ABSTRACT

        This study examined the stereotypes held by American
native English-speaking students at the Monterey Institute of
International Studies (MIIS) about gender and language. Captions from
14 cartoons in 1993 issues of "The New Yorker" magazine were used to
elicit subjects' stereotypes. The issue of whether there would be a
difference between male and female subjects with respect to the
frequency with which they assigned a particular gender to the speaker
of each caption was researched, as well as the reasons they gave for
their decision to assign a particular gender to the speakers. Only
those cartoons in which there were two adult characters and one line
of speech were used. Using a two-way Chi-square, the researchers
analyzed feedback from the subjects (n=20) based on a form on which
the cartoon captions were listed. The subject responses were also
analyzed in terms of the reasons that they gave for assigning a
particular gender to each caption. In only one case was a
statistically significant difference found for the frequency with
which subjects assigned a particular gender to the speaker of a given
caption. Some stereotypes held by both men and women about the way
different genders use language were unexpected. Appended is the test
instrument, chi-square calculations on frequency of gender, choice of
speaker, and speaker choices. (Contains 11 references.) (CK)

A STUDY ON GENDER AND LANGUAGE:

CONVENTIONS OF PERCEPTION AND USE
IN A GRADUATE SETTING

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The connection between gender and language has become a focus of sociolinguistic research, particularly over the past 25 years. Researchers have been exploring the link between the roles that men and women play in society and particular features of their language, such as discourse, lexicon, syntax, phonology, and content. The present researchers feel that a central issue is the extent to which people's generalizations and predictions about language and gender are actualized in the real speech of men and women.

As observed by Poynton (1989), there are many different stereotypes about the ways that men and women speak in our society. Admittedly these are constantly evolving and vary between individuals and between subcultures; and yet, despite the variety, the literature reveals that certain broadly held stereotypes do exist:

> ...women speak 'better' (more 'correctly' and with
> more 'refined' accents) than men; men swear and use
> slang more than women; women and men talk about
> different things; men tell jokes and women can't;
> women can smooth over difficult social situations;
> and men find this more difficult. (Poynton, 1989, p.67)

These stereotypes might spring from deeply ingrained assumptions which are based on the roles which men and women have historically played; men as the agents of power and aggression, and women operating in domestic and emotional spheres. Early sociologists (Balswick and Peek, 1971, in Thorne, Kramarae and Henley, 1983) attributed male behaviors such as an inability to show affection, tenderness, or vulnerability to socialized requirements for masculinity, while later sociologists drew a link between masculinity and a prescribed achievement/reward system based on power (Sattel, 1983, in Thorne, Kramarae and Henley,

1983). "Male" language has thus been seen as a reflection of traditional roles assigned to men in society.

Much research has been done on men's and women's speech which addresses (supporting or refuting) some of the stereotypes mentioned above while bringing to light new insights about the relationship between gender and language. Researchers have isolated certain features of language in order to differentiate between men's and women's speech. These features can fall into the categories of, for example, discourse, lexicon, grammar, and phonology.

While discourse does not play a role in our study (given that only one speaker's utterances -- as opposed to a dialogue or conversation -- are presented for analysis), it nevertheless has been a focus of gender-based research on various aspects of interaction, such as interruptions, topic nomination/rejection, backchannelling, conversation initiation, and speech act choice and realization (Poynton, 1989). An example of documented speech act choice and realization would be men's more frequent use of commands than women's, and their tendency to express these by using the imperative ("Shut the door."). Women's less frequent use of commands tends to be expressed through the use of interrogatives ("Would you mind shutting the door?") (Brown and Levinson, 1978, in Poynton, p.71). This serves to soften the force of the statement, reinforcing a common stereotype that women tend to be more polite than men.

According to research, men and women tend to make different choices in certain lexical domains. Men have been observed to swear and use slang more than women (Keesing, 1982, in Poynton, p.73), reinforcing the stereotype that men are more assertive/agressive than women. (Edelsky, 1976, in Smith, p. 150). Women, on the other hand, use euphemisms (Lakoff, 1977, in Smith, p. 149) in order to avoid discussing certain topics or using certain words. Furthermore,

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women use politeness markers more than men do (e.g. please, thanks) (in Poynton, p. 73) and use evaluative adjectives (e.g. wonderful, gorgeous) which Kramer (1974) describes as instrumental in "flowering up their remarks" (p. 84, in Psychology Today). These lexical choices serve to reinforce the stereotypes of women operating out of feeling or emotion.

A number of significant grammatical variations have been found which differentiate male and female speech. Women have been observed to use more tag questions (e.g. "It's a nice day, isn't it?") (Lakoff, 1975, in Poynton, p. 71), and modals (e.g. "I was wondering if you could do me a favor.") (Lakoff, 1977, in Smith, p. 148-9) than men. Both of these syntactic choices have the effect of lessening the impact of what is being said. Again, this supports the stereotype that women are both more polite and more deferential to others than men. Further grammatical differences have been found with regards to the use of possessive construction; boys were found to use possessives (my, your, hers, his, my father's, etc.) more than girls (Haas, 1979 in Poynton, 1989, p. 72). This, in our view, supports a commonly held stereotype that men define themselves in terms of their material possessions.

As with discourse, phonology does not play a role in our study. Nevertheless, research in phonology has revealed support for perceived differences in the ways men and women speak. While not always the case, it has been found that women tend to use more prestigious and cultivated forms in their speech than men, such as the tendency for women to pronounce participle forms ending in -ing with /n/ rather than /n/ (Poynton, 1989). Furthermore, women have been found to display a more dynamic range of pitches, with utterances frequently ending in rising intonation (McConnell-Ginet, 1978, in Poynton, p. 73). As rising intonation generally indicates a question, (while falling intonation indicates a firm statement), women's frequent use

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of this pattern might support the commonly held assumption that women are less sure about themselves and their opinions than men. As with discourse, phonology does not play a role in our study.

One area of research which has shown significant differences in perceptions of language use by men and women is in the area of topic choice. In her study on perceived stereotypes, Kramer (1974) examined the topics of conversation in cartoons from The New Yorker magazine and found that men discuss topics such as business, politics, legal matters, taxes and baseball. Women's topics of discussion include, among others, social life, food, age, and life-style. The results of Kramer's study revealed that the subjects, when asked to identify speakers of captions, associated these same topics with the corresponding gender. Another study supports these findings, revealing that typical topics of female talk involve self, feelings, affiliation with others, home and family (Aries, 1976 in Smith, 1985).

As evidenced by this summary, the research on gender and language has revealed many links between the kinds of stereotypes people hold about the sexes and the kind of language they actually use. The intent behind our study was to further illuminate the existing findings. Above all, we hoped to seek new insights into the dynamic link between perceptions and actual use of language for our particular subject population.

TOPIC AND RATIONALE

The topic of this study was an examination of the stereotypes held by American native English-speaking students at the Monterey Institute of International Studies (MIIS) about gender and language. We used captions from cartoons in 1993 issues of The New Yorker magazine as

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the language medium through which to elicit subjects' stereotypes. We were interested in finding out the reasons subjects would give for attributing a certain gender to the speaker in each caption, and whether those reasons were in any way related to the subjects' genders. The reason for selecting cartoon captions from The New Yorker as our medium was primarily to ensure consistency of data. We selected captions which were consistent with respect to form (one-liners from cartoons with dyads), content (social commentary), and the audience to which they cater (elite, intellectual and politically aware), and then we separated the captions from their corresponding illustrations. We were not concerned with whether the subjects' choices matched the gender of the actual speaker in the cartoon. Although we did not intend to draw any definite conclusions about MIIS students, we suspected that MIIS students would resemble the audience at which The New Yorker is directed, in terms of education, social class and political orientation.

RESEARCH QUESTIONS

We had two primary research questions. First, we were curious to know if there would be a difference between male and female subjects, with respect to the frequency with which they assigned a particular gender to the speaker of each caption. Second, we wanted to discover what reasons native English-speaking MIIS students would give for their decision to assign a particular gender to the speakers in the cartoon captions which we presented to them.

THE STUDY

For the first stage of the study our formal hypothesis was as follows: There will be no statistically significant difference in the frequency with which male and female subjects assign a

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particular gender to the speaker of any given caption. Although research on gender and language using cartoons from The New Yorker has been previously conducted (Kramer, 1974), the focus of our research is sufficiently different so as to discourage us from making a directional hypothesis. The second stage in our study entailed compiling the descriptive data and looking for patterns in the reasons subjects gave for assigning a particular gender to a caption. Because this did not necessitate a statistical test, no hypothesis was needed.

Our discussion of the variables in this study will refer only to the Chi-square analysis in the first stage of our research. The two variables are: 1) the twenty student subjects (divided into two distinct groups of male and female) and 2) the judgment made regarding the gender of the speaker of each caption: a) male b) female or c) impossible to decide. The independent variable is the gender of the subjects who are participating in the study. This variable has two levels: **male** and **female**. The dependant variable will be the choices that subjects make regarding the speakers in the cartoon captions. This variable will have three levels: **male, female,** and **impossible to decide.**

In order to ensure consistency of data, we selected only those cartoons in which there were two adult characters. This was to avoid language which could be identified as belonging to children, as well as language associated with large-group discourse. Because the focus of our study was not on interactive dialogue but on single utterances taken out of context, we also controlled against cartoons with more than one line of speech. This helped to maintain simplicity, both for the subjects and the researchers. We selected 14 cartoons (7 with captions uttered by men and 7 with captions uttered by women) from 11 issues published during a limited

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time period (between the months of September and December, 1993) so as to control against the influence that different time periods could have on the content of the cartoons.

SUBJECTS

The subjects for this study were 10 male and 10 female American native English-speaking Monterey Institute graduate students in their mid-20s to mid-30s. Subjects were selected from a variety of MIIS programs, excluding TESOL and TFL. We decided to exclude these two programs because we wanted to control for subjects with high levels of sensitivity to language variation. The subjects were contacted directly by the researchers.

DATA COLLECTION AND ANALYSIS

The data of this study was the feedback the researchers collected from the subjects based on the data collection instrument (Appendix A). The instrument was a form on which the cartoon captions were listed. Subjects were unaware that the quotations on the form were cartoon captions, and no information concerning their origins was given. Subjects were asked to designate a gender to each caption, and to specify their reasons for their choice in written form. An 'impossible to decide ' option was offered.

A two-way Chi-square was used to tabulate the frequencies with which male versus female subjects identified a given gender (or selected "impossible to decide") for the speaker of each caption.

The subject responses were also analyzed in terms of the reasons that they gave for assigning a particular gender to each caption. Subjects' reasons were documented separately for each caption and examined for patterns common to males, females, or both genders.

RESULTS

After analyzing the frequency with which male and female subjects assigned a particular gender to the speaker of a given caption, in only one (out of fourteen) cases was a statistically significant difference found (see appendix B, Chi-square calculation for caption #12). While we were only looking for significance with respect to gender choice, we suspect that the significance for this one item might have been caused by the fact that so many of the male subjects' selections fell into the category of 'impossible to decide,' which was not of interest to our study. This trend amongst the male subjects contrasted with the trend shown by female subjects of largely selecting one particular gender (female) (See Appendices B and C).

This lack of overall significance reveals that there were almost no patterns to distinguish the male and female subjects with regard to frequency in their choice of gender. Given the small scale of our study and a lack of significant trends in our data, we feel that we cannot make any generalizable inferences from this part of our analysis.

The second stage of our study was exploratory, and revealed many interesting patterns in the reasons that our subjects gave for assigning a particular gender to each caption. As we discuss these findings, we will define a pattern as consisting of two or more tabulations of the same reason for a particular gender assignment. We will only mention the 'impossible to decide' choice as a pattern when a disproportionate number of subjects selected it over the other options.

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Our analyses often revealed patterns unique to just one of the subject genders, while at other times both genders gave similar reasons. Following each reason, in parentheses, we will include the frequencies with which a reason was given and the number of times a specific gender gave that reason (e.g. (F=2) indicates that two female subjects offered a common reason).

The nature of the reasons given were extremely varied and caption-specific. Because of this, and because the reasons were offered in many different forms (opinions, declarative sentences, brief associations, etc.), we analyzed . · · ita through summary and interpretation. Our judgments were therefore necessarily subje: . nd we realize that this may lend our own particular slant to the results. Also, because of the variety that we found, we have decided to discuss each of the fourteen captions individually.

Caption 1: **"I do have a fallback position, but it involves firearms."** A very clear pattern was that both male and female subjects associated the word 'firearms' with weapons in general, and overwhelmingly this was seen as a male domain/topic (F=4; M=8). More women extended this to characteristics of violence and aggression, both seen as male qualities (F=4).

Caption 2: **"Not tonight, hon. It'll just wreak havoc with the motion sensors again."** Both male and female subjects attributed the mechanical, technical language (e.g. motion sensors) in this caption to a male speaker (F=3; M=4). Male subjects read the caption as a man's excuse to a woman for not wanting to have sex (M=3).

Caption 3: **"My mother sends you her remorse."** Some male and female subjects felt that the caption was unemotional and impersonal and that these are male qualities (F= 2; M=2). Other men and women saw the speaker of the caption as openly expressing feelings and in tune with emotions, all associated as 'female' qualities (F=2; M=1).

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Caption 4: "Thank-you so much for inviting me to play a pivotal role in your marriage. What am I to do, exactly?" Some men and women saw this speaker as a woman, attributing the topic of weddings and negotiations of interpersonal issues to women (F=1; M=2). Other men and women interpreted the language of the caption as being 'distanced' or 'impersonal' (but did not specifically elaborate) and associated these overtones as male (F=1; M=1). Several men interpreted the language as 'sarcastic' and attributed this to a female speaker (M=3). Some female subjects felt that this utterance involved the speaker asking for instructions and wanting to discuss the situation before acting on it, and these strategies were seen as female (F=2).

Caption 5: "I used to be in advertising. remember 'Buy this, you morons'? That was mine." Several men and women judged the language used in the slogan 'Buy this you morons' as condescending and insulting and associated these features with a male speaker (F=5; M=2). Additionally, some male and female subjects associated the profession of advertising with the male gender, and so determined the speaker to be male (F=1; M=2). Several females described the speaker as 'boasting,' 'taking credit,' or 'showing ownership of ideas,' all of which implied male-ness to them (F=3).

Caption 6: "I think it might help us to understand one another better if you waited on me hand and foot for a while." The majority of men and women perceived this speaker as a woman, for three similar reasons. First, this utterance was seen as a sarcastic and bitter response from a woman to her husband, coming out of feelings of being disrespected and unacknowledged by him (F=2; M=1). Second, this woman was seen as seeking understanding from her partner, a relationship role subjects attributed to females (F=2; M=2). Finally, this utterance represented a

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despairing, weary complaint about a woman's role as the care-taker in the relationship (F=1; M=1). Again, this kind of role was seen by the subjects as pertaining to women.

Caption 7: **"I used to exult in my wonderful view of Central Park, but now, somehow, I'm beginning to feel that Central Park is staring back at me!"** The major pattern here both for male and female subjects was that this was a woman expressing her insecurity in terms of threats to her physical safety (F=1; M=3). Also, the perception by both men and women that this was a female related to their view of females as being more emotive and expressive (F=2; M=1). Interestingly, many women and men could not decide on the gender of this speaker (F=5; M=6).

Caption 8: **"Sure we need affordable housing--just so long as it doesn't come at the expense of unaffordable housing."** Many male subjects were unable to decide on the gender of this speaker (M=8). All remaining males, as well as all those females who were able to decide, selected male as the gender of the speaker. Two patterns emerged; according to the women, this speaker was neither compassionate nor emotionally involved -- traits that they associated with men (F=3). Among both male and female subjects, this utterance was seen as practical and rational, also perceived male personality traits (F=1; M=1).

Caption 9: **"They're just late-night talk shows honey. It's not a real war."** Both men and women felt that because the content of this utterance concerned war, the speaker was necessarily male (F=1; M=4). Also, men and women interpreted the tone of this statement as male; some felt the tone to be reassuring (F=2; M=1), others thought it to be patronizing (F=1; M=3). Interestingly, the word 'honey' was a reason for gender choice; one male felt that a

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woman was using the word as a witticism, while one female saw this as a typically male term of endearment.

Caption 10: **"President Clinton's new health plan will make Americans stop feeling so bad-tempered and mean and rotten all the time, and then the pussycats will all be very, very happy ever after."** Male subjects thought this was a woman because of the 'flowery language' used. Specifically, the words "mean," "rotten," and "pussycats" conjured up feminine images (M=4). Female subjects, on the other hand, perceived the speaker as sounding maternal, and therefore as female (F=2).

Caption 11: **"My people will be in touch with your people."** Both genders believed this speaker to be male for the same reasons. Some of the subjects felt that the language was business-related in tone and content, and they associated this with the male gender (F=2; M=3). Others felt that the utterance indicated that the speaker held a position of power -- again a domain commonly associated with men (F=2; M=2).

Caption 12: **"It's the kids! Quick! Stash the cigs!"** The majority of the male subjects could not decide on the gender of this speaker (M=7). The remaining men, as well as several women, viewed the word "cigs" as slang, which they felt a more male means of expression (F=2; M=1). A pattern found among the female subjects was that the speaker's concern for the 'kids' shows maternal tendencies (F=4).

Caption 13: **"If the Yankees move to New Jersey, will you be going too?"** Some men and women believed that this speaker was a woman sarcastically accusing or teasing a man about his baseball fetish (F=1; M=5). While in this case, the choice of the speaker as a woman was connected to the perceived sarcastic tone, the sports theme influenced other subjects to determine

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the gender differently. Several women automatically determined sports as a male-dominated topic, thus choosing male as the speaker's gender (F=4). Several male subjects, viewing men as authorities on baseball, felt that only a woman would ask such an 'uninformed' question (M=4).

Caption 14: **"What do you mean, you're getting cold feet? We've been married six years."** The overwhelming tendency for subjects of both genders was to assign the gender of this speaker as female. The concepts of 'cold feet' and an inability to commit to relationships were given as the predominant reasons, associated always with men (F=5; M=3).

Our data has revealed some patterns which reflect or are similar to the perceptions of male and female speech found in the above literature review. Topic has been seen as a significant area of difference between the genders. Several topics attributed by our subjects to the male gender included weapons (caption 1), technology (caption 2), the advertising profession (caption 5), war (caption 9), business (caption 11), and sports (caption 13). Other topics were viewed as more female-related. These were: feelings (captions 3 and 7) and social relations (caption 4). Previous research has also pointed to the differential use of lexicon by men and women. This was supported in our data by the perception of the use of slang (caption 12) as male and the use of 'flowery' and maternal words (caption 10) as female. From our data we found three other perceived male traits which parallel those previously found in gender and language research. These are: the desire to show possession (caption 5), the inability to show compassion (caption 8) and the display of power (caption 11). Clearly, our study does reinforce some trends discovered in previous research.

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Still, we did discover several patterns which were not in the literature. Reasons given by female subjects tended to be more evaluative in nature. Specifically, women were critical of men and praising of women. Men also were critical of men and while we found these patterns interesting, we were not entirely surprised by them. The 'politically correct' atmosphere prevalent on the MIIS campus combined with the fact that the researchers are female may have swayed the responses in favor of women. Another interesting finding was that female subjects tended to interpret the language of the captions more literally than men, who tended to infer the illocutionary intent of the utterances. This was best exemplified by captions 4 and 13 (seen by men as sarcastic comments) and caption 2 (seen by men as an excuse).

IMPLICATIONS

Many stereotypes are held by both men and women about the way different genders use language. This study showed us that while we may have predicted some stereotypes, others were unexpected. The implications of our unexpected findings are that as teachers, we must approach attitudes through the collection and analysis of data, not by relying on our preconceived assumptions.

By discovering actual attitudes in this way, we dispel our own unfounded assumptions and portray the way people use and view language more accurately to our students. While this study is not immediately relevant to the low level ESL class, it is pertinent to students at more advanced levels. Gaining knowledge of the subtle conventions in the ways language is used and perceived can help these students hone their sociolinguistic sensitivity and competence.

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I am a   ___ male   ___ female. (check one)

     Below is a list of quotes. After you read each quote, please decide whether you think the speaker is a male or a female. Then, describe in as much detail as possible your reasons for your choice.
     Please try to rely on your first gut impression as you choose and give your reasons. Don't worry about being evaluated as "right" or "wrong." Feel free to write anything that comes to mind. Just try to be as honest as you can.

1. "I do have a fallback position, but it involves firearms."

a) ___ male   ___ female   ___ impossible to decide

b) Why?

2. "Not tonight, hon. It'll just wreak havoc with the motion sensors
    again."

a) ___ male   ___ female   ___ impossible to decide

b) Why?

3. "My mother sends you her remorse."

a) ___ male   ___ female   ___ impossible to decide

b) Why?

4. "Thank you so much for inviting me to play a pivotal role in your
    marriage. What am I to do, exactly?"

a) ___ male   ___ female   ___ impossible to decide

b) Why?

5. "I used to be in advertising. Remember 'Buy this, you morons'? That was mine."

a) __ male   __ female   __ impossible to decide

b) Why?

6. "I think it might help us to understand one another better if you waited on me hand and foot for a while."

a) __ male   __ female   __ impossible to decide

b) Why?

7. "I used to exult in my wonderful view of Central Park, but now, somehow, I'm beginning to feel that Central Park is staring back at me!"

a) __ male   __ female   __ impossible to decide

b) Why?

8. "Sure, we need affordable housing--just so long as it doesn't come at the expense of unaffordable housing."

a) __ male   __ female   __ impossible to decide

b) Why?

9. "They're just late-night talk shows, honey. It's not a real war."

a) __ male   __ female   __ impossible to decide

b) Why?

10. "President Clinton's new health plan will make Americans stop feeling
    so bad-tempered and mean and rotten all the time, and then the
    pussycats will all be very,very happy ever after."

a) __ male   __ female   __ impossible to decide

b) Why?

11. "My people will be in touch with your people."

a) __ male   __ female   __ impossible to decide

b) Why?

12. "It's the kids! Quick! Stash the cigs!"

a) __ male   __ female   __ impossible to decide

b) Why?

13. "If the Yankees move to New Jersey, will you be going too?"

a) __ male   __ female   __ impossible to decide

b) Why?

14. "What do you mean, you're getting cold feet? We've been married six
    years."

a) __ male   __ female   __ impossible to decide

b) Why?

APPENDIX B: CHI-SQUARE CALCULATIONS ON FREQUENCY OF GENDER CHOICE OF SPEAKER

CAPTION 1

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	9=fexp	10=fobs	0=fexp	0=fobs	1=fexp	0=fobs	10
Female Subjects	9=fexp	8=fobs	0=fexp	0=fobs	1=fexp	2=fobs	10
Totals	18		0		2		20

$\alpha = .05$

df (degrees of freedom) = 2

χ obs = 2.222

χ crit = 5.9915

CAPTION 2

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	5.5 =fexp	7=fobs	1.5=fexp	1=fobs	3=fexp	2=fobs	10
Female Subjects	5.5=fexp	4=fobs	1.5=fexp	2=fobs	3=fexp	4=fobs	10
Totals	11		3		6		20

$\alpha = .05$

df (degrees of freedom) = 2

χ obs = 1.8176

χ crit = 5.9915

CAPTION 3

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	3.5=fexp	3=fobs	2.5=fexp	2=fobs	4=fexp	5=fobs	10
Female Subjects	3.5=fexp	4=fobs	2.5=fexp	3=fobs	4=fexp	3=fobs	10
Totals	7		5		8		20

$\alpha = .05$

df (degrees of freedom) = 2

χ obs = .8428

χ crit = 5.9915

CAPTION 4

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	2.5=fexp	2=fobs	5=fexp	6=fobs	2.5=fexp	2=fobs	10
Female Subjects	2.5=fexp	3=fobs	5=fexp	4=fobs	2.5=fexp	3=fobs	10
Totals	5		10		5		20

$\alpha = .05$

df (degrees of freedom) = 2

χ obs = .8

χ crit = 5.9915

CAPTION 5

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	8=fexp	6=fobs	5=fexp	1=fobs	1.5=fexp	3=fobs	10
Female Subjects	8=fexp	10=fobs	.5=fexp	0=fobs	1.5=fexp	0=fobs	10
Totals	16		1		3		20

$\alpha = .05$

df (degrees of freedom) = 2

χ obs = 5

χ crit = 5.9915

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CAPTION 6

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	1.5=fexp	1=fobs	5=fexp	4=fobs	3.5=fexp	5=fobs	10
Female Subjects	1.5=fexp	2=fobs	5=fexp	6=fobs	3.5=fexp	2=fobs	10
Totals	3		10		7		20

$\propto = .05$

df (degrees of freedom) = 2

χ obs = 5.020

χ crit = 5.9915

CAPTION 7

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	.5=fexp	0=fobs	4=fexp	4=fobs	5.5=fexp	6=fobs	10
Female Subjects	.5=fexp	1=fobs	4=fexp	4=fobs	5.5=fexp	5=fobs	10
Totals	1		8		11		20

$\propto = .05$

df (degrees of freedom) = 2

χ obs = 1.0909

χ crit = 5.9915

CAPTION 8

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	4=fexp	2=fobs	.5=fexp	0=fobs	5.5=fexp	8=fobs	10
Female Subjects	4=fexp	6=fobs	.5=fexp	1=fobs	5.5=fexp	3=fobs	10
Totals	8		1		11		20

$\propto = .05$

df (degrees of freedom) = 2

χ obs = 5.2726

χ crit = 5.9915

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CAPTION 9

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	7=fexp	7=fobs	2=fexp	2=fobs	1=fexp	1=fobs	10
Female Subjects	7=fexp	7=fobs	2=fexp	2=fobs	1=fexp	1=fobs	10
Totals	14		4		2		20

∝ = .05
df (degrees of freedom) = 2
χ obs = 0
χ crit = 5.9915

CAPTION 10

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	1.5=fexp	2=fobs	3.5=fexp	4=fobs	5=fexp	4=fobs	10
Female Subjects	1.5=fexp	1=fobs	3.5=fexp	3=fobs	5=fexp	6=fobs	10
Totals	3		7		10		20

∝ = .05
df (degrees of freedom) = 2
χ obs = 3.876
χ crit = 5.9915

CAPTION 11

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	6.5=fexp	7=fobs	.5=fexp	0=fobs	3=fexp	3=fobs	10
Female Subjects	6.5=fexp	6=fobs	.5=fexp	1=fobs	3=fexp	3=fobs	10
Totals	13		1		6		20

∝ = .05
df (degrees of freedom) = 2
χ obs = 1.0768
χ crit = 5.9915

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CAPTION 12

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	1.5=fexp	1=fobs	4=fexp	2=fobs	4.5=fexp	7=fobs	10
Female Subjects	1.5=fexp	2=fobs	4=fexp	6=fobs	4.5=fexp	2=fobs	10
Totals	3		8		9		20

$\alpha = .05$
df (degrees of freedom) = 2
χ obs = 8.117
χ crit = 5.9915

CAPTION 13

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	2.5=fexp	0=fobs	5.5=fexp	8=fobs	2=fexp	2=fobs	10
Female Subjects	2.5=fexp	5=fobs	5.5=fexp	3=fobs	2=fexp	2=fobs	10
Totals	5		11		4		20

$\alpha = .05$
df (degrees of freedom) = 2
χ obs = 7.2726
χ crit = 5.9915

CAPTION 14

	Male Speaker		Female Speaker		Impossible to Decide		Totals
Male Subjects	1.5=fexp	2=fobs	6=fexp	4=fobs	2.5=fexp	4=fobs	10
Female Subjects	1.5=fexp	1=fobs	6=fexp	8=fobs	2.5=fexp	1=fobs	10
Totals	3		12		5		20

$\alpha = .05$
df (degrees of freedom) = 2
χ obs = 3.4668
χ crit = 5.9915

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APPENDIX C: SPEAKER CHOICES

CAPTION NUMBER	MALE SUBJECT			FEMALE SUBJECT		
	Male Speaker	Female Speaker	Impossible to decide	Male Speaker	Female Speaker	Impossible to decide
1	10	0	0	8	0	2
2	7	1	2	4	2	4
3	3	2	5	4	3	3
4	2	6	2	3	4	3
5	6	1	3	10	0	0
6	1	4	5	2	6	2
7	0	4	6	1	4	5
8	2	0	8	6	1	3
9	7	2	1	7	2	1
10	2	4	4	1	3	6
11	7	0	3	6	1	3
12	1	2	7	2	6	2
13	0	8	2	5	3	2
14	2	4	4	1	8	1

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