

Learning to Speak Like Girls and Boys: A Developmental Study in Gender and Narrative Style

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Abstract

This study investigated whether or not gender-based differences are evident in the language (North American English) children use to tell a story. An equal number of boys and girls representing 3 developmental stages (7;2, 10;10, and 13;8) were asked to perform a 3 part guided narrative task, which involved telling 3 stories from 2 wordless picture books. The language of the first and third narratives, representing natural and simulated discourses were analyzed. The linguistic variables of interest included lexical diversity, ratio of foregrounded statements to backgrounded ones, mention of the subjective state of either the story characters or the self, and the total length of the narratives. Results showed that differential performance on only two "gendered" factors, percentage of foregrounded utterance usage and mention of subjective state, were the only findings that showed any sensitivity to gender or age. The results for these variables do not support the presence of either expected gender stereotypes or very robust language differences between the sexes.

1. Introduction

In the past twenty years interest in the differences between male and female language has spawned a tremendous literature. The largest body of work on language and gender has revolved around Robin Lakoff's 1975 seminal work in which she identified a set of features that she claimed occurred more frequently in women's speech than in men's. Lakoff's claims along with most of the early assertions about gendered language behavior have been prone to methodological and interpretive criticism. Of late, there has been a renewed interest in refuting this early work, due, in part, to the fact that much of it was largely anecdotal, fairly subjective, culture-specific, and has not been replicable.

This study investigated the validity of some of these claims with respect to the domain of children's narrative production. The study compares children's production of and metalinguistic awareness about gendered stereotypes in the language they use to tell a story. Although there is a large corpus of language and gender literature, this literature has focused on gendered aspects of adults' language production in conversation. Little research has been conducted into the presence of gender differences in narrative styles, let alone that of children's. The central goal of this study is to provide a description of how boys and girls produce narratives and whether they produce and/or are aware of gender-based differences in their language.

It is claimed that by the time children start school, they have already been exposed to gender-differentiated language and are well on their way to forming their own gendered speech patterns. Before age 6, children "have begun to learn to speak differently as a girl or as a boy, how to speak to other girls and boys, and how to speak about them" (Swann 1992:14). According to Swann 1992, how people speak affects how they are perceived by others. Swann proposes that through spoken language, relationships are negotiated and people reveal things about themselves through speaking. Consequently, a number of stereotypes regarding gendered speech have become solidified in North American culture.

Within a culture, people have fairly clear perceptions of how each of the sexes should behave and speak. In a classic study by Kramarae (reported in Kramer 1977), adult subjects were asked to identify speech traits that were typically "male" or "female". The task required that the subjects gradiently classify a list of 51 speech traits on the basis of what extent they were likely to

be male or female speech traits. The results of this study show that, at least based on the results of the subjects' judgments, females are perceived (1) to have a higher pitch as well as a wider range in their pitch and speaking rate, (2) to use faster, gentler speech, (3) to be personable and aware of/concerned for the hearer, (4) to be enthusiastic and emotional, (5) to enunciate clearly, (6) to use paralinguistic cues to aid in self expression, (7) to provide lots of detail, (8) etc. The subjects perceived males (1) to be more forceful, (2) to have deeper voices, (3) to speak louder, (4) to be more confident and direct, (5) to be more aggressive, (6) to show their emotions in their speech, (7) to use more non-standard language (slang), (8) etc.

Edelsky 1976 attempted to study perception of gender stereotypes in children between the ages of 6 and 14, using adult subjects as a control. She presented both the adult and child subjects with a series of sentences and asked them to identify which sentences would most likely be said by a male or a female and those that were neutral (those which could be said by either or both). She found that the adults' judgments regarding the classification of the stimuli set were consistent across subjects. She also found that the 6 year olds, the youngest subject group in the study, were unable to perform the task with reliable results. Moreover, the 11-year-old subjects' classificatory judgments were becoming similar to those of the adult subjects. These findings suggest that awareness of genderlects does not occur until late childhood or even early adolescence. I found similar results in the study I report on below. However, it seems not only that awareness of genderlects that first shows up in early adolescence, but production of genderlects as well.

The aforementioned studies concern the perception of stereotypic patterns in male and female speech. Evidence that these stereotypes are pervasive in our culture comes from the fact that they are tapped into and used every day of our lives, through jokes, news media, cartoons, television, etc. Could these factors really be exploited through humor if these stereotypes did not actually exist? Is it possible to discredit totally these stereotypes? Stereotypic behavior patterns must have some grounding in truth and be representative of at least a portion of the population or else they would have died out. However, some of these stereotypes are often exaggerated (e.g., pitch, intonational contours, etc.) and that others are definitely unfounded (e.g., verbosity in women) (Prideaux, Hogan, & Stanford, 1993).

Variability in language is functional, conveying information to others about the speaker and his or her assessment of the context. Gender is one of the many social classifications that is often associated with, if not manifested by, language use. Gender differences in language use are not bimodal, however, and all males do not always speak in manner X nor do all females speak in manner Y. Gender differences purported to exist in language use usually involve differences of degree rather than differences in kind, at least in the vast majority of languages and cultures. It is probably best to think of the social constructs of "maleness" and "femaleness" as extremes on a scale with much variation occurring between these sex-based poles. No given speech or language trait is exclusive to one sex and there may be as much variation of traits within sex as across.

Whether or not males and females are predisposed to, or eventually learn to, speak in different ways, speech is a fairly robust indicator of gender. Pitch is one way in which this gender distinction in language is signaled. Both males and females are able to vary their pitch consistently and it has been proposed that people tend to speak in a manner that accentuates the differences between male and female speech, especially in the presence of the opposite sex. In learning to speak like a boy or a girl, young children may incorporate a plethora of articulatory features that are typically associated with their sex. The question is, do they also incorporate more structurally or semantically based linguistic features as well?

Beyond articulatory and structural differences, there have also been studies that investigated gender and knowledge about language and gender. Andersen 1984 was interested in determining what children know about appropriate usage of language in different social roles. She set up specific role playing situations so that children would be able to express the various registers that are in their repertoire. Twenty-four children between the ages of 4 and 7 were involved in her study. She divided them into three groups, equally divided by sex and age. She had each child participate in three play-acting sessions with puppets (a doctor's office scene, parents with a young child scene, and a classroom scene with a teacher and two students). She found that children consistently used a variety of features (including pitch, register differences, morphosyntactic

factors, etc.) to distinguish characters and that there was an emergent pattern to these characteristics. She found that each child in each role-playing situation used prosodic markings to distinguish the roles, specifically "pitch differences, but also intonation, volume, rate and voice quality" (Andersen 1984:132). For example in the family scene, she observed that the "fathers" (i.e., children role-playing as fathers) used deeper voices, spoke louder than the other characters, and "showed a marked tendency to produce shifted vowels." "Mothers" were observed to use higher pitch than the "fathers", to exaggerate their intonation. Moreover, they did not speak as loudly as the "fathers" in the scene.

Andersen also found that there was an age difference in the use of these features. She found that the older children were able to maintain these distinctions throughout the role play situation whereas the younger children typically used them at "role-junctures" where a contrast was necessary to avoid ambiguity. After children acquired the ability to use phonological modification, the next step that they seemed to acquire was the context-appropriate use of topic and lexicon. She found that lexical marking of role was used fairly consistently across children, although lexical distinctions of role were not always used appropriately and were less prevalent than phonological markings. While the use of distinguishing morphosyntactic features were not common in these data. She concluded that children are sensitive at a very early age (as young as 4) to the fact that utterances can express a whole range of social information tied to status (age, sex, occupation), as well as to the degree of familiarity of the speaker with the addressee. Also, children learn initially to encode these differences phonologically, then lexically, and only later as morphosyntactic distinctions.

Prior to conducting my study, I searched extensively for studies on children's ability to differentiate and imitate the opposite sex through narrative. Apart from Andersen's study on role-play, I know of no other studies that examine children's awareness of gender differences. The experiment described below is a study designed to examine children's ability to use gendered language. Although very little research has been done with respect to gendered language use and children's narratives, there is a growing body of research on children's narrative formation and developing narrative competence (cf. Berman and Slobin (eds.) 1994). However these studies focus on cross-linguistic and developmental patterns rather than on sex-based ones.

2. The One Frog Too Many Study

This study involved a three part structured narrative task. By examining behavior across several parameters, it was designed to test whether children are metalinguistically aware of gender stereotypical patterns in language and whether they use these patterns in their own natural and simulated narratives productions. My intent was to study developmental patterns in these areas and to determine whether genderlect resides more in speech (articulatory cues) or in language (morphosyntax and discourse organization).

The materials selected and used as stimuli for the current narrative study were two picture books with no written text other than the title on the covers, *One Frog Too Many* by Mercer and Marianne Mayer and *Frog Goes to Dinner* by Mercer Mayer. The former provided the test stimuli, while the latter served as stimuli for a distracter task. In *One Frog Too Many*, there are a number of different characters, a boy, a big frog, a dog, a turtle, and a new little frog. To outline the plot of *One Frog Too Many*, a new frog is given as a gift to the boy. He introduces it to his other animals. The big frog is jealous of the new frog and is cruel to it on a number of occasions while they are out playing. The boy punishes the big frog and does not let it play with the other animals. The big frog disobeys the boy and there is increased conflict between the two frogs, such that the little frog gets lost. In the end the boy and the other animals fear that they have lost the little frog forever when in actuality the little frog is hiding. They sadly go home from their adventure. Resolution occurs when the little frog returns home and everyone becomes friends.

Sixty children covering the developmental span from 6;1 to 15;2 years participated in the study. These subjects were divided into three different age groups, each consisting of 20 children, 10 males and 10 females. For expository purposes, it may be helpful to establish general reference ages for the three groups. The Group 1 subjects were about 7;3, the Group 2 subjects were about

10;5, and the Group 3 subjects were about 13;5. All of the children that participated in the study were non-impaired and native speakers of North American English.

Subjects were asked to look at the picture book, *One Frog Too Many* in order to familiarize themselves with the story so that they could later tell it. When the child was finished looking through the story book and signaled his or her readiness, the experimenter invited the child to tell the story while looking at the book. The narrative was considered complete when the child verbally (e.g., by saying "the end") or nonverbally signaled the end. The role of the experimenter was merely that of a listener, following the child's narrative attentively but passively. After the children completed the first story, they were given the second story book, *Frog Goes to Dinner*, and allowed to become familiar with it. The experimenter asked each subject to tell the second story as an old person would. The same procedure was followed to determine completion of the story.

For the third part of the task, the subject was asked to re-tell the first story, *One Frog Too Many*, as a member of the opposite sex would tell it, thus forming the simulated gender version data of the story *One Frog Too Many*. Again, the child was allowed to look through the picture book for awhile before telling the story. When the subject was ready, the experimenter turned on the tape recorder and invited the child to tell the story while looking at the book. As before, the experimenter's role was that of a passive, yet attentive listener.

Several variables were coded for or calculated in the current study: (1) the total number of words, (2) the total number of utterances, (3) the mean length of utterance, (4) lexical diversity, (5) mention of foregrounded information, and (6) mention of subjective state. Each child's natural and simulated narrative was transcribed and coded for each of these factors.

The total number of words (TNW) was established for each subject. This measure served as part of the base for calculating the subject's Mean Length of Utterance (MLU) and a Lexical Diversity Measure (LDM).

The total number of utterances (TNU) was also determined for each subject. This measure served as part of the base for calculating the subject's Mean Length of Utterance (MLU).

Mean length of utterance (MLU) was calculated by dividing the total number of words by the total number of utterances. For the purposes of this study, fairly strict parsing criteria were imposed for the determination of an utterance. Roughly, what I called an utterance consisted of a tensed clause. The general operational definition was that each clause containing a tensed verb constituted a separate utterance. Many parsing choices were fairly straightforward although there were a number of difficult choices that required a more refined determination. Below, I give some example sentences along with their utterance length.

1. Psych Verbs with Complement Clauses	2. Semi-serial Verbs
a. he didn't know what to do (1)	a... stopped/started/began V-ing (1)
b. I want to go (1)	b... went home crying (1)
c. He was sad/that he lost his present (2)	

TNW, TNU, and MLU are each length measures. According to gender stereotypes (see discussion above), females are perceived to be more verbose than males. If this is indeed the case, we would expect to see higher TNW, TNU, and MLU counts for the female subjects.

A Lexical Diversity Measure (LDM) was also calculated for each subject. This is essentially a type/token ratio and is arrived at by dividing the total number of words uttered by the total number of different words used. This was chosen as a relevant measure because of the claim that women are not only more verbose than males, but they display a richer and more diverse lexicon than males.

The percentage of foregrounded utterances used was also determined for each subject. Five independent adult assessors looked at the story and compiled a minimum story line, which described the most salient aspects of each of the 15 pictures in *One Frog Too Many* with respect to overall plot. The assessors determined that the 15 pictures minimally yielded about 32-34 foregrounded statements. That is, it would take about 32-34 short statements to recount the story. This schematic story was then reviewed by two independent judges and the foregrounded utterances were matched to each picture. If the subject mentioned an item from the list of

predetermined foregrounded utterances, it was coded as one token of a foregrounded utterance. The total possible number of foregrounded utterances was determined to be 32-34.

The final variable that was coded in the current study was mention of subjective state (SSM). The operational definition of SSM was any clause that described the cognitive, perceptual, or emotional state of a participant in the story or the narrator (e.g. I thought, etc.). For example, the following items were coded as being a token of subjective state mention:

<i>was happy</i>	<i>didn't like</i>	<i>was excited</i>	<i>I don't know</i>	he calmed
got mad	didn't notice	was still mean	was/got sad	everybody's happy
the boy thought	ignoring him	was so pleased	was surprised	

This measure can be tied to yet another gender stereotype. Women are perceived to be more emotional and/or aware of their own and other peoples' thoughts and feelings. If this is the case, one would expect a higher percentage of subjective state mentions amongst the female subjects.

3. Results

The three length measures, the total number of words (TNW), the total number of utterances (TNU), and the mean length of utterance (MLU) that each subject used was calculated. Means for each group under both the simulated and the natural conditions were calculated and compared. Table 1 below shows the mean TNW, TNU, and MLU for natural and simulated narratives.

Table 1- Mean TNW, TNU, and MLU for Natural and Simulated Narratives By Age and Sex

Group	Nat. TNW	Sim. TNW	Nat. TNU	Sim. TNU	Nat. MLU	Sim. MLU
1-Females	318.70	377.70	49.9	60.9	6.50	6.29
1-Males	319.20	378.60	44.8	56.6	7.09	6.71
2-Females	315.60	390.40	53.4	64.6	6.14	6.20
2-Males	276.60	266.50	51.3	54.4	5.62	5.34
3-Females	482.40	518.30	75.5	84.5	6.43	6.20
3-Males	337.60	360.30	50.9	59.3	6.72	6.25

A difference between the natural and simulated narratives was expected based on our guiding assumptions that children can actively manipulate their language in a gendered role. However, on an intersubjective basis, comparing natural to simulated narratives, no significant differences were found. Furthermore, it was concluded that overall differences in narrative length do not show up until late childhood or early adolescence for the females whereas the males do not exhibit an upward developmental change for this variable at all. In general, there were no gendered effects found. In short, the response to the question, "Can children effect the genderlect of the opposite sex?" is no, they cannot, at least not for these factors.

As stated above, the narratives were parsed into individual utterances based on very narrow syntactic criteria revolving around the presence of a tensed verb. Since verbal criteria were used for defining an utterance unit, the only real way to raise MLU would have been through increased use of modification, but only through the use of modification. As for example, with the use of adjectives, adverbs, or prepositional phrases, not through complementization (except with infinitival or gerundive complements). I anticipated an increase in the use of modifiers with the girls, based on gender stereotypes discussed above. However, this stereotypic difference was not supported in the current study.

If utterance length were calculated using criteria other than syntactic features (i.e., presence of a tensed verb), a more pronounced and possibly more revealing difference may have

been found. A number of factors could have been changed to see an effect at this level. For example, if a Chafian notion of utterance unit had been used, we might have seen more variation. Chafe 1994 defines an utterance as one intonational contour, which contains one new idea, etc. (see Chapter 5 of Chafe 1994 for a further discussion).

Lexical diversity (henceforth LDM) is essentially a type-token ratio derived by dividing the total number of words that a child used in a narrative by the number of different words used. Means for each group in both the natural and simulated versions were calculated and compared. Refer to Table 2 below for a summary of these means.

Table 2- Mean LDM for Natural and Simulated Narratives by Age and Sex

Group	Natural	Simulated	Group	Natural	Simulated
1-Females	.360	.344	2-Males	.383	.376
1-Males	.334	.315	3-Females	.376	.376
2-Females	.399	.370	3-Males	.397	.425

The natural and simulated versions of the narrative were pooled and two- factor ANOVAs were run for each age group. It was found that age was significant. This makes sense intuitively because as children age, one would expect them to become more lexically diverse. The males show a natural upward progression, although the females do not. This finding was a bit of a surprise as the language and gender literature generally proclaims that females are better at verbal skills. It is reasonable to assume that verbal agility should include a rich lexicon, but this did not appear to be the case with these subjects.

Based on gender stereotypes, one would expect that the girls would perform better than the boys on this measure, but this did not occur. Furthermore, each groups' simulated narrative featured a slightly depressed lexicon, except in the case of the Group 3 Males. This may be accounted for by the fact that when one rehearses something, one typically uses short cuts and expends less energy making the repeated task interesting. Although it could just as reasonably be argued that the second telling might be more polished and more embellished. I expected to be able to draw inferences about the children's metalinguistic awareness from their simulated narrative behavior. There were no significant differences between the natural and simulated versions for any of the variables. It appears that the subjects were performing in the same manner in both narratives, at least for the linguistic factors being measured, or possibly at a lower level in their simulated narrative. This would lead one to conclude that subjects' are not able to carry out the task of simulated role-play, that they are unable to suppress their natural gender tendencies, or that these variables do not really reflect genderlect features, either actual or perceived.

As a measure of the richness of the child's vocabulary, I found the overall lexical totals to be unrevealing. Again, a microanalysis whereby specific words are studied and compared might yield more sensitive information about differences in lexical use between boys and girls and across developmental groups. In summary, the LDM findings were very surprising. Based on gender stereotypes, one would expect the girls to perform better on this measure than the boys, but in fact the opposite was found to be the case. A more finely grained lexico-graphic analysis would be necessary to see which lexical items or phrase types contributed most to the differences between groups.

The percentage of foregrounded utterances measure was used to examine the subjects' use of foregrounded utterances. Each utterance was compared to the independent assessors' minimal storyline. If a child's statement was compatible with or seemed a reasonable paraphrase of one of these foregrounded statements, it was counted as a foregrounded utterance. The percentage of foregrounded utterances to overall utterances was determined for both narratives of each subject. Table 3 below summarizes the mean percentage of foregrounded utterances for each group under both the natural and simulated conditions.

Table 3- Mean Percentage of Foregrounded Utterances for Natural and Simulated Narratives by Age and Sex

Group	Natural	Simulated	Group	Natural	Simulated
1-Females	53.5	50.2	2-Males	51.7	49.4
1-Males	45.5	42.7	3-Females	40.1	36.9
2-Females	55.0	48.3	3-Males	55.1	49.8

As stated earlier, the total number of utterances that could be coded as foregrounded was 32-34. One might have predicted a decrease in the percentage of foregrounded utterances, developmentally speaking, since younger children's narratives might be thought to have a higher percentage of foregrounded utterances. Because younger children typically introduce less background information, their narratives may be guided more by the content of the pictures in the story book. However older children might embellish the story more by contextualizing the plot, providing motivation for action or character development in addition to the main story line. In the natural narratives, it was found that the females did begin to demonstrate such a negative slope and that this downward trend was especially strong between the Group 2 and Group 3 Females. It is interesting to note that, again, these differences do not become pronounced until late childhood or early adolescence and only in the females. The males, surprisingly, manifested a positive slope (refer to Figure 1 below) across all developmental ages. This was not anticipated at all, but may be due to the fact that they were not interested in the task, or that the task was too simplistic, or that they did not introduce superfluous material, in keeping with certain gender stereotypes. In the simulated narratives, we see the same directional slopes for males and females with a negligibly lower percentage of foregrounded utterances (refer to Figure 2 below) for both groups as compared to the natural narratives. This slight depression suggests that the second telling of the story encouraged the inclusion of more superfluous or background material into the children's stories.

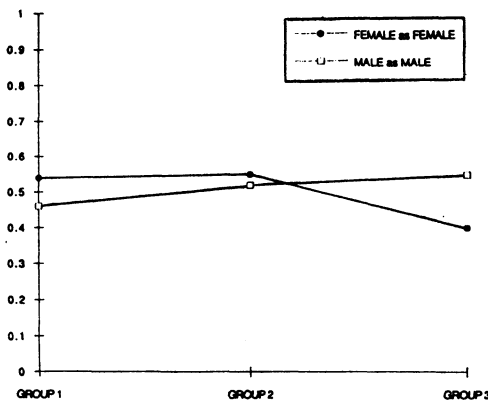


Figure 1- Percentage of Foregrounded Utterances in Natural Narratives

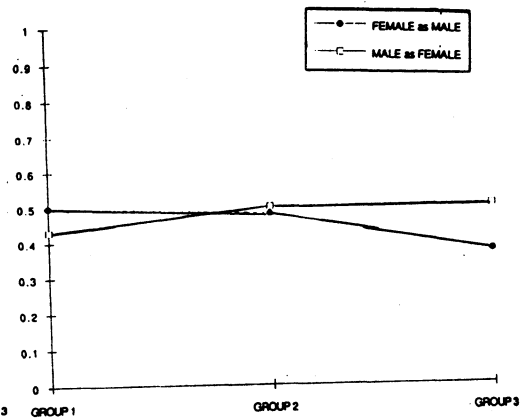


Figure 2- Percentage of Foregrounded Utterances in Simulated Narratives

In summary, the expected result would be a negative slope, from the younger to the older children. The females' narratives follow the expected pattern with a pronounced difference between Group 2 and 3. In other words, as the females age, they provide more background information, thereby lowering their percentage of foregrounded utterances. Conversely, males only alter their behavior slightly with age.

The subjective state measure was used to examine the subjects' mention of subjective state. Means for each group under both the natural and simulated conditions were calculated and compared (refer to Table 4 below).

Table 4- Mean Percentage of Subjective State Mention for Natural and Simulated Narratives by Age and Sex

Group	Natural	Simulated	Group	Natural	Simulated
1-Females	19.0	22.5	2-Males	24.5	26.1
1-Males	24.4	27.4	3-Females	38.1	39.5
2-Females	24.5	28.8	3-Males	29.0	30.0

In the second telling (the simulated narratives), there was a slight increase in Subjective State Mention by both sexes. This may be an effect of the rehearsal factor mentioned previously or it may be accounted for by the fact that the narrator expends more energy getting inside the motivation of the story and less energy making it lexically interesting. Nevertheless, both LDM and SSM seem like they should be linked factors although comparable increases in both sexes' values were not found. As SSM increased, LDM decreased for the female subjects. Conversely, although the male subjects showed no significant differences over age groups for SSM, in fact, this value dipped in the Group 2 males, they did show a modest increase in LDM developmentally speaking, although these increases were mainly significant between the Group 1 and Group 3 males. The females showed no significant increase developmentally speaking for either telling of the narrative.

In summary, as the females aged, they increased their use of subjective state mention, whereas the males only marginally increased their SSM with age. It was noted that both males and females had a slightly elevated SSM in their simulated narratives. This effect could be attributed to a number of things such as familiarity with the task, changing the focus of output energy (from LDM to SSM for simulated narratives, etc.).

4. Conclusions

It takes a number of years, well into late childhood or even early adolescence, before a child's personal rhetorical style or command of narrative is mastered, to say nothing about use of genderlect. Some of the factors that were examined in the current study are very narrow morphosyntactic and pragmatic factors that may be more difficult to tap into and consciously manipulate in role-playing situations. Moreover, they may have little to do with marking genderlect. In any case, differential performance on only two supposedly "gendered" factors, percentage of foregrounded utterances and SSM, was the only finding that conformed at all to gender stereotypic predictions. Even so, sex-based differences for these measures only arise in the older females.

First and foremost, it involved a guided rather than a free narration. By controlling the general content and length of the story that each child told, I was able to examine children's production of gender differences in narrative style focusing on quite different parameters than the Goldilocks study (reported in McEwen, Hoff, Schneider, & LeBlanc 1995). In this study I focused on length of narrative, lexical diversity, use of foregrounded utterances, and mention of subjective state. It was generally observed that children were unable to change the values of these factors when they tried to effect the genderlect of the opposite sex. Although some of the findings may be attributed to a gendered effect (e.g., SSM and Percentage of Foregrounded Utterances for the girls and surprisingly a slight increase in LDM for the males), these effects may more plausibly be attributed to an age-by-sex difference. These effects were not consistent across age or sex nor did they show developmental trends, generally, except in the older girls.

There are a number of possible explanations for the generally negative results. It could be that the parameters under study have little bearing on genderlect differences. It could also be the case that the factors were correct but the assessment and coding of hits and misses was not sufficiently refined. It might also be the case that children were unable to do the requested task. Instead of retelling a story as a member of the opposite sex, their second narration of the One Frog Too Many story may have been simply that-- a second rehearsal. By reexamining the audiotapes and assessing them on articulatory parameters as done with the pilot study (cf. McEwen 1996), I might be able to ascertain whether or not the participants indeed tried to sound/talk like a member of the opposite sex. Another factor that may have led to the rather weak gender effects (though

some evidence of developmental effects) was the controlled nature of the story. For example, the children may have focused their cognitive energy more on narrative production, than on the required task as the pictures were always available.

A number of other studies can be profitably explored using the age and gender-segregated database compiled as part of the One Frog Too Many project. This database is comprised of audiotape recordings and partially coded transcriptions for 60 children from ages 6;3 to 15;2. This database could be used to replicate the study reported on in McEwen 1996 which focused on articulatory factors that did seem to be associated with gender both in terms of production differences and metalinguistic awareness of those differences. Upon examination of the current findings, it is possible that gender only resides in articulatory factors affecting speech patterns such as pitch, rate, intonation, etc. These are certainly the most salient aspects of both an individual's idiolect and a speaker's dialect.

A second line of research using this database could be an exploration of children's development of narrative competence. A number of studies have been devoted to this as of late (cf. Berman and Slobin (eds.) 1994, Bamberg 1987). Although these studies have tended to focus on cross-linguistic narrative development, the present database is compatible in that it used a similar set of probe stimuli, comparable methodologies, and also elicited children's narratives through story-telling from a picture book. The present database can easily be annotated for the linguistic factors under analysis in these previous studies. While none of these studies partitioned subjects' responses on the basis of gender, my database is balanced for both age and gender, and features a healthy N of 20 in each group.

In McEwen, Hoff, Schneider, & LeBlanc (1995), it was suggested that metalinguistic awareness of gender is outpaced by children's actual linguistic behavior. They found that subjects were able to make some articulatory differences such as pitch, intonation, and loudness changes in their simulated narratives. However, the children were unable to explain many of the changes that they had made. They concluded that children may be metalinguistically aware of some of the more pronounced stereotypical gendered speech patterns as early as age 6. The results of the study discussed above did not yield similar results. Differences in the targeted gender-associated stereotypic behaviors were not found. This may lead one to conclude that gender differences in language may be manifested primarily at the articulatory level. Children may only be able to manipulate factors such as rate, intonation, and loudness when gender role-playing, at least until the onset of puberty. In the One Frog Too Many study, a task effect may explain the lack of gendered-effects, in that the children focused more on the pictures rather than the experimenter's request for a simulated narrative.

The two studies reported here were designed to test for the most stereotypic gender differences (e.g., pitch, rate, loudness, lexical diversity, mention of subjective state, etc.). While articulatory differences between the two sexes' natural and simulated narratives were observed (and even some conscious awareness of such differences were exhibited by test subjects) in the first study, the results from the One Frog Too Many study looking into linguistic differences failed to find much direct evidence of gendered language use either consciously or unconsciously. The differences that were there (Percentage of Foregrounded Utterances, SSM, and LDM) were age-dependent and were not apparent between the sexes for all age levels. The results of the two studies seem to indicate that both production and awareness of gender differences in language and speech only begin to solidify in late childhood or early adolescence and only for a small set of factors/variables. However, this does not preclude the fact that children are not aware of the differences earlier (cf. McEwen, et. al, 1995). Children might have genderlect sensitivity in terms of comprehension, but this metalinguistic awareness is not manifested in their own narrative production until late childhood. As is typical with most facets of language, comprehension precedes production. Genderlect distinctions may not be socially relevant in children's lives, and consequently their narratives, until they are more socially aware (late childhood or early adolescence) of the biological factors of sex differences.

Endnote

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