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Mother-Child Communication Sequences: Play Activity, Child Gender, and Marital Status Effects

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Contextual-ecological models of sex-typing guided the examination of mother-child communication patterns in relation to mother's marital status, child gender, and play activity. Married mothers ($n = 47$) and single mothers ($n = 30$) were videotaped in their homes while playing with their preschool-age daughter or son (mean age = 45.5 months). Mother-child pairs played with both a masculine-stereotyped toy set (toy track with cars) and a feminine-stereotyped toy set (toy foods and plates) for 8 min each. Mothers' and children's use of controlling (assertive), supportive (affiliative), and collaborative (both assertive and affiliative) speech acts were coded, and speech act sequences were analyzed. Mothers' and children's speech was influenced by child gender, the other's prior behavior, the mother's marital status, and the play activity. The study lends support to a multidimensional and multivariate view of sex-typing processes.

Children's first lessons in the meaning of gender occur through interactions with family members (Block, 1983; Huston, 1983; Whiting & Edwards, 1988). Consequently, much of the research on the socialization of gender has been focused on parents' interactions with their young children (see Block, 1983; Fagot & Leinbach, 1987, for reviews). When examining socialization processes, sociolinguists and sociocultural theorists have emphasized the importance of language as a tool for

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transmitting cultural practices (e.g., Schieffelin, 1990; Shatz, 1991). The different communication styles that mothers use with sons and daughters then can be viewed as cultural lessons in the meaning of gender. Mothers of young children have been observed to use more praise and affectionate comments with daughters than sons (Cherry & Lewis, 1976; Dunn, Bretherton, & Munn, 1987; Endsley, Hutcherson, Garner, & Martin, 1979; Fagot, 1974; Hubbell, Byrne, & Stachowiak, 1974; Noller, 1978; Stoneman & Brody, 1981), and to use more directive statements with sons than daughters (Cherry & Lewis, 1976; Frankel & Rollins, 1983). These patterns may both reflect and foster the greater emphasis on affiliation and expressiveness associated with the traditional female gender role, and the greater emphasis on self-assertion and instrumentality associated with the traditional male gender role (Block, 1983; Huston, 1983).

It is important to note, however, that not all researchers have found differences in mothers' uses of assertive/instrumental and affiliative/expressive language (Bee, Van Egeren, Streissguth, Nyman, & Leckie, 1969; Bellinger & Gleason, 1982; Fagot & Hagan, 1991; Laosa, 1980). This inconsistency in the research literature suggests that other factors besides child gender may moderate the incidence of sex-typed communication. As contextual models of gender have emphasized, sex-typing processes are multidimensional and multivariate in nature (Huston, 1983, 1985). Gender-related behaviors are influenced by factors in both the immediate interactive context as well as the broader sociocultural environment. Therefore, to help move the study of sex-typing beyond a primary focus on child-gender effects, we examined aspects of the interactive context and the family ecology in relation to mother-child sex-typed communication. Specifically, the influences of partner behavior and play activity were studied as two aspects of the interactive context, and marital status as a feature of the family ecology. The possible role of these three factors in the sex-typing process are reviewed next.

The other person's behavior as context. The first aim of the present study was to examine communication patterns in both mother-to-child sequences and child-to-mother sequences. Virtually all of the previous studies of sex-typed communication have been focused on only the overall frequencies or rates for certain behaviors. It may be more important, however, to examine when parents use certain behaviors than how often they use them. In other words, parents may respond differently to daughters and sons depending on the child's behavior as well as gender (Caldera, Huston, & O'Brien, 1989; Fagot, 1978; Langlois & Downs, 1980). Specifically, we hypothesized that mothers are more likely to respond positively to children's sex-typed behaviors and to respond negatively to cross-sex-typed behaviors.

In addition to considering how parents react differently to daughters and sons, it is also worth examining how daughters and sons react differently to certain behaviors from their parents. If gender differences are found in children's reactions to their mothers, it would suggest ways in which daughters and sons bring differences in communication style to the particular play settings that, in turn, may influence mothers. Hence, sex-typing may be viewed as a co-construction between children and their parents.

The play activity as context. Many developmental researchers have highlighted the activity structure or task as another salient feature of the interactive context during socialization in general (Rogoff, 1990; Tharp & Gallimore, 1988; Whiting & Edwards, 1988) and the sex-typing process in particular (Caldera et al., 1989; Huston, 1985; Leaper, 1994). In this regard, studies generally indicate that parents tend to select sex-stereotyped toys and activities for their children (Eisenberg, Wolchik, Hernandez, & Pasternack, 1985; Huston, 1983; Lytton & Romney, 1991). Consequently, researchers examining parent-child interaction styles who used either free play (e.g., Cherry & Lewis, 1976; Endsley et al., 1979) or semi-naturalistic observations in the home (e.g., Dunn et al., 1987; Fagot, 1974) may have missed an important component in the sex-typing process. In this regard, parents' reaction to children's behavior may depend on the activity setting as well as the child's gender and prior behavior (Caldera et al., 1989; Fagot, 1978). Therefore, the hypothesis was tested that mothers are most likely to respond positively to children's sex-typed behavior in gender-atypical play settings, and to respond negatively to children's cross-sex-typed behavior in gender-atypical play settings.

Marital status and the family ecology. In addition to examining aspects of the immediate setting, mother's marital status was considered as a feature of the broader family ecology that might influence the incidence of sex-typed behavior. According to ecological models of the family (e.g., Bronfenbrenner, 1979; Ogbu, 1981), many variations in child rearing reflect the parents' adaptations to their social and economic circumstances. In this regard, most single-parent mothers of preschool-age children must assume the demands of both employment and parenting—typically with substantially fewer resources than their married counterparts (Colletta, 1983; Hetherington, 1989; Hilton & Haldeman, 1991; MacKinnon, Brody, & Stoneman, 1982). These two family ecologies appear to influence the sex-typing process in different ways. Research reports indicate that children of single mothers are less likely than children of married mothers to have traditional gender stereotypes and play preferences (Kurdek & Siesky, 1980; Russell & Ellis, 1991; Stevenson & Black, 1988). These studies have left unanswered the processes by

which these effects might be transmitted in ongoing interactions. To our knowledge, there have been no observational studies of marital status and mother-child sex-typed interactions.

Some self-report studies indicate that single mothers tend to be more demanding and controlling with their children than are married mothers (see Colletta, 1983). Researchers have interpreted a directive care-giving style like this as adaptive to a family ecology in which the mother experiences stressful demands on her time and resources as the sole care giver (Colletta, 1983; Hoff-Ginsberg, 1991). Therefore, the hypothesis was tested that there is more emphasis on control among single mothers. A difference between single and married mothers in the use of self-assertive communication would indicate a corresponding difference in the sex-typing environments of children. This difference would be especially pertinent to the socialization of assertiveness in daughters given the otherwise traditional emphasis on this orientation in sons. If single mothers are found to demonstrate more self-assertion (e.g., directive language), then a possible origin is suggested for previous reports that daughters from single-mother families demonstrate more social assertion than those from two-parent families (Deutsch, 1983; Levy-Shiff, 1982).

In addition to having a control-oriented care-giving style, single mothers also may be more likely to look for emotional support from their children (Rehberg & Richman, 1989). Rehberg and Richman's (1989) research suggested that this may be especially likely with sons. If so, sons of single mothers may receive more encouragement for affiliative communication than sons of married mothers. This might partly explain previous reports that sons of single mothers are less sex-typed in their play behavior (Stevenson & Black, 1988). Accordingly, the idea was tested that there are more supportive responses with single mothers than with married mothers based on the premise that single mothers may be more likely to turn to their children for emotional support. This would be especially relevant to the socialization and expression of affiliation in sons given the otherwise traditional emphasis on this orientation in daughters.

In summary, we examined some of the possible contextual features of family life that may be related to sex-typed communication patterns between mothers and their young children. Communication was analyzed with use of a classification scheme in which speech acts are interpreted in terms of their underlying degrees of assertion and affiliation. Thus, supportive (highly affiliative), controlling (highly assertive), and collaborative (both assertive and affiliative) speech acts were targeted for analysis. We examined both how often speech acts were used overall as well as patterns of speech act sequences between speakers, the latter to reveal

how one person's behavior influenced the other. In addition, how sex-typed communications were moderated by the play activity was studied. Finally, we tested the extent to which maternal marital status might be related to the incidence of sex-typing effects.

METHOD

Participants

Sample characteristics. The sample consisted of 77 mother-child dyads. The children ranged in age from 30 months to 61 months ($M = 45.5$ months, $SD = 9.5$ months). Of these, 13 were single-parent mothers of daughters ($M = 44.3$ months, $SD = 9.4$ months), 17 were single-parent mothers of sons ($M = 47.6$ months, $SD = 8.9$ months), 26 were married mothers of daughters ($M = 44.0$ months, $SD = 9.3$ months), and 21 were married mothers of sons ($M = 46.3$ months, $SD = 10.5$ months). There were no significant child age differences between any of these groups. In order to control for age-related changes in sex typing (Huston, 1983) and communicative competence (Garvey, 1985) during the preschool years, children's age (in months) was included as a covariate in the statistical analyses.

There were no significant differences between single and married mothers in the incidence of paid employment. Seventeen (57%) of the single mothers were in paid employment (8 mothers of daughters and 9 mothers of sons), whereas the remaining 13 (43%) of the single mothers were not employed (5 mothers of daughters and 8 mothers of sons). Twenty-nine (62%) of the married mothers were in paid employment (15 mothers of daughters and 14 mothers of sons), whereas the other 18 (38%) married mothers were not employed (11 mothers of daughters and 7 mothers of sons).

Married and single mothers' education level was compared with use of an ordinal scale. The corresponding rankings were as follows: 1 = elementary school, 2 = some high school, 3 = high school diploma, 4 = some college, 5 = college degree, 6 = some graduate/professional school, and 7 = graduate/professional school degree. Married mothers of sons had significantly higher levels of education ($M = 5.8$, $SD = 1.1$) than did single mothers of sons ($M = 4.7$, $SD = 0.8$), $F(1, 36) = 11.85$, $p < .002$. As indicated by the mean rankings, this reflected an average difference of having a college degree versus only having attended some college, respectively. Married mothers of daughters ($M = 5.12$, $SD = 1.1$) and single mothers of daughters ($M = 5.2$, $SD = 1.1$) did not differ

significantly in their levels of education. In order to control for differences in maternal education, education level was included in the statistical analyses as a covariate.

Family socioeconomic status was assessed with the use of occupational prestige rankings (Stevens & Cho, 1985). Brief summaries of these rankings are as follows: 1 = unskilled laborer, 2 = unskilled worker, 3 = semi-skilled worker, 4 = skilled worker, 5 = clerical or sales worker, 6 = technicians and semiprofessionals, 7 = managers and minor professionals, 8 = administrators and white-collar professionals, and 9 = executives and major professionals. With married mothers, the higher score was used from either the mother or the father. Consistent with prior reports (e.g., Hetherington, 1989), married mothers ($M = 7.0$, $SD = 2.9$) were significantly higher than single mothers ($M = 4.0$, $SD = 1.8$) in their socioeconomic status (SES) levels, $F(1, 73) = 30.14$, $p < .001$. Consequently, SES was included in the statistical analyses as a covariate.

Recruitment. Letters and flyers describing the research project were distributed to recruit participants at preschools and public places such as grocery stores, malls, and parks. In addition, letters with return postcards were sent to families' homes based upon names and addresses from birth announcements in a local newspaper or from a mailing list purchased from Americalist, a direct-mail marketing firm. Families received a children's book as a gift for their participation.

Procedure

Two female research assistants visited each family's home. Upon arrival, one research assistant asked the parent to complete an informed consent form and a questionnaire containing family demographic questions, while the other research assistant set up the video equipment.

Next, the mother-child dyad was videotaped while playing with three different sets of toys for 8 min each. After 8 min, each set of toys was removed and the next set was placed on the floor. First, a set of Playmobil toy zoo animals, people, and surroundings was presented. This relatively gender-neutral toy set was used as a warm-up context to help the mother and child accommodate to being videotaped while playing together, but their behavior in this setting was not used in the analyses.

After the warm-up play session, two sex-typed toy sets were presented in counterbalanced order across families. The feminine-stereotyped toy set consisted of Playskool plastic foods, pots, and place settings. The masculine-stereotyped toy set consisted of a Little Tikes large plastic track requiring assembly with a tunnel, station, and two cars with people.

Classification of the toy sets as sex-typed is consistent with previous research (see Hughes, 1991, for a review). In addition to being gender-stereotyped, the two toys reflect functionally different types of play. The toy foods and plates tend to elicit social-dramatic play, whereas the toy track and cars emphasize construction- and action-oriented play (Hughes, 1991).

Behavioral Coding

Mother and child behaviors were coded from the videotape recordings with use of the Psychosocial Processes Coding Scheme (PPCS) (Leaper, 1991; Leaper, Smith, Schwartz, & Strasser, 1992). The PPCS classifies the social functions of speech acts based on their underlying degrees of assertion and affiliation. These two dimensions are directly related to conceptualizations of traditional masculine and feminine gender roles in terms of self-assertion/agency and affiliation/communion, respectively (see Block, 1983), as well as models of child rearing in terms of control and affection (see Maccoby & Martin, 1983). The PPCS is also consistent with conceptual models of androgyny (e.g., Bem, 1975; Block, 1973; Spence & Helmreich, 1978) that emphasize the possibility for combining these two dimensions (see collaborative speech act category below).

The following three PPCS speech acts were targeted for analysis.¹ *Controlling statements* refer to using orders, demands, commands, and telling the other person what to do (e.g., "Don't put the car on the track yet"). These are masculine sex-typed speech acts that are high in assertion and low in affiliation. *Supportive comments* refer to concurring or going along with the other person (e.g., "Yes, that's right") as well as offering reassurance, affection, or praise (e.g., "That's a very good idea"). These are feminine sex-typed speech acts that are highly affiliative and moderately assertive. *Collaborative statements* include suggestions, propositions, positive corrections, and offers that are collaborative or helping in nature (e.g., "Let's eat our sandwich now"). These are highly assertive and moderately-to-highly affiliative speech acts. They suggest

¹The PPCS includes other speech act categories that were not included in the present analyses: give information, request for information, request for assistance, criticize, disagree, and withdrawal. Although some researchers have characterized giving and requesting information as masculine-stereotyped instrumental forms of communication (see Aries, 1987), we view them as being relatively neutral speech acts that are both moderately assertive and moderately affiliative. Some of the other categories were potentially related to sex-typing (e.g., criticisms as assertive), but they did not occur in sufficient frequencies to perform the kinds of statistical analyses described in the Results section.

an “androgynous” style of communication whereby self-assertion and interpersonal affiliation are coordinated simultaneously.

PPCS behaviors were scored with the use of an interval coding procedure. Every 5 s, any instance of the PPCS codes was checked for both mother and child. This is considered a sensitive time period for this sort of analysis (Mann, Have, Plunkett, & Meisels, 1991). It was possible for more than one PPCS code to occur for a speaker in a 5-s period. If the incidence of a speech act code overlapped across more than one 5-s period, it was counted during only the first period.

The coding was carried out by eight research assistants during the course of the project. Intercoder reliability was assessed between each new research assistant and the trainer after several weeks of training. In addition, coders were periodically checked to assure the maintenance of reliability during the coding phase of the research.

Four different parent-child pairs were used for testing reliability. Each PPCS category was assessed separately for the extent of agreements and disagreements between pairs of coders. The criterion kappa coefficient for attaining reliability was .70—which is considered a high level of agreement (Bakeman & Gottman, 1986). The minimum kappa score obtained by any coder with either the controlling, supportive, or collaborative speech act categories was .73.

Speech act sequences. The coding sheets were used to tally the number of times particular two-event sequences between speakers occurred. These are often referred to as “exchanges” (Garvey, 1985) or “sequences” (Bakeman & Gottman, 1986). This was carried out for both parent → child sequences and child → parent sequences. A response to a speech act was counted when it occurred within a subsequent 5-s period of the initiating speech act by the other speaker in the interval coding record. Sequences were examined in which one speaker’s supportive, controlling, or collaborative speech act was followed by another speaker’s supportive, controlling, or collaborative speech act. Supportive and controlling responses highlight ways in which one person reacts in a positive or negative manner, respectively (Kerig, Cowan, & Cowan, 1993). In addition, collaborative responses were examined because they reflect the speaker’s effort to coordinate both self-assertive and affiliative concerns.

Yule’s Q scores. Unlike the analysis of the speech act frequency scores, the analysis of the sequences considers how two speech acts between different speakers might be related. In order to ascertain whether the sequential ordering of two events is greater than chance, it is necessary to take the base rates of the different events into account (Bakeman & Gottman, 1986). Therefore, the sequence frequencies were transformed

into Yule's Q scores. Yule's Q is an odds-likelihood ratio of contingency between two events that controls for base rates (Bakeman, 1991; Kennedy, 1983). Yule's Q scores range from +1 to -1, with a Q of zero indicating that a sequence occurred at chance levels (or there were no instances of the initiating and the consequent events). A positive Yule's Q score indicates that a sequence was more likely than would be expected by chance; a negative one indicates a sequence less likely than would be expected by chance. However, when Yule's Q scores are averaged for groups, they need to be interpreted as *relative values* of association between the groups.

RESULTS

Statistical Design

As described later, mother and child communication behaviors were analyzed in relation to the predictor variables. First, an omnibus $2 \times 2 \times 2 \times 2$ analysis of covariance (ANCOVA) (Toy Order \times Child Gender \times Marital Status \times Play Activity) was performed to test for any toy order effects (food-then-track or track-then-food). Toy order was not a significant factor with either speech act frequencies or with the sequences. Therefore, the analyses were repeated without toy order as a variable. Thus, the following results were based on $2 \times 2 \times 2$ (Child Gender \times Marital Status \times Play Activity) ANCOVAs. Child gender and mothers' marital status were between-group factors. Play activity (food or track) was a within-group repeated measure. Child age (in months), family SES, and mother's education were entered as covariates. There were no significant correlations between any of the covariates.

Given the unequal cell sizes of the sample, the SAS General Linear Models (GLM) statistical procedure for unbalanced designs was used (SAS Institute, 1990). This procedure uses the method of least squares to fit general linear models. It is a conservative procedure for handling unequal samples. The GLM procedure performs comparison tests using the least squares means. The output provides adjusted means and standard errors (SE), which will be presented when significant effects are reported.

Speech Act Frequencies

There were no significant effects in the analyses of mothers' and children's speech act frequencies that directly addressed any of the hypotheses. Specifically, there were no significant main effects or related interactions with child gender. However, two significant Marital Status

× Play Activity interactions were found with mothers' controlling speech acts, $F(1, 70) = 6.18, p < .02$; and mothers' collaborative speech acts, $F(1, 70) = 7.78, p < .007$. Simple effects tests revealed that single and married mothers differed in the amount they used these two speech acts during the feminine-stereotyped play activity only. Single mothers used more controlling speech acts ($M = 7.47, SE = 0.94$) than did married mothers ($M = 5.04, SE = 0.75$) during the toy food play, $F(1, 73) = 4.12, p < .02$. Single mothers also used more collaborative speech acts ($M = 18.60, SE = 1.26$) than did married mothers ($M = 15.31, SE = 1.00$) in the same setting. Both controlling and collaborative speech acts are high in assertiveness.

In addition, the child-age covariate appeared as a significant factor with mothers' supportive speech acts, $F(1, 70) = 6.13, p < .02$; children's supportive acts, $F(1, 70) = 6.61, p < .02$; and children's collaborative speech acts, $F(1, 70) = 3.99, p < .05$. Both mothers' and children's amount of supportive speech acts decreased with the child's age. Children's collaborative speech acts increased with age.

Sequential Analyses

Whereas the analysis of speech act frequencies did not prove particularly useful in the examination of sex-typed communication, several significant effects occurred in the sequential analyses related to our hypotheses. Child-to-parent and parent-to-child sequences were examined whereby one person responded with either a controlling, supportive, or collaborative speech act to the other's controlling, supportive, or collaborative speech act. Yules Q scores were entered into separate ANCOVAs for each type of child-to-parent and parent-to-child sequence to test the hypotheses regarding sex-typed communication between mothers and their children.

First, findings are presented pertaining to the extent to which mothers and their children responded to one another in sex-typed ways. This section also includes any gender effects that were specific to particular play contexts. Then the results are described that address our hypothesis that gender effects are moderated by the mother's marital status. Specifically, traditional sex-typed interactions were expected to occur more likely with married than single mothers. Finally, any other significant marital status effects that have possible implications for sex-typing are summarized. Given the complicated nature of the analyses and the number of results reported, a narrative summary of the significant findings in relation to the hypotheses is presented in Table 1.

Table 1. Summary of Significant Findings
Associated with Speech Act Sequences

Observed child gender effects

1. During the feminine-stereotyped play activity, mothers were more likely to reciprocate the supportive speech acts (child support → mother support sequence) of daughters than sons.
2. Mothers were less likely to make controlling responses following their child's collaborative speech acts (child collaborate → mother control sequence) during play activities that were sex typed for the child's gender (i.e., toy track with sons, toy foods with daughters) than those that were cross-sex typed.

Observed child gender effects moderated by mother's marital status

1. Single mothers were more likely to respond supportively to the collaborative speech acts of daughters than sons (child collaborate → mother support sequence). There was no child difference associated with this sequence for married mothers.
2. Sons of single mothers were more likely to make supportive responses following mothers' controlling speech acts (mother control → child support sequence) than were daughters of single mothers or sons of married mothers.

Other observed effects

1. Children's controlling responses to mothers' collaborative speech acts (mother collaborate → child control sequence) were more likely during the masculine-stereotyped play activity than during the feminine-stereotyped play activity.
 2. Single mothers were more likely than married mothers to reciprocate children's controlling speech acts (child control → mother control sequence).
 3. During the feminine-stereotyped play activity, single mothers were more likely than married mothers to have their supportive comments reciprocated by their children (mother support → child support sequence).
 4. Children's reciprocations of mothers' collaborative statements (mother collaborate → child collaborate sequence) were more likely with single mothers than with married mothers during the feminine-stereotyped play setting.
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Note. As described in the Results section, the child-age covariate was also a significant factor in some of the analyses.

Are There Gender Differences in Mothers' or Children's Response Patterns?

Mothers' responses to children's speech acts. A Child Gender × Play Activity interaction occurred with mothers' reciprocation of their children's supportive speech acts (support-support sequences), $F(1, 70) = 4.67, p < .04$. There was a corresponding simple main effect for child

gender associated with the toy food play activity, $F(1, 70) = 4.07, p < .05$. During the play food setting, mothers were more likely to reciprocate the supportive speech acts of daughters ($M = .37, SE = .12$) than of sons ($M = .04, SE = .11$). This finding confirms the hypothesis that mothers respond more positively to similarly affiliative speech acts from daughters than from sons. Moreover, also as predicted, this result was specific to the feminine sex-typed toy food play activity.

Second, a Child Gender \times Play Activity interaction effect was associated with mothers' controlling responses to children's collaborative speech acts (child collaborate \rightarrow mother control sequence), $F(1, 70) = 7.23, p < .009$. Although this was generally an unlikely sequence, a post hoc comparison test revealed that it was most likely with children during play activities that were cross-sex-typed for the child's gender. In other words, the sequence had a higher probability with sons during the feminine-stereotyped play ($M = -.26, SE = .11$) and daughters during the masculine-stereotyped play ($M = -.35, SE = .11$) than with sons during the masculine-stereotyped play ($M = -.55, SE = .11$) and daughters during the feminine-stereotyped play ($M = -.55, SE = .11$), $F(1, 75) = 6.20, p < .02$. This finding confirmed the hypothesis that mothers are more likely to respond negatively to children in cross-stereotyped play activities.

Children's responses to mothers' speech acts. There were no significant child gender main effects. This also included the absence of any child gender effects that were specific to any of the play activity settings.

Are Gender Differences in Mothers' or Children's Response Patterns Moderated By Mothers' Marital Status?

Mothers' responses to children's speech acts. A significant Child Gender \times Marital Status interaction occurred with mothers' supportive responses to children's collaborative acts (child collaborate \rightarrow mother support sequence), $F(1, 70) = 5.04, p < .03$. A simple main effect for child gender was found with single mothers only, $F(1, 25) = 6.43, p < .02$. Single mothers were more likely to respond supportively to the collaborative speech acts of daughters ($M = .39, SE = .12$) than of sons ($M = .01, SE = .12$). Married mothers did not differ with daughters ($M = .24, SE = .13$) and sons ($M = .24, SE = .14$), $F(1, 42) < 1$. Collaborative speech acts express both assertion and affiliation, which can be viewed as a non-sex-typed (or "androgynous") form of behavior for daughters.

Children's responses to mothers' speech acts. Children of married mothers were hypothesized to make more sex-typed responses and fewer cross-sex-typed responses than were children of single mothers. There

was one significant result that was consistent with this hypothesis. A Child Gender \times Marital Status interaction was found with children's supportive responses to mothers' controlling speech acts (mother control \rightarrow child support sequence), $F(1, 70) = 6.64, p < .02$. Follow-up tests revealed both a child gender simple effect with single mothers, $F(1, 25) = 5.76, p < .03$; and a marital status simple effect with sons $F(1, 33) = 5.96, p < .03$. The sequence was more likely with sons of single mothers ($M = .08, SE = .18$) than either daughters of single mothers ($M = -.56, SE = .20$) or sons of married mothers ($M = -.38, SE = .17$). There was no difference with daughters of married mothers ($M = -.15, SE = .15$).

Other Significant Effects

There were a few significant results associated with play activity and marital status that did not pertain directly to our hypotheses. However, they relate indirectly to our interpretation of play activity and marital status as contextual/ecological factors that may mediate socialization and sex typing. In addition, there were a few instances when one of the covariates appeared as a significant effect in the ANCOVAs. These findings, summarized next, should be viewed cautiously given that they were not derived from our specific hypotheses.

Mothers' responses to children's speech acts. A marital status main effect at $p < .06$ suggested that single mothers tended to be more likely ($M = -.26, SE = .12$) than married mothers ($M = -.56, SE = .09$) to reciprocate children's controlling speech acts (child control \rightarrow mother control sequence), $F(1, 70) = 3.78$. Given the similarity of this sequence to the coercive interaction cycles that other researchers have observed between single mothers and older children (see Hetherington, 1989), the analysis was repeated without the covariates for SES and mother's education. When this occurred, the marital status effect became significant, $F(1, 72) = 7.82, p < .007$.² Thus, it appears that factors related to education and occupational status may mediate the incidence of this social interaction pattern between single mothers and children.

Finally, the child age covariate appeared as a significant factor with the child support \rightarrow mother support sequence, $F(1, 70) = 8.10, p < .006$; and the child control \rightarrow mother control sequence, $F(1, 70) = 4.75, p < .04$. Both sequences were more likely with older children.

²We also tested to determine whether removing the covariates changed the presence or absence of statistical significance for any effects related to gender or marital status in the other analyses. There were no differences.

Children's responses to mothers' speech acts. There were three other significant results associated with children's responses to their mothers. First, a play activity main effect was associated with children's controlling responses to mothers' collaborative speech acts (mother collaborate → child control sequence), $F(1, 70) = 8.38, p < .006$. This pattern was more likely during the masculine-stereotyped play activity ($M = -.36, SE = .12$) than during the feminine-stereotyped activity ($M = -.43, SE = .11$).

Second, a Marital Status → Play Activity interaction occurred with children's reciprocation of mothers' supportive comments (mother support → child support sequence), $F(1, 70) = 7.02, p < .01$. A corresponding simple main effect for marital status was associated with the feminine-stereotyped play activity, $F(1, 70) = 11.75, p < .002$. In this setting, single mothers were more likely to have their supportive comments reciprocated by their children ($M = .43, SE = .13$) than were married mothers ($M = -.18, SE = .10$). This result suggests greater expressed closeness in the social interactions of children of single mothers than of children of married mothers.

There was also a Marital Status × Play Activity interaction associated with children's collaborative responses to mothers' collaborative statements (mother collaborate → child collaborate sequence), $F(1, 70) = 4.14, p < .05$. Simple effects tests revealed that during the feminine-stereotyped play activity this sequence was more likely with single mothers ($M = .01, SE = .13$) than with married mothers ($M = -.41, SE = .10$), $F(1, 70) = 6.11, p < .02$.

Finally, a few significant covariate effects occurred. Child age was a significant factor with the mother control → child control sequence, $F(1, 70) = 10.78, p < .002$; and the mother support → child support sequence, $F(1, 70) = 14.25, p < .001$. Both sequences were more likely with older children. In addition, mother's education was a significant factor with the mother collaborate → child support sequence, $F(1, 70) = 8.78, p < .005$. This sequence was less likely with higher educated mothers.

DISCUSSION

Overall, the findings supported several of the hypotheses. First, we predicted that mothers are more apt to respond supportively to sex-typed behavior—especially during gender-stereotypical play settings. Consistent with this prediction, mothers were found to be more likely to reciprocate supportive statements from daughter than sons during the feminine-stereotyped toy food play. Also predicted was that mothers are more

likely to respond negatively (controlling) to cross-sex-typed behavior—especially during the gender-atypical play settings. In support of this hypothesis, we found that mothers were more likely to use controlling responses following children's collaborative speech acts in cross-sex-typed play settings. In other words, this collaborate → control sequence occurred more with sons during the feminine-stereotyped toy food play and daughters during the masculine-stereotyped toy track play.

We interpret mothers' greater likelihood of controlling responses to their children's collaborative speech acts in these situations as possible messages in the meaning of gender. The toy track and the toy foods are cross-sex-typed play contexts for girls and boys, respectively. Making a controlling statement following a child's collaborative act may be viewed as undermining the child's authority and effort at mastering the activity. Our result is somewhat similar to Fagot's (1974) finding that children received more negative reactions from their parents for cross-sex-typed behaviors. However, we found differences in maternal reactions depending on *both* the child's behavior and the ongoing activity setting.

Another finding illustrates the interrelationship of factors in mothers' sex typing. Mothers were more likely to reciprocate supportive speech acts from daughters than from sons during the toy food play activity. This is consistent with the relatively greater encouragement for interpersonal closeness traditionally associated with the socialization of girls (Block, 1983; Huston, 1983). Moreover, as predicted, the sex-typed pattern occurred during the feminine-stereotyped play setting. Although the toy food play activity itself tends to elicit affiliative speech, it was even more likely with mothers and their daughters.

Contrary to our expectation, no significant differences between daughters and sons in their speech act behavior were observed. Perhaps child gender differences would have been more apparent with an older group of children. Other studies suggest that sex-typed differences in girls' and boys' social-interaction styles increase between early and middle childhood (Leaper, 1991; Serbin, Sprafkin, Elman, & Doyle, 1982). In contrast, the early childhood period represented in the present study's sample is the age when parents may be most apt to treat their children in sex-typed ways (Lytton & Romney, 1991).

The hypotheses regarding the relation between mothers' marital status and their sex-typed communication patterns received partial support. First, we expected that married mothers are more likely than single mothers to respond positively to children's sex-typed behavior. However, no support for this hypothesis was found.

There was some support for the related hypothesis that single mothers are more apt to encourage nontraditional sex-typed behavior: single

mothers were more likely to give supportive responses following collaborative speech acts from daughters than sons. We interpret collaborative speech acts as expressing both assertion and affiliation, which makes them consistent with descriptions of "androgynous" behavior (e.g., Block, 1973). Single mothers in this study were especially likely to encourage this nontraditional form of behavior in their daughters. Our finding suggests a process to partly explain the developmental origins for previous reports that daughters from single-mother families demonstrate more social assertion than do those from two-parent families (Deutsch, 1983; Levy-Shiff, 1982).

We did not find that single mothers were especially likely to encourage nontraditional behavior in sons. As the previously discussed finding indicated, single mothers were actually less supportive following collaborative speech acts from sons than daughters. However, evidence was obtained that sons of single mothers were more apt to demonstrate cross-sex-typed behavior. Specifically, sons of single mothers were more likely than sons of married mothers (and daughters of single mothers) to respond with supportive comments to their mothers' controlling statements. We interpret the control → support sequence as reflecting both compliance (e.g., command → agree) as well as redirecting a negative affect into a positive one. Either way, this kind of pattern has been associated traditionally with the feminine role and the socialization of interpersonal closeness (Block, 1983; Huston, 1983; Leaper et al., 1989). Consequently, it can be viewed as a form of cross-sex-typed behavior for sons. Our finding, therefore, is consistent with the hypothesis that cross-sex-typed behavior is more likely among children of single than married mothers. It is also compatible with other research findings indicating that sons from father-absent homes are especially likely to demonstrate nontraditional play behavior (see Stevenson & Black, 1988). Furthermore, this pattern is compatible with Rehberg and Richman's (1989) observation that sons of single mothers were most likely to demonstrate comforting prosocial behavior with peers at a preschool.

In addition to the previously discussed findings, some marital status effects occurred that were not related to child gender. First, single mothers were more likely than married mothers to reciprocate children's controlling speech acts. This finding suggests that single mothers emphasized compliance more than married mothers. Compliance may be viewed as adaptive socialization goals for a mother who is coping with the strains of single parenting (Colletta, 1983). Moreover, although no gender differences were associated with this effect, it is possible that single mothers' reciprocal controlling affects daughters and sons differently (see Hetherington, 1989, for a general discussion of the differential

impact of divorce on sons and daughters). For both sons and daughters, mothers' reciprocal controlling may encourage compliance—which is traditionally emphasized in the socialization of girls more than boys (Block, 1983). However, for these daughters, there may be an additional effect of seeing their mother act as an assertive role model. This process may be related to one report that girls of single mothers demonstrated more social assertion with peers at a preschool than did daughters of married mothers (Levy-Shiff, 1982).

We also found evidence that children of single mothers were more likely to demonstrate greater affiliation in their responses than were children of married mothers. Specifically, children of single mothers were more likely to reciprocate their mothers' supportive and collaborative speech acts during the toy food play activity. Perhaps children of single mothers are more apt to have experience assisting their mothers during actual food preparation and eating (see Goodnow, 1988, pp. 12–13). Nonetheless, these patterns of positive reciprocity for children of single mothers seem paradoxical in light of the other finding regarding single mothers' greater likelihood of negative reciprocity (Hetherington, 1989). Perhaps it is not until later ages that mothers' coercive style leads to child resistance (Hetherington, 1989; Patterson, DeBaryshe, & Ramsey, 1989). Given that we did not make any hypotheses regarding overall marital status effects, these findings should be viewed cautiously.

There were two sets of factors that were controlled in the present study that may have moderated against finding more gender and marital status effects. First, the play activity setting was specified. As Caldera and her colleagues (1989) observed, when parents and children are asked to play with both feminine- and masculine-stereotyped toys, the play activity can have a stronger impact on behavior than gender. Second, social class variables were covaried in our analyses of marital status effects. Many previously reported child-rearing differences between married and single mothers may be mediated by factors such as SES, maternal employment, and education (MacKinnon et al., 1982). In addition, social support—which was not assessed in the present study—is another relevant factor that may be related to the marital status effects that were observed. With less social support, single mothers are usually under greater strain and consequently may emphasize the kind of control-oriented child-rearing style previously described (Hetherington, 1989). This is a variable worth exploring further in studies of sex-typing and parenting behavior.

Finally, in addition to suggesting some theoretically relevant factors in the sex-typing process, our results highlighted the potential advantages of using sequential methods of analysis over more conventional

comparisons of behavior frequencies. The analyses of the frequency counts for the different speech acts did not yield any significant gender effects, whereas the sequential analyses revealed several significant findings. It should be no surprise that examining communication patterns provided a more sensitive assessment of sex-typing processes. Speech acts such as controlling or supportive statements do not occur in isolation: instead, they are part of an interpersonal transaction that is situated in a concrete setting and patterned over time.

In conclusion, this study suggests that sex-typing processes are multidimensional and multivariate in nature. Sex-typed communication patterns, it was found, depended on the other's prior behavior, the play activity, and the mother's marital status. In contrast, there were no significant gender effects when either mothers' or children's overall frequencies of speech acts were examined. In these ways, our research lends support to recent contextual and ecological models of sex-typing and parenting (Caldera et al., 1989; Huston, 1983, 1985). The socialization of gender must be viewed as a construction that transpires during social interactions that are influenced directly by factors in the immediate interactive context and influenced indirectly by developed adaptations to the family's social, economic, and cultural conditions.

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