitive studies reveal some details of the interaction between the maturational level of cognition and gender conceptualization. As early mental categories are formulated, they tend to be defined in terms of prototypes that capture the attributes most representative of items within the category and least representative of items outside of it (Rosch 1978). Thus, when the earliest gender formulations emerge, the ability to label others according to gender seems to be related to the use of stereotypical surface features as cues for recognition. Children under thirty months seem to need the presence of a prominent, socially determined gender characteristic (e.g., hair length, clothing) in order to be able to assign a person to a gender category (Leinbach and Fagot 1986). Anatomy at these ages does not appear to be used as a gender cue. Even though by thirty months, most children can reliably use gender labels for self and others (Thompson 1975), this ability does not embody the ability to understand the genital basis for the gender categories. At that age, when a child uses a gender term, it merely reflects her or his ability to use language to name an object (Emmerich et al. 1977).

Thus, for the toddler, gender exists solely as a taxonomic category. Studies have indicated that for the child younger than thir-

ty-six months, as gender categories are established, they reflect embryonic conceptualizations that are loosely tied to surface appearances (Leinbach and Fagot 1986; Thompson 1975). Gender is a fluid concept at this age, in that it does not take genital difference into account. It can be applied whimsically. But at the point at which children link genital difference to gender difference, their concept of gender is potentially imbued with deeper meaning and is anchored to an immutable personal quality.

It should be remembered that recognition and understanding of the link between gender and genitals occur while children are still relatively cognitively immature. That immaturity affects not only the way in which the genitals themselves are perceived, but also how that linkage is conceptualized. Characteristic of three- and four-year-old children is their fluidity of thought, reflecting age-appropriate, indistinct boundaries between reality and fantasy. Young children think syncretically (Piaget 1976; Werner 1980). Thought processes at these ages reflect a creative synthesis of motor-emotional and sensory factors. Werner (1980) describes this as follows:

[The child's] . . . experience of a doll does not need to contain a head with two eyes, a nose, a mouth, and so on. On the contrary, it may be assumed that the perceptual experience of the doll is made up correlatively of both factual attributes and inner motor-affective needs and impulses. The affective and motor behavior of the child impresses itself on the world of things and fashions it. [p. 65]

Because of this fluidity in thought, the child's early concept of gender as related to anatomy does not necessarily conform to the body's actual anatomical configuration.

### *Related Studies*

Although clinical work with young children has shown that they are aware of the anatomical difference between the sexes and are significantly affected by it, investigative research to corroborate that awareness and to clarify its influence on psychological develop-

ment has been scant. Several observational studies have shown that children from about fifteen months of age are aware of genital differences and engage in directed genital play (Dillon 1934; Kleeman 1965, 1975; Mahler, Pine, and Bergman 1975; Roiphe and Galenson 1981).

Several other studies have dealt with how and when very young children link sexual anatomy with gender. De Marneffe (1997) found that at eighteen months, toddlers could label themselves as a boy or a girl, but could not reliably label anatomically correct dolls according to gender. Even when these children, who were between the ages of fifteen and thirty-six months, knew which doll was genitally similar to them, they still had difficulty labeling the doll a *girl* or a *boy*. De Marneffe concluded that although the children had learned the gender names assigned to them, they did not have a grasp of the relationship between the gender term and the corresponding genital anatomy.

Earlier, the cognitive-developmental psychologist Kohlberg (1966) initiated research into children's linkage of sex and gender when he argued that, although the three- to four-year-old child has an awareness of genital differences, she or he does not use those differences as a criterion for gender categorization. It is not until age seven, in his view, that genitals acquire a centrality in gender categorization. When that occurs, however, it enables the child to view gender as an invariant or a constant.

A series of studies designed to test gender constancy in very young children—i.e., the stability of the concept of gender—seemed to confirm his thesis (Eaton and Von Bargen 1981; Emmerich et al. 1977; Gouze and Nadelman 1980; McConaghy 1979; Slaby and Frey 1975). Incredibly, all but one of these studies (McConaghy 1979) did not use genitals as a gender cue. However, two other researchers, using either photographs of nude toddlers or anatomically correct dolls in gender-recognition tasks, found that children as young as thirty-six months do employ genitals to designate gender (Bem 1989; Miller 1984). Still, Kohlberg's belief that children younger than seven see stereotypical surface features (e.g., length of hair, clothing) as the essence of gender, rather than

genital difference, continues to be invoked, even within psychoanalysis (Coates 1997).

Although both Bem's and Miller's studies showed that children as young as three do link genitals with gender, their research did not give the children a way to indicate which genitals were being used as cues. The doll bodies and photographs that were shown to the children already contained either male or female genitals. The children had no way of indicating whether or not they were using both male and female genitals to designate gender; it was possible that only one genital had been used as a gender cue for both the male and the female categories. For example, the children might have recognized the penis on the boy doll and correctly labeled it a boy, and then determined that since the other doll or photograph did not have a penis, it was a girl. The children might also have recognized that the female genitals made the figure a girl. The important issue of the role of each of the genitals in early gender recognition and conceptualization remained unaddressed in these studies.

## OVERVIEW OF THIS STUDY

In this study, preschool children were asked to place body parts, including genitals, onto a doll to make it gendered. It was a task that confronted them with both genital difference and gender difference, and challenged them to consider the linkage between the two. The ways in which the children used the body parts to construct gendered dolls were expected to meaningfully reflect their ideas about that linkage. Additionally, because boys and girls have basically different anatomical ground plans, it was expected that these anatomical differences would differentially affect their gender constructs.

### *Hypotheses*

Four hypotheses were tested. I had expected that: (1) the children would use the genitals more often than not to construct a

gendered body; (2) the male genital would be used more often by both boys and girls to construct the boy doll than would the female genital be used to construct the girl doll; (3) the female genital would be used less by boys than by girls to construct the girl doll; and (4) bodies constructed by boys would show sexual ambiguity more than would bodies constructed by girls—e.g., genitals of both sexes on either the boy or girl doll.

## DESIGN OF THE STUDY<sup>1</sup>

### *Participants*

The research sample consisted of sixty-two children, thirty-two boys and thirty girls, who ranged in age from thirty-eight to fifty-nine months ( $M = 46$  months). Thirty-nine were three-year-olds (boys:  $n = 21$ ; girls:  $n = 18$ ), and twenty-three were four-year-olds (boys:  $n = 11$ ; girls:  $n = 12$ ). The children were recruited from preschools in central New Jersey suburban communities. They were predominantly from white, middle-class families and lived with both parents.

### *Stimulus Material*

The children were asked to construct a girl and a boy, using Velcro-backed anatomical features that they could place on a doll body devoid of anatomical characteristics. This method contrasted with previous gender research in which children were asked to identify the sex of a preconstructed, anatomically correct doll. Free use of both genital and nongenital parts provided the children with an opportunity to express through anatomy their ideas about what makes a girl a *girl* and what makes a boy a *boy*. The task was akin to working on a puzzle, and was introduced to the children in that way.

These custom-made dolls had child-sized bodies (seventeen inches tall), and were made of a soft stuffing material covered with

<sup>1</sup> For a more detailed description of the study's methods, see Senet 1997.

a light beige, polyester-knit "skin"; each had an anal opening and hands with fingers. Both boy and girl dolls had the same short, curly, dark brown hair. On both, Velcro similar in color to the body was sewn across the width and length of the face and down the front torso to the pelvic area.

There were ten removable, Velcro-backed parts for each doll. The nongenital parts consisted of two eyes, two ears, two nipples, one mouth, one nose, and one bellybutton. The male genital consisted of a circumcised penis with scrotum, and the female genital was a vulva with labia major and minor, clitoris, and vaginal pocket. The dolls were specifically designed to portray a child's body rather than that of an adult; accordingly, they had no secondary sexual characteristics, such as pubic hair, chest hair on the male, or breasts on the female. The doll bodies were constructed identically except for the genitals, and were presented without clothing so that there were no stereotypical cultural gender cues, such as style of clothing or hair length. Thus, secondary sexual characteristics and stereotypical cultural gender cues were eliminated as possible confounding variables in this research. Although such variables are likely important to children's ideas about gender, they were not included as dimensions of this study, nor is their influence discussed in this paper; the purview of this study was limited solely to the significance of the genitals for early gender categorization.

### *Procedure*

All interviews were conducted in the child's home. I gave the parent a short questionnaire to fill out about the family structure, and then I engaged the child in play with regular twelve-piece puzzles. The parent remained in the room throughout the research procedure, and each interview was videotaped. The tapes were later viewed as an aid in scoring, as well as for reviewing the verbal remarks and gestures of the children as they played with the dolls and completed the tasks.

At the start of each interview, I asked the child, "Are you a boy/girl?", first phrasing the question to conform to the child's

gender and then repeating it using the opposite gender. This assessed whether the child knew his or her own gender and could correctly use gender labels. Only one child answered “yes” to both questions, and although that interview proceeded to completion, the results were not used. Thus, the final sample of sixty-two children included only those who had correctly identified themselves as to gender.

I then showed the child fully assembled girl and boy dolls, placing them on a table at which the two of us would work. I told the child, “These are special puzzles. The pieces come off and can be put back on.” After demonstrating how this could be done by using the lips of one of the dolls, I said, “Now I’m going to take all the pieces off.” All twenty body parts (ten from each doll) were put in front of the child and were available for the child to use to complete each task.

One doll body was then placed in front of the child as I said, “Here is the body-puzzle. Please make it a girl [or boy, gender corresponding to the sex of the child]. Use the parts that you need and tell me when you’re done.” When finished, the child was asked to name each part used. The parts were then taken off the doll and placed alongside the unused parts, again making twenty parts available for use. The child was next asked to make the doll a boy (or girl, gender opposite that of the child), and again, when finished, the child was asked to name each part used as well as those not used.

I attempted to follow this protocol as closely as possible. However, in order to engage these very young children in working on the research task, I had to be flexible. I became involved in the doll play to a degree that varied with each child. Some children worked quietly without asking for help from me, while others needed to be coaxed to work on the task. Some wanted me to play with them as they worked. They asked me questions about the doll or the parts, or wanted help from me, or became playful and silly. Some children involved others in the room: parents, siblings, and friends, even a pet cat in one case.

Part way through the study, I realized that some of the children were calling their construction a “silly” boy or girl; and in-

deed, it would be silly looking. After a child who had made this kind of doll was finished, I would ask her or him to make another one and to now make the girl or boy look real. Only the original construction was used for scoring, however.

### *Scoring and Statistical Tests*

The following information was recorded for each doll construction: the specific parts used, number of parts used, sequence in which they were placed on the doll, and body location where parts were placed. The genital was considered to be in the correct body location if it had been placed on the lower half of the front torso. The name that had been given for each body part was also recorded, but not used in the scoring. Each child's use of parts and body-location placement of genitals on both doll construction tasks was converted into scores for seventy-two genital-use variables. Using chi-square ( $\chi^2$ ), the data from these variables were analyzed by age and gender categories, as well as by two demographic categories (religion and siblings) for which the sample was heterogeneous. When sample size was small enough to result in a 2-x-2 contingency table with cells having an expected frequency of less than five, the chi-square statistic was adjusted using the Yates continuity correction. An alpha level of .05 was used for all statistical tests.

## RESULTS OF THE STUDY

### *Genitals as Indicative of Gender*

The majority of children in this study knew that genitals (1) belong on a gendered body, and (2) can be used as a defining feature of gender. Although each gendered doll came with ten removable parts, the actual constructions made by the children could contain anywhere from one to twenty parts (ten from each doll). In most of the constructions, the children used from eight to twelve parts (girl doll: 89%; boy doll: 92%), rather than simply putting on

all available parts. The genitals were included as one of those parts 74% of the time. Moreover, the genitals were placed on the dolls as one of the first seven parts 71% of the time.

Taken together, these results suggest that purposeful inclusion of the genitals occurred in both doll tasks. Moreover, in a preponderance of constructions, the children used the gender-consistent genital (although in some of these cases, the opposite-sex genital was also used) and placed it in the correct body location (girl doll: 66%; boy doll: 74%).

### *The Use of Both Male and Female Genitals*

In constructing their conceptual world, young children give preeminence to an object's highly visible surface features (Gopnik and Meltzoff 1987; Rosch 1978). Because boys' genitals are a protruding body feature, while those of the girls are mostly hidden, I had expected that the boys in this study would be less likely than the girls to use the female genital in their girl doll construction. But, to the contrary, there were no significant differences between the girls' and the boys' constructions in this respect. Moreover, the majority of both boys and girls constructed girl dolls by including a female genital (76%) and boy dolls by including a male genital (79%).

### *Doll Constructions as Genitally Realistic*

Although the expected differences between girls and boys in the frequency of use of the female genital on the girl doll did not occur,<sup>2</sup> differences between the sexes did occur on a particular kind of doll construction created by some children. These were constructions that were genitally realistic: only the appropriate genital was used, rather than a combination of male and female genitals, and it was placed in the correct body location. Out of the total sample, 26% of the constructions met these criteria. Interestingly, it

<sup>2</sup> See my third hypothesis, p. 300.

was the girls rather than the boys who made these doll constructions (see Table 1, below). More girls (37%) than boys (16%) constructed genitally realistic girl dolls,  $\chi^2 (1, N = 62) = 3.58, p = .05; \phi, p = .05$ . And more girls (53%) than boys (25%) constructed genitally realistic boy dolls,  $\chi^2 (1, N = 62) = 5.24, p = .02; \phi, p = .02$ .

Table 1  
Genitally Realistic Boy Doll and Girl Doll  
Constructions

Genitally Realistic Doll	Gender of Child	
	Boys (n) %	Girls (n) %
Girl	(5) 16 *	(11) 37 *
Boy	(8) 25 **	(16) 53 **

*Note.* Percentages are based on the following sample sizes.  
Boys = 32, girls = 30.

\*  $p = .05$ , \*\*  $p = .02$ .

### *Sexual Ambiguity in Body Design*

A child could create ambiguity in the sex of the doll in two ways: (1) by using the genitals of both sexes, or (2) by using the genital of the opposite sex only. Approximately one-half of the total doll constructions were ambiguously sexed (girl doll: 56%; boy doll: 48%). It was on these kinds of constructions that other significant differences between girls and boys occurred. Differences between the girls and the boys had been expected because it had been assumed that girls would have a greater familiarity than boys with the genitals of both sexes. However, more three-year-old girls than boys,  $\chi^2 (1, n = 39) = 3.72, p = .05; \phi, p = .05$ , created sexually ambiguous girl dolls, but more four-year-old boys did so than girls,  $\chi^2 (1, n = 23) = 5.24, p = .02$  (see Table 2, next page). These differences were statistically significant.

Table 2  
**Sexually Ambiguous Girl Doll Constructions**

<u>Gender of Child</u>	<u>Age of Child</u>	
	<u>3 years</u> <u>(n) %</u>	<u>4 years</u> <u>(n) %</u>
Boys	(10) 48 *	(8) 73 **
Girls	(14) 78 *	(3) 25 **

*Note.* Percentages are based on the following sample sizes. 3-year-old boys = 21, 3-year-old girls = 18, 4-year-old boys = 11, 4-year-old girls = 12.

\*  $p = .05$ , \*\*  $p = .02$ , Yates,  $p = .06$ .

Boys more than girls used both genitals simultaneously on the boy doll (see Table 3, facing page). When a boy made a sexually ambiguous boy doll, he most frequently used both genitals simultaneously, rather than only the female genital. The girls, however, were just as likely to give the boy doll only the female genital as both genitals. This finding—that boys more than girls used both genitals simultaneously on the boy doll—reached the level of statistical significance,  $\chi^2 (1, N = 62) = 3.75, p = .05; \phi, p = .05$ .

Among the three-year-olds who made a sexually ambiguous girl doll, the overall trend was for both the boys (seven out of ten) and the girls (ten out of fourteen) to use both genitals simultaneously, rather than only the male genital. Within the four-year-old sample (see Table 4, p. 308), however, boys (75%) continued to use both genitals, while girls (33%) did not do so. The difference was statistically significant,  $\chi^2 (1, n = 23) = 5.79, p < .02$ . Adjusting for the small four-year-old sample using the Yates continuity correction, this finding remained significant,  $\chi^2 (1, n = 23) = 3.81, p = .05$ .

In creating sexual ambiguity on the boy doll (see Table 5, p. 309), four-year-old girls used the female genital alone. The four-year-old boys, however, continued to use both genitals simultaneously. This difference was statistically significant,  $\chi^2 (1, n = 23) = 5.79, p < .02; \phi, p < .02$ . The numbers were small, however.

Table 3  
**Percentages for Use of Both Genitals Simultaneously  
 in Girl Doll and Boy Doll Constructions**

Doll with Both Genitals	% Total Sample N = 62	Gender of Child		Age of Child	
		% Girls n = 30	% Boys n = 32	% 3-year-olds n = 39	% 4-year-olds n = 23
Girl	39	37	41	44	30
Boy	37	27 *	47 *	41	30

Note. \* p = .05.

Table 4  
**Comparison of Sexually Ambiguous Girl Doll Constructions**

Genitals Used On Girl Doll	Age and Gender of Child			
	3 years		4 years	
	Boys (n) %	Girls (n) %	Boys (n) %	Girls (n) %
Both Genitals	(7) 70	(10) 71	(6) 75 **	(1) 33 **
Male Genital Only	(3) 30	(4) 29	(2) 25	(2) 67

Note. \*\*  $p < .02$ , Yates,  $p = .05$ .

Table 5  
**Comparison of Sexually Ambiguous Boy Doll Constructions**

Genitals Used On Boy Doll	Age and Gender of Child			
	3 years		4 years	
	Boys (n) %	Girls (n) %	Boys (n) %	Girls (n) %
Both Genitals	(9) 82	(7) 88	(6) 86 **	(1) 25
Female Genital Only	(2) 18	(1) 13	(1) 14	(3) 75 **

Note. \*\*  $p < .02$ , Yates,  $p = .05$ .

## DISCUSSION OF THE RESULTS

The research findings in this study generated data that impact on three aspects of gender development: (1) young children's ability to conceptually link genitals and gender; (2) differences in that process between girls and boys; and (3) preoedipal bisexuality.

First, with regard to the linking of genitals and gender, both the three- and four-year-old children in this study appeared to have grasped that there is a genital basis to gender. Second, the boys in this study, at both ages three and four, had more difficulty than the girls in making genitally realistic doll constructions. And third, the sample as a whole—with the exception of the four-year-old girls—created bisexual bodies. Many of the children imagined that gender does not exclude having genitals of the opposite sex. A fantasy or basic notion that the body can exist as a bisexual one was prevalent.

### *Genital Basis of Gender*

Characteristic of their level of cognitive development, the children's crafting of the doll constructions seemed to reflect in part a primitive thought process that conflates wish with perception. Their doll-body designs could be described as revealing a free flow of play with ideas, wishes, fears, and so on, without regard for logical contradictions. These designs probably reflected each child's emotional and fantasy life as much as the recognition of anatomical difference between the sexes.

Even so, statistical evaluation of the use of genitals in doll constructions yielded a picture of their purposeful inclusion. Moreover, other nonstatistical evidence from the study indicated that the children possessed discrete factual knowledge about sexed bodies and gender difference. As reported earlier, I asked some of the children who had made a doll with unrealistic anatomical configurations to construct another doll, and this time to make it look like a real boy or girl. These children most often responded by making the construction look more realistic. In other words,

they had a factual grasp of girls' and boys' anatomy and could make their girl and boy doll constructions look realistic, including genitally. However, without adult prompting for performance strictly in conformance with a realistic body schema, these children's approach to the research tasks was imaginative. But even when children in this study made wholly unrealistic doll-body constructions, their choices with regard to genitals appeared to be intentional rather than random.

Some examples may help to clarify what I mean. Kristin, three years old, used all twenty parts on her girl doll. Nonetheless, she placed the vulva in the correct location and gave it a genital name. Three-year-old Tommy used nineteen parts on his boy, including both the vulva and the penis. When I asked him to make a girl, he immediately quipped, "But no penis." True to his word, he constructed a girl using all available parts except the penis.<sup>3</sup>

A number of children seemed to be playing with anatomical possibilities, but nonetheless demonstrated that they understood the link between genital difference and gender difference. Katie, three years old, placed two eyes on the face of the girl doll, followed by the vulva where the mouth should go, and then ears. Although she considered giving her girl a penis, in the end, she decided to leave it off. When she was finished, I asked her, "Is this the girl?" "Yes," she answered, pointing directly to the vulva perched on the doll's face.

Robert, a four-year-old boy, used both male and female genitals on his girl doll and boy doll. After the interview was completed, his mother, who had been watching, asked him, "Does a girl have a penis?" Quickly and confidently, he answered, "No."

Three-year-old Rachel made her girl with a penis. She placed it in the genital area and correctly named it. She did not give her girl a female genital. Next, she made a boy without a male genital. But as she began designing her boy, the very first part that she picked up was the vulva, which she placed in the correct body

<sup>3</sup> The male genital body part consisted of both the penis and scrotum, but for brevity's sake, throughout this paper, I refer to it as a penis.

location. She evidently knew that the vulva doll part was a genital, but for some reason, had chosen to construct her girl doll without it, as she had also chosen to construct her boy doll without a penis.

Patrick, three years old, used all twenty parts for both his boy and his girl dolls. He constructed his boy by first putting two eyes on the face and then putting the penis in the correct location. From then on, with his eyes repeatedly darting to his mother's face and then away, he became silly and giggly, sticking the other parts all over the torso. He named the penis correctly, but then made up silly names for all other parts. He began his girl doll next. The very first part he gave her was the penis, placed in the correct genital location. Now even gigglier, he announced to his mother, "Look, I made a penis for the girl."

Consonant with the primitive thinking of children of this age, their inclusion of genital difference into the dolls' gender schemas did not mean that true-to-reality body structure would necessarily be reflected. Nonetheless, relatively high percentages of the constructions (35% of the boy dolls and 26% of the girl dolls) were made genitally realistic. This finding in the context of these children's cognitive level of functioning evidences the powerful pull of their awareness of the genital basis of gender. The results as a whole affirm such awareness, refuting Kohlberg's (1966) contention that children younger than seven do not understand the link between genitals and gender.

### *Girl-Boy Differences*

The girls' and boys' performance on the body construction tasks differed significantly in some respects. The girls more than the boys created sexed bodies for the gendered dolls by way of accurate usage of the genitals. This outcome issued from the data in two ways. First, at both ages three and four, the girls made more genitally realistic boy and girl dolls than the boys did. Second, 47% of the boys had crafted their boy dolls with both genitals, while only 27% of the girls constructed their boy dolls in that way.

To restate these differences, one could say that, on the whole, the girls in this study were more able to accurately convey their comprehension of the significance of genitals to gender, and perhaps had a better grasp of body structure as it relates to sex and gender difference.

The girls' greater proficiency in the body construction tasks was similar to results obtained in other, related studies. Mortensen (1991) asked children of ages five to thirteen to draw three pictures of people: one of each sex and one of him- or herself. She reported that boys more often than girls drew figures whose sex was unrecognizable by the raters. After age seven, all drawings made by girls could be recognized as to sex, but the boys continued to make sexually ambiguous drawings up to and including the age of thirteen.

Reviewing body-image research with preschool children, Fisher (1964, 1986) found that girls often manifested superiority over boys in mastering body-image tasks. Preschool girls showed a greater awareness of their bodies and more quickly mastered body spatial coordinates. On figure-drawing tests, when requested to draw a person, girls responded by drawing a figure of the same sex as the self at an earlier age than did the boys. Also, at an earlier age than the boys, girls incorporated details into their drawings that clearly distinguished the sex of the figure.

Although the notion that preschool girls are more cognitively mature than boys might provide a beguiling explanation for these boy-girl differences, existing research yields no confirmation for this view. Maccoby (1966), in a survey of research on sex differences in three- to five-year-olds, found no consistent differences between girls and boys in cognitive abilities.

The children in the present study were not tested for differences in level of cognitive functioning. However, in de Marneffe's (1997) study, which investigated two-year-old children's recognition and labeling of preassembled anatomically correct dolls, greater proficiency on some tasks was also found among girls. Since de Marneffe had tested the children for their level of cognitive functioning and had not found any differences between the

girls and the boys, she concluded that their differences in performance on the gender tasks could not be accounted for by differences in cognitive maturity.

Overall, these research findings create a picture that is the opposite of Freud's (1925, 1931, 1933) portrait of little girls. He argued that at the time of children's discovery of the anatomical difference between the sexes, it is girls, rather than boys, who are confronted with a daunting, perhaps even insurmountable, psychological task on account of the nature of their sexual anatomy. More recently, others (D. Bernstein 1990; Krausz 1994; Mayer 1995; Richards 1992; Torsti 1993; Wilkinson 1991, 1993) have argued that contrary to Freud's belief that a little girl must struggle to accept her body as missing the prized male genital, the task at hand for a girl is rather to find solutions to the genital anxieties intrinsic to the possession of her own female anatomy.

However, only a few have argued the reverse of Freud's position, observing that it is young boys who potentially have more difficult developmental tasks because of anxiety stirred by the nature of their own sexual anatomy. Tyson and Tyson (1990) contend that forming a genitally intact, confident sense of body self might be easier for girls than for boys because a girl's body structure inherently provides her with a greater sense of protection against genital injury. Boys, unlike girls, have genitals that are protruding appendages, and as a consequence are seemingly vulnerable. Fast (1990, 2001) argues that for a boy, matters of sex difference and of separation-individuation may readily become fused and impair his ability to adequately deal with sex difference at that developmental juncture. According to Fast, girls' and boys' issues diverge at the time when they recognize sexual differences. While the girl must recognize herself as sexually different from her father, who is usually not her primary caretaker, the boy must see himself as sexually different from the mother who *is* his primary caretaker, an inherently confounding circumstance.

The design of the current study did not allow for the gathering of data that would have more clearly revealed why the boys' body designs were not as accurate with respect to genitals as those

of the girls. One might speculate, though, that a confluence of elements, such as girls' and boys' possession of distinctly different sexual anatomies, as well as the differing nature of their early identificatory processes, affected their execution of the research task. Much has been written about gender differences in early identificatory processes (Benjamin 1995; Chodorow 1979; Dinnerstein 1976; Fast 1984; Tyson and Tyson 1990), so I will not repeat it here. On the other hand, little has been said about the effect of genital difference per se on the ability to psychologically incorporate sex difference.

Perhaps the hidden nature of a girl's genitals gives her an advantage in articulating gender via anatomy. Boys and girls learn about genital anatomy, their own and that of the other sex, differently. A girl can establish familiarity with her own genitals via kinesthetic cues (D. Bernstein 1990; Irigaray 1990; Kestenbergs 1968; Krausz 1994; Montgrain 1983; Richards 1992; Wilkinson 1993) that are not available to a boy as he tries to apprehend the differences between a girl's body and his own. Girls not only can *feel* the movement associated with their own genital sensations, but can also *see* the motion of the male genital. Thus, the motorically interesting features of the male genital may add another dimension to the girl's understanding of it, while no similar element is provided for the boy as he tries to understand a girl's sexual anatomy.

Some of the children in this study alluded to the importance of motion for their grasp of genital anatomy. The ways in which they creatively labeled genitalia referenced their motor and kinesthetic aspects. The male genital was called a "tickle" by one four-year-old girl, a "vacuum cleaner" by a three-year-old boy, and "they-sail-on-the-ocean-in-a-boat" by a three-year-old girl. Another four-year-old girl referred to the female genital as "pee-to-get-out."

For the boy, reliance on what he can see for information about the body of the opposite sex will not give him as clear a grasp of female anatomy as the girl may be able to glean about male anatomy. The female genital, a complicated configuration of folds and openings, is not as visually salient or comprehensible as that of

the male genital. Although the girl is confronted with hurdles as she tries to grasp the features of her own genitals, for the boy, apprehending female genitalia and sex difference might well be a more daunting task. It would follow, then, that girls can learn more about the unique features of the protruding male genital than boys can about the mostly hidden female genital. If so, I would argue that this situation creates some advantages for the young girl, facilitating her ability to articulate body structure, enhancing her understanding of sex difference, and promoting more realistic body concepts than those of boys of the same age.

Excerpts from several children's interviews in my study will hopefully enhance the statistical picture of girl-boy differences yielded by my research. For example, three-year-old Johnny verbalized his difficulty in constructing the girl doll. He had confidently created the boy doll using fourteen parts, including both genitals. Although he had used the female genital on his boy, he had called it a "peepee," indicating that he knew it was a genital. When I asked him to make a girl, however, he began to do so tentatively. He put on the eyes and the nose. He placed a third eye on the face as a mouth and commented, "I'll make a funny girl," and then immediately put the doll aside, indicating that the construction was completed. Afterward, I suggested that he make the girl look real. He paused, and then responded in a lowered voice, "I don't know how."

In contrast, Elizabeth, three years old, got right down to business and had little trouble in completing both dolls. "This one's a boy and this is a girl—right?" she announced, as I took out the preassembled dolls and placed them in front of her. She proceeded to work on the tasks with little hesitation. Her girl doll was made with eight parts. The only genital she gave her was the vulva, which she placed on the lower torso and called a "peepee." Then she started on her boy. The first part she picked up was the penis; she accurately placed it on the lower torso.

Donald, also three years old, seemed delighted when he saw the dolls. But rather than freely engaging in the task, he moved back and forth between his own body and the doll body as he

worked on his boy and girl constructions. He gave his boy doll both genitals. He used the vulva on its face, naming it a mouth, and next correctly placed the penis on the lower torso. He could not name it, however, instead pointing to his own penis. His girl doll was constructed with only the male genital. When asked to name that part, he pointed to his own genital, but said, "She is like my Aunt Joanne." When he placed the nipples and bellybutton on his dolls, he pulled up his shirt to show me where they were on his own body. He seemed to be using his body as a prototype for both sexes, but his reason for doing so was unclear. Was it that he did not understand the link between genitals and gender? Was he defensively denying the girl her own genital? Did he not know what the female genital looked like? As is often the case, research leads to many more questions than answers.

Although most of the three-year-olds, both boys and girls, did not use the genitals accurately to create sexed doll bodies, by age four, the girls were handling the task with aplomb. The boys, on the other hand, continued to create genitally unrealistic bodies. It might be that the acquisition of the capability to conceptualize gender as a category related to genital difference was a more prolonged event for the boys than for the girls in this study. Could it be that by age four, the girls had been able to integrate genital difference into their concept of themselves as gendered in a way that enhanced and further stabilized their identities, while the boys at that age lagged behind in such an achievement?

### *Bisexual Bodies*

A little over one-half (53%) the children in this study constructed sexually ambiguous doll-body designs, even though, as previously discussed, there was evidence that they were cognizant of the anatomical difference between the sexes and the genital basis of gender. A majority (66%) of these constructions were created by the use of both genitals simultaneously. Less commonly (34%), the children used only the genital of the opposite sex, i.e., the girl doll had only a penis, or the boy doll only a vulva.

The propensity for these three- and four-year-olds to fashion bisexual body designs for both boy and girl dolls is an intriguing statistical finding that potentially supports two assumptions of psychoanalytic developmental theory: (1) that young children wish to be both sexes, and (2) that genital envy exists at a young age. What follows is a consideration of these two assumptions, coupled with vignettes from my interviews that might be seen as illustrative of those concepts. The specific psychic factors that might underlie the construction of these doll bodies as bisexual, though, can only be a matter of speculation, inasmuch as the data is limited.

**The Wish to Be Both Sexes.** Kubie (1974), in noting the pervasiveness of children's denial of the anatomical difference between the sexes, saw this as defensive against a drive in both girls and boys to become both sexes. He argued, however, that children's desire to have what the other sex has is not a wish to give up one's own sex, but to supplement it with that of the other. Fast (1984) also recognized the prevalence of this wish, considering it central to the evolution of identity in young children. She argued that the childhood fantasy of possessing a sexually complete, bisexual body is an attempt to buttress a faltering illusion of omnipotent limitlessness after the discovery of sex difference.

Bearing in mind these arguments, the children's doll-body creations that playfully disregarded sex difference might be indicative not only of the wish to possess the genitals of both sexes, but also of ambivalence about acknowledging genital difference, as well as a defensive denial of the body limitation inherent in that difference. Excerpts from the interviews of a number of children in my study will perhaps underscore these possibilities and illustrate some of the choices being made as these preschoolers fashioned ambiguously sexed body schemas.

For three-year-old Carla, sex difference was acknowledged and clearly indicated on her boy doll, but it is possible that her desire for both genitals and her struggle with that desire was played out in the construction of her girl doll. She plunged into the task of making the girl doll as soon as the body parts were

placed in front of her. "Which one is the vagina?" Carla wanted to know. After briefly rummaging through the parts, she found the vulva and placed it correctly in the genital area. Then she picked up the penis. "What is this?" She placed it on the upper right torso and exclaimed, "I need another one like this." When she could not find another one, she moved it to the center, in line with the previously positioned vulva. Although she ignored sex difference in adorning her girl doll with both genitals, she did not do the same for her boy doll, which was limited to the genital of his sex.

Victor, a four-year-old boy, seemed to be struggling to admit sex difference while still holding onto the fantasy of anatomy not limited by that difference. He constructed his boy doll by first placing the vulva in the genital area and next putting a bellybutton inside the vulva. Then, finishing his genital masterpiece, he placed the penis on top of the other two parts. He called his anatomical invention a "weenie," saying that the boy "looked funny with the things on." As he started his girl doll, he told me, "Girls don't have weenies." He then proceeded to create a similar genital combination, except that he used the nose instead of the belly button inside the vulva, again finishing it with a penis on the top. He distinguished this genital from the one he had created for the boy doll by calling it a "crooked weenie." His unique genital designs and his acknowledgment of genital difference, while simultaneously denying that difference, could perhaps be interpreted as his expressing via the doll bodies that he could not so easily relinquish what was unique to the other gender.

Three-year-old Sally hesitated, at first, as she created her girl with the usual eyes, nose, and, mouth on her face and then a bellybutton in the genital area. "I need help making this girl," she implored. Picking up the penis, she asked, "Does this go with the girl?" Encouraging her to continue, I said, "You tell me what you would like this girl to have." Sally chuckled with delight. "A penis," she answered, placing it on the doll on top of the bellybutton. "I'll make her funny. I'll make a girl with a penis. See, the girl has a penis." Then, looking dismayed, she took off the eyes,

saying, "These are *boy* eyes. She needs girl eyes." She replaced them with two others. Next, Sally worked on her boy doll. She completed it by placing a bellybutton in the genital area and then the penis on top of that. She showed it to her 21-month-old brother. Playfully taunting him with having eliminated the sex difference, she now clarified the genital combination that had also been previously placed on the girl doll. "He has lipstick, Charlie, and he has earrings, and the boy has a vagina. The vagina is underneath the penis."

Four-year-old Josie, too, struggled with how to proceed with her knowledge of anatomical difference. She at first attempted to deny that the girl doll should be constructed without a penis. Afterward, she renounced the desire for the girl to possess what a boy has, instead offering her own girl body as a universal prototype: "Everybody must be just like me" (Mayer 1985). She constructed both the boy and the girl with the female genital only. She toyed, however, with giving the girl a penis. After designing the girl's face, she picked up the penis, looked at it, and asked, "Where does this go?" Without a pause, she continued, "I'll make it an earring." After placing it on the girl's ear, she looked through the pieces in front of her and said with dismay, "I can't find another one, another one just like that, another earring!" After looking through the parts a few moments longer, she took off the penis and declared, "I don't want it on." Next, she picked up the vulva and asked, "What's this?" "What do you think it is?" I inquired. Josie answered, "I don't know," while placing it correctly in the genital area.

**Genital Envy.** If indeed these children's doll designs revealed their desire to be both sexes, a concomitant of that desire would quite possibly be an envy of the genital that one does not have. Genital envy, as with other psychological concepts, refers to a complex phenomenon that includes emotional and cognitive determinants. This concept can be viewed from both these vantage points. With respect to cognition, envy of the genital of the opposite sex is perhaps fueled by the very nature of the preschooler's thought processes. Cognitive immaturity, typified by syncretic and

diffuse thought, prevails. The young child's perceptual organization is characterized by qualities of the whole (Werner 1980). Each part is assumed to contain the entirety of the object. Thus, the opposite-sex genital is not only a body part different from that of one's own, but may also embody all that is differentially attributed to the other sex. Perhaps, to possess that other genital is to have all that personifies that sex.

In considering possible emotional determinants of genital envy, we are confronted with a curious state of affairs. Psychoanalysis has barely acknowledged the existence of envy of the genitals of *both* sexes. Genital envy has been assumed to be synonymous with penis envy. Much has been written about penis envy theory, and we are all familiar with it; a brief summary of the relevant literature should suffice. For Freud (1923b), recognition of sex difference meant that children were confronted with the castrated state of girls. As a result, boys' fear of their own castration intensifies, and girls, realizing that they are missing a penis, are envious of it. In this way, he introduced penis envy as a key factor in girls' development and subsequently established it as the bedrock organizer of femininity (Freud 1925, 1931, 1933).

Others argued that, rather than bedrock, penis envy should be viewed as a conflation of secondary conflicts and/or defenses. Horney (1924) proposed three components: jealousy on account of the ready visibility of the boy's organ; hindrance of the girl's exhibitionistic tendencies because her genitals are mostly hidden; and suppression of the girl's wish to masturbate, contrasted with her belief that boys, because they are allowed to hold their penises while urinating, have permission to do so. Jones (1935) regarded penis envy as a regressive defense against the oedipal wish for father's penis. Klein (1928) also conceptualized it as defensive: an idealization of father's penis, as the little girl turns away in frustration and hate from her first object, the maternal breast.

More recently, writers have offered a myriad of possible dynamics related to penis envy. It can be seen as a metaphor serving to express intertwined but separate issues from various levels of development that articulates a narcissistic injury incurred

at the time of the discovery of the genital differences between the sexes, as well as a later regressive effort to resolve oedipal conflicts involving envy (Grossman and Stewart 1976). When a girl notices that she lacks something that the other sex has, a penis, her envy for that part can become a metaphor for desire, as well as a communication of her sense of other lacks (Wilkinson 1991). Penis envy can express a girl's feeling of being cheated because of parental failure to explicitly acknowledge the vulva (Lerner 1976). It can serve as a revolt against the omnipotent mother (Chasseguet-Smirgel 1976), or may express a fear of losing mother because of lacking what is needed to genitally gratify her (Lax 1995), or compensate for too early a traumatic disappointment with mother (Torsti 1993), or it might function as a defense against identification difficulties with mother (Torok 1970) or the lack of a relationship with father (Elise 1998).

Research observations seem to confirm the verity of penis envy theory's supposition that a girl is distressed at what she does not have at the time of discovery of the anatomical difference between the sexes (Mahler, Pine, and Bergman 1975; Roiphe and Galenson 1981). Observational data from some of the girls in the present study could be used as supportive evidence of penis envy as well. For instance, Caroline was one of the three-year-old girls who constructed her girl with both genitals. After beginning to make the girl, she hesitated, and I encouraged her, asking, "Does this girl need any other parts to make her a girl?" "Yes," she answered, placing the mouth correctly, followed by the vulva above one of the eyes, referring to it as an eyebrow. "Does she need anything else to be a girl?" I inquired. "Yeah!" "What does she need?" Picking up the penis, Caroline showed it to me, exclaiming "This!" "She needs that?" I asked. Caroline answered wistfully as she placed it on the upper torso, "I hope."

But to interpret this data solely as confirmatory of penis envy would be incomplete and inaccurate. Carla, Sally, Caroline, and a significant number of other girls in this study wanted their girl dolls to have penises *in addition* to the female genital, not *instead* of it. As Fast (1990) stated with eloquent simplicity:

Denial of sex difference in both boys and girls is expressed in notions of being bisexually complete rather than in being male. Envy and demands for restitution occur in both boys and girls. In both, they concern ideas about others' unlimited sex and gender characteristics rather than their exclusively male completeness. [p. 111]

Thus, Fast believes that the little girl's wish to have a penis is reparative to the narcissistic injury imposed by the recognition of genital difference, and that it reflects a desire to retain an illusion of body completeness.

On the research task, three-year-old Patricia made her girl sexually ambiguous and her boy with no genitals at all. She adorned her girl with all twenty parts. The vulva was placed in the center of the torso and the penis (referred to as a hand) on the arm. In the genital area, she placed a bellybutton and named it a penis, perhaps underscoring the presence of that genital. Next, she made her boy doll. He was devoid of most parts, for she gave him only four—all of them eyes, placed on the torso. I could not help but wonder whether Patricia had seized the interview situation to poetically depict her fantasy of body completeness: "All eyes on the girl with a vulva *and* a penis, the girl who has everything!"

One interpretation I have offered for the large number of doll bodies designed with both genitals has been that a wish to be both sexes, i.e., to possess what the other sex has, is perhaps a common occurrence among boys as well as girls. Historically, however, the possibility that boys may envy female genitalia has essentially gone unnoticed. Neglect of what might be called *vulva envy* is remarkable. Attention has been drawn instead to girls' envy of the penis and boys' envy of breasts and women's childbearing capacity (Dinnerstein 1976; Fast 1984; Horney 1926; Klein 1928; Kubie 1974; Lax 1997). This saga began with Freud (1905), who considered psychological bisexuality to be a universal feature of the psyche, yet believed that it was only girls who wish to possess the genitals of the opposite sex. It should be remembered that he assumed that both boys and girls saw nothing but an anatomical anomaly—a missing penis—when they looked at the vulva (Freud

1923b, 1925, 1931). Such a position is a denial of the existence of an intact, uniquely female genital.

The possibility that boys might be envious of the female genital per se has continued to be excluded from consideration by all but a few writers. Little Hans's first plumber fantasy was revisited by Silverman (unpublished), who wrote that "the wish to obtain his father's and/or his mother's powerful genitals" is another way to interpret the fantasy. And Bettelheim (1962), describing his observations of adolescent initiation rites, argued that these rites originate more as an attempt at mastery of the envy that one sex has of the other than as a rite of passage demarcating childhood from adulthood. In a rarely cited work, he wrote, "Girls undoubtedly suffer from penis envy, as boys do from vagina envy" (p. 141). Bettelheim supported his thesis with clinical data and with striking evidence from male subincision rites practiced in some primitive cultures. In those rites, either the whole or part of the penile urethra, along the under surface of the penis, is slit open. The wound is called a *vulva* in tribes of central Australia and a *vagina* or a *penis womb* in New Guinea tribes.

An indirect approach to examining vulva envy is by way of literature associated with the dread and fear of that genital. In her exploration of psychoanalytic themes in the movie *Basic Instinct*, Richards (1998) suggests that the image of Medusa momentarily flashed on a TV screen in the lead male character's room is crucial to the basic theme of this murder mystery. That image brings to mind the image from a previous scene of the suspected murderess displaying her vulva, thus linking the danger of Medusa to the danger of women. The major theme, Richards concludes, is an assurance to men that "by avoiding beautiful, powerful women, they can avoid death" (p. 279).

Richards's argument implies that Medusa symbolizes the terror of the vulva as the power of woman, not as the terror of a mutilated male genital. Yet Medusa is the very myth that Freud (1922) used to corroborate his supposition that the female genital is horrifying to boys because it is castrated, and as such, it verifies the possibility of their own castration. Instead, that myth might attest

to male recognition and envy of a distinctive female genital. To Freud, "The terror of Medusa is . . . a terror of castration that is linked to the sight of something. Numerous analyses have made us familiar with the occasion for this: it occurs when a boy, who has hitherto been unwilling to believe the threat of castration, catches sight of the female genitals" (p. 273).

A more thorough study of Medusa lore suggests that, to the contrary, the terror of Medusa had more to do with fear of her potent femaleness than of her penislessness (Balter 1969). Medusa's history, culled from poetic legends dating back to Paleolithic cultures, identifies her as the serpent goddess of the Libyan Amazons, representing female wisdom, and as the Destroyer aspect of the Libyan "Triple Goddess," who was revered as mother of all the gods (Graves 1948; Walker 1983). As Anath in ancient Syria, Egypt, and Libya, the goddess was worshipped in sacrificial rites, during which she was fertilized by the blood (not the semen) of males. Anath then hung the shorn penises of her victims on her goatskin apron or aegis (Walker 1983).

Later, the classical Greeks revised the earlier poetic tales that venerated the goddess in order to assemble an array of deities more in conformance with their patriarchal social order (Balter 1969; Baring and Cashford 1993; Gimbutas 1982; Graves 1948). In so doing, they changed Medusa from a castrating goddess to a hideous, castrated creature. In their story, the "Destroyer" was herself destroyed at the behest of a cunning male potentate. But the original Medusa of earlier civilizations embodied woman as potentate. Female anatomy was seen as a link to the superior forces of nature. Supplemental to this point of view is Horney's (1932) essay on dread of women, in which she argued that male devaluation and dread of the female genital arises primarily out of male fears of genital inadequacy, and only secondarily from castration fears.

The weight of the statistical results from my research study supports the argument that a majority of the children interviewed considered the vulva to be valuable and desired. It would have been felicitous to have had further substantiation of this interpre-

tation via the children's verbal responses but most of the children did not verbalize their thoughts, and so did not explain their choices for the body designs. I can present some details, nonetheless, from the interview of one of the boys that might provide additional corroborative evidence, as follows.

Four-year-old Keith was able to use words to tell me what was on his mind as he worked on the research tasks. He was exuberant when I showed him the fully assembled dolls, but he had difficulty in carrying out the research task. He was interested in doing one and only one part of it: his attention was riveted on the female body, especially that genital. When I showed both dolls to him, he immediately took the vulva off the girl doll and shouted, "Ooh, it's got a peepee! Gonna make girls." "First, make a boy," I said. He pointed to the other doll body, also now devoid of parts, which had been put to one side, and asked, "Is that one a girl?" I again said, "First, make this one a boy." Taking the doll body in front of him, he placed two eyes on the face and then picked up the vulva and put it in the doll's genital area. He then put the two nipples on the upper body, calling them "boobs," followed by the mouth on the face. Next, he picked up the penis: "What's this?" "What do you think it is?" I queried. He answered, "I don't know—uh—a sock," and he attached it to the doll's foot. As soon as he finished the boy doll, Keith grabbed the other doll body and said, "I'll make the girl now." The first part that he picked up was the vulva. He placed it correctly in the genital area and then jabbed it, saying excitedly, "I'll punch the peepee." Like the boy doll, the girl doll also got a penis on her foot.

Although another four-year-old boy, Joey, did not speak, perhaps his manner of executing the tasks, as well as the body designs themselves, spoke for him, possibly indicating his desire for and envy of the vulva. He worked quietly; his demeanor was serious. He made his girl doll accurately and genitally realistic, placing the vulva in the correct location and correctly naming it. He had also used the correct number of parts (ten) for his boy doll, so that its overall appearance was realistic, except for one thing: he had used only the vulva as a genital. He constructed his boy

first with a nose, followed by a bellybutton. He then picked up the penis and placed it momentarily on the torso, but took it off, replacing it with the vulva in the correct genital location.

In this study, the responses of three- and four-year-old boys did not support Freud's conclusion that boys' primary reaction to the sight of the vulva is terror because they see it as a castrated male genital. What appeared to be interest—and perhaps even desire, more than fear—prevailed; these boys seemed interested in the female genital and used it. They adorned their male as well as female doll creations with it. In fact, significantly more boys than girls gave the boy doll a vulva. Also, many of the children, both girls and boys, advantageously used the research interview to learn more about the female genital. Alive with curiosity, they turned the doll task into an investigative opportunity. They thoroughly explored the part that was the vulva, holding it, poking fingers into the folds and vaginal opening, and looking at it every which way.

This research with a nonclinical sample of children has allowed a glimpse into one of the elements of the complex phenomenon of psychological bisexuality. Approximately half the girls and boys appeared to want the genital of the opposite sex, and most of those wanted it in addition to their own. Perhaps at this point in their young lives, in the wake of having recognized that there is a world of others—some of whom are bigger and more powerful and all of whom are differentiated by sex and gender—the genitals, now recognized as the basis of sex difference, can become a symbolic source of all generation and gender differences. It might be that through a fantasy of possessing both genitals, preschool children attempt to bolster their now-faltering illusions of omnipotence and wholeness. It might also be that these bisexual fantasies, arising at such a very young age, continue either consciously or unconsciously throughout life. Although I am aware that these possibilities are conjecture about interesting, albeit rather limited, data, my hope is that they will stimulate further research as well as additional interpretations.

## CONCLUSION

A group of white, middle-class preschool children from several suburban Northeast communities provided fertile ground for the empirical testing of an aspect of gender development. This study investigated how three- and four-year-old boys and girls deal with the anatomical difference between the sexes. It yielded three main findings:

- First, the children understood the genital basis of gender. This research provided a straightforward demonstration of the children's awareness of the link between genitals and gender, a link that has not always been recognized as existing at these ages. It also provided a glimpse into the influence of their immature level of cognition—typified by syncretic thought in interaction with their primitive emotions and desires—on their emerging conceptualization of gender. Although the children purposefully included genitals in their gendered doll constructions, those body designs were for the most part fanciful. Recognition of the link between body difference and gender difference was manifest but contextualized within the primitive nature of thought and emotion typical of this age.
- Second, girls—cognitive immaturity notwithstanding—were more able than boys to articulate gender via anatomy. Using genital difference to enunciate gender difference appeared to be a more difficult process for boys at these ages. This finding contradicts the belief that it is young girls who have more difficulty in dealing with the anatomical difference between the sexes.
- Third, a majority of the children created both their girl and boy dolls with the genitals of both sexes simultaneously. These bisexual doll bodies were not construc-

ted by chance. Their prevalence was interpreted not only as a reflection of cognitive immaturity, but also as an indication that these children, although aware of genital difference, were reluctant to embrace the idea that to be either a girl or a boy means to have the anatomy of one sex and not that of the other. Recognition of genital difference did not mean that these children acquiesced to the bounds of reality that normally limit body structure to the genital of only one sex. It was proposed that perhaps both the girls and the boys desired and envied what they did not possess, and so created fantasy bodies capable of being both sexes.

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