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WHEN WOMEN'S IDEAS ARE MISATTRIBUTED TO MEN: THE EFFECT OF
GENDERED LANGUAGE AND ARGUMENT QUALITY ON MISATTRIBUTIONS
OF DISCUSSION CONTRIBUTIONS

ALYSSA P. SIMON
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Reviewed and approved* by the following:

Theresa K. Vescio
Associate Professor of Psychology
Thesis Supervisor

Rick R. Jacobs
Professor of Psychology
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

Previous research has established that men and women speak in distinctly different ways, such that women speak tentatively and men speak directly (Carli, 1990). Gender differences in speech patterns have led to stereotypes and expectations regarding the ways in which comments are presented by men and women. While research shows that tentatively stated, or stereotypically female, ideas are associated with higher numbers of source recognition errors, the goal of the present study is to understand the relationship between gender and the misattribution of arguments. I hypothesized that 1) tentative arguments will be less well remembered and 2) tentatively stated high-quality arguments would be more frequently attributed to men than women. To test predictions, participants saw a discussion of the benefits of a tuition hike, where the language (tentative or direct speech) and gender of the speakers were crossed. Following the discussion, participants rated each discussant on competence and warmth prior to completing a recognition task requiring that discussion contributions be matched with the speaker who presented the contribution. Consistent with predictions, tentative speakers were perceived as less competent. Also consistent with predictions, contributions that were stated tentatively and contributions stated by women were less well remembered. But findings did not support the prediction that ideas would be more likely to be misattributed to male than female speakers. The implications of these findings are discussed and subsequent research is considered.

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Chapter 1

Introduction

Throughout history, it is very clear that there are many differences between men and women. Some of these differences are clearly visible (e.g., appearance, behaviors, tone of voice, etc.) and others require an interaction to become apparent. For example, we see the use of gender through everyday language, some of which is gender-exclusive. Gender-exclusive language includes the use of “he” instead of the gender-neutral “you,” which has been shown to make women feel unwelcome in professional settings (Stout & Dasgupta, 2011). Some of the differences in behaviors between men and women have even led to gender stereotyping. Because of this, men and women are often expected to act in a certain way, regardless of whether the stereotype is actually accurate. While some stereotypes are not accurate, others might actually be based on reality.

One difference between men and women that is clearly apparent is differences in their speech patterns and interactions. Gender differences in speech patterns are apparent by early childhood. Among children, boys tend to use more assertive language than girls (Leaper & Smith, 2004). Research also shows that when experimenters spoke with primary school age children in either male- or female-preferential language styles, meaning that the experimenters spoke in stereotypic male or female styles, the children changed their speaking styles in accordance with the experimenter’s male or female speaking style (Robertson, & Murachver, 2003).

The goal of the present work is to examine the possibility that female speech patterns result in poorer memory, such that women who present high quality ideas but speak in stereotypically female ways may have their contributions to a group discussion misattributed to men. In order to consider this research question I first will review prior research and theory on male versus female speaking styles. Next, I will review the relationship between memory and tentative language by discussing the research that inspired this work. I then will present the ways in which gendered speech as well as the relationship between tentative language and memory inspire my hypotheses and research.

Gendered Speech

Men and women exhibit different patterns of speech. The specific speaking style characteristic of women is referred to as the “female register” and this idea was first explored in Lakoff’s research (Crosby & Nyquist, 1977). There are 6 main characteristics of the female register, which together create a very nonassertive, polite and expressive speaking style. These include the use of (1) lexical words (e.g. using “mauve” instead of “purple”), (2) empty or meaningless adjectives (e.g. cute, divine, etc.), (3) tag questions and question intonation when making declarative statements (e.g. “it’s a nice day, isn’t it?”), (4) modifiers and hedges (e.g., hmmm, ummm, ah), (5) intensifiers (e.g., “It’s so nice out”), and (6) polite grammar (e.g. please and thank you). Compared to men, women tend to use more tag questions (e.g. “Nice weather, *don’t you think?*”), hedges (e.g. “*I guess* you’re right”), expressions of uncertainty (e.g. “*I’m not sure*, but...”) and intensifiers (e.g. “That was *really* smart”) in their speech.

Women presumably choose to speak more tentatively because they are attempting to fill their ascribed status role as expected by men. Generally, men are expected to be

much more assertive and more competitive in environments involving the influence of others and in the same environments, women are expected to be much more open to influence and lack assertiveness (Carli, 1989). Carli (1989) finds that men as assertive leaders are much more successful than women as assertive leaders. Generally, male direct speakers are well received by both males and females, whereas female direct speakers are only well received by other females. Males do not respond well to direct females and prefer their tentative speaking style, possibly because directly speaking females appear as competition.

There are also important differences in speaking styles and expectations of men and women. The combined use of more tag questions, hedges and intensifiers results in a more tentative speaking style for women compared to men. When examining specific characteristics of tentative speech (hedges, expressions of uncertainty, intensifiers and tag questions) through meta-analysis, findings suggest that women use these techniques as a way to maintain interpersonal sensitivity (Leaper & Robnett, 2011). More specifically, Leaper and Robnett (2011) found that women used significantly more tag questions and intensifiers as a technique to make their speech more tentative and unassertive. However, there is also evidence to show that the prevalence of tentative language use by women depends on how gender-neutral a discussion topic is; women are more tentative than men when discussing masculine topics, men are more tentative when discussing feminine topics and gender-neutral topics show no gender differences (Palomares, 2009).

In addition, men and women behave differently when they are with members of the same gender rather than members of the opposite gender (Carli, 1989). Carli (1989) focuses on the stereotypical behaviors of men and women and the ways in which more

stereotypical behaviors are present in discussions with the same gender rather than the opposite gender and that these stereotypical behaviors decrease in discussions with the opposite gender. Carli (1989) also explores the way in which the stereotypically male, direct and forceful behavior exhibited by men differs from the stereotypically female, indirect and reserved behavior of women with regards to influenceability. People also generally use a more direct and forceful approach when attempting to influence a man rather than a woman, because men generally speak this way, while adopting a more agreeable and stereotypically female speaking style when attempting to influence a female (Carli, 1989).

These differences lead to research showing that tentative speech is perceived as less competent, while tentatively speaking women are more persuasive to men than are direct speaking women, potentially because men feel less challenged and the woman is fitting her stereotype role (Carli, 1990). For instance, Carli (1990) had participants listen to men and women argue in favor of a raise in bus fees, a position the participants opposed at the outset of the study. In addition, speakers used direct or tentative language to present their position. Carli (1990) found that tentative speaking women are generally considered by men to be less knowledgeable and competent than assertive women. The same research also shows that while men found assertive women more competent, they were ranked as less likeable, but interestingly, women seem to prefer other women who are more assertive than those who are tentative (Carli, 1990). Carli's (1990) findings show that speech style (tentative and assertive speech) exerts subtle and complex influences on people's perceptions and opinions.

How could it be that people who are perceived as incompetent are more likely to be persuasive and cause you to change your attitudes? How can tentatively speaking women who are perceived as less competent, be more persuasive and impactful?

The present research was designed to test the possibility that the source of tentatively stated ideas is less well remembered, allowing a good idea to “float in the air” in a sense, ready to be misattributed to others. The present work explores the possibility that there are memory differences for tentative versus direct speech, which could allow high quality ideas to be transmitted while the source of those ideas (i.e., a tentative female speaker) is forgotten.

Based in this data, it is clear that there are gender differences in speech. What is unknown, however, is magnitude of gender differences in speech patterns within mixed-gender discussion groups, given that gender differences in speech styles seem to be exaggerated in same gender dyads. Importantly, however, what is most interesting is the way in which there are clearly different approaches that are taken when attempting to persuade men versus women. It seems as though there are assumptions that are being made regarding the intelligence and competence of the opposite gender and the knowledge of these assumptions by women might actually serve as a self-fulfilling prophesy.

Tentative Language and Memory

With the knowledge that women generally speak more tentatively than men, one might begin to question the effectiveness of tentative arguments in persuading others and how well they are remembered (Carli, 1990). Do people less well remember the source of ideas that are presented tentatively (and in a stereotypically female manner) than the

source of ideas that are directly presented? These are all questions explored by Heiphetz, Vescio and Fiske (2008; see also Vescio, Fiske, & Heiphetz, 2008). More specifically, Heiphetz et al. (2008) predicted more recognition errors associated with stereotypically female, tentative speech than direct speech. To test these predictions, participants were brought into a lab and were asked to transcript of a discussion about the benefits of a Penn State tuition hike. Half of the arguments were low-quality and half were high-quality, as indicated by pilot testing. In addition, half of each kind of argument was stated using direct language, while the other half of arguments were presented via tentative language. In other words, Heiphetz et al. presented the participants with four kinds of arguments: direct high-quality, direct low-quality, tentative high-quality and tentative low-quality.

After reading the arguments, Heiphetz et al. (2008) asked participants to complete a recognition/memory task. To test recognition, participants were shown 32 arguments in favor of a tuition hike, half of which appeared in the discussion and half of which were novel arguments. Participants were then asked to indicate whether the argument appeared in the discussion. For arguments identified as having appeared in the discussion, participants further indicate which of the eight speakers presented the ideas. Importantly, during this recognition task, the arguments were modified to remove the tentative and direct speech elements while preserving all information relevant to the content.

Heiphetz et al. (2008) found that the source of tentative arguments was less well remembered. Low-quality arguments are also associated with more errors in source recognition and memory. Importantly, these two main effects additively combined such

that high quality direct comments were remembered better than high quality arguments that were tentatively stated or low quality arguments that were directly stated, which were in turn remembered better than low quality arguments that were tentatively stated.

The present theory and research extends the work of Heiphetz et al. (2008) by turning attention to whom gets credit for high quality ideas that are tentatively stated. Based on previous gender research (Eagly & Karau, 2002), we hypothesized that if ideas were presented with cues indicating the use of tentative versus direct language, then when perceivers had to guess who had forwarded an idea in the absence of a clear memory, tentatively made arguments would be attributed to women, whereas directly stated arguments would be attributed to men. It is also reasonable to assume that in the absence of cues indicating the use of tentative versus direct language, as in the Heiphetz et al. recognition task, high quality arguments should be misattributed to men and low quality arguments should be misattributed to women given stereotypes of male but not female agency and competence.

This brings me to the question that motivated my research; namely, guessing about who presented a high quality argument that was tentatively stated (as women tend to speak), do people guess a male source given stereotypes of superior male competence? The question of whether gender plays a role in the attribution of tentative or direct and low or high quality arguments is the next logical step extending Heiphetz's et al. (2008) research. Essentially, I am seeking to examine whether gender plays a role in the way that arguments are remembered and misattributed when guessing occurs. There is a direct possibility that something as simple as being a woman can cause you to be underappreciated and the quality of your thoughts underestimated. For example, based

on sexist views that consider women to be a lower status group, women are expected to behave with high levels of warmth and low levels of competence which leads to the perception that they are nonthreatening and, thus, unimportant (Fiske, et al., 2002). However, there is also the possibility that simply being a woman is not causing these kinds of attributions. There is a possibility that the stereotypical speaking style of a woman is the cause rather than gender per se. This would mean that, while women are not attributed with tentative and low-quality arguments and thoughts due to sexism, their stereotypically female speaking style is the culprit. Both of these rationales have a potential and they both create a negative image for women.

In addition, if we find a relationship between gender and argument misattribution (i.e., tentative and/or low-quality arguments are misattributed to women) it brings us to the question of the effect that these attributions have on women. For example, if a woman presents a high-quality idea using stereotypically feminine speech to avoid backlash (Carli, 1989; see also Rudman & Fairchild, 2004) and that idea is later misattributed to a man due to gender stereotyping, are there negative consequences for the woman? Might she feel devalued, excluded, exploited, insecure?

The goal of this study is to understand the relationship between gender and the misattribution of arguments. Based on the data presented by Heiphetz et al. (2008), I hypothesized that 1) tentative arguments will be less well remembered and 2) tentatively stated high-quality arguments would be attributed to men rather than women.

Chapter 2

Method

Participants

The participants were 128 undergraduate students from The Pennsylvania State University. Of the 128 participants, 63 were women and 65 were men. All participants were awarded class credit in return for participation in this study.

Procedures

Each participant was provided with a packet, which contained arguments in favor of a Penn State tuition hike from 8 different speakers. Each speaker provided two different arguments, including one in the first half of the discussion and one in the second half of the discussion. In addition, each speaker was personified by a male or female icon, allowing for the manipulation of speaker gender. The speaker icons were all pilot tested and chosen based similar ratings for perceived attractiveness, competence and warmth. Each icon was also labeled with a popular and unambiguous male or female name. Each speaker (identified by an icon and name) was then seen presenting one of four kinds of discussion contributions, including: (a) a female presenting a high quality argument that was directly stated, (b) a female presenting a high quality argument that was tentatively stated, (c) a male that was presenting a high quality argument that was directly stated, or (d) a male that was presenting a high quality argument that was tentatively stated. Sixteen comments were selected based on pilot testing showing that the comments were perceived as high quality arguments (i.e., rated as significantly above the

mid-point on a 9-point scale with end points labeled “extremely weak argument” to “extremely strong argument”). In addition, pilot testing revealed that the sixteen comments were equivalently persuasive (or rated as equally strong arguments). Speakers and arguments were randomly paired. In addition, participants were presented with one of two random discussion orders (See Appendixes A and B).

Each participant was provided with a packet which contained all of the experimental instructions and materials (see Appendixes A-E). The participants were asked to work through the packet from front to back and were instructed not to look forward or backward any pages. The packet began with the script of the discussion, with speakers being identified by argument icons and names. After reading the transcript of the discussion, participants reported their impressions of each speaker before completing a recognition task.

Dependent Variables

Competence and Warmth. Participants were shown photographs of each individual group member. A single photograph and name was presented followed by eight ratings. The order in which the photographs and names were presented was random and unrelated to the order in which people were seen in the discussion. On a 9-point scale with endpoints labeled “Not At All” and “Extremely”, participants were asked to rate each speaker across the following traits: thoughtful, competent, confident, intelligent, friendly, sincere, good natured and warm. The specific traits measuring competence are thoughtful, competent, confident and intelligent. The traits measuring warmth are friendly, sincere, good natured and warm.

Recognition. Participants were provided with a list of 32 argument stems (arguments that were not manipulated to portray a specific speaking style). Of the 32 argument stems provided, 16 were previously presented in the discussion script and 16 were new foils. Participants were asked to identify which of the 32 argument stems were previously presented in the study and, of the familiar arguments, participants were asked to identify the speaker who forwarded each argument.

Finally, each participant was asked to complete an exit questionnaire asking them to guess the hypothesis and purpose of the experiment in which they just took part. After being probed for suspicion, participants were fully debriefed and permitted to leave.

Chapter 3

Results

Analysis of Recognition Errors

Responses that were that were correctly identified as discussion contributions, but ascribed to the wrong target were coded in terms of four factors – the gender of the actual person who made the comment, the speech style of the actual person who made the comment, the gender of the person to whom the comment was erroneously ascribed, and the speech style of the person to whom the comment was erroneously ascribed. When these four factors are crossed, there are 16 possible types of errors that could be made. These errors are depicted in Table 1. The errors in column 1 represent comments made by tentative women that are erroneously ascribed to a different tentative woman (TF-TF), a direct woman (TF-DF), a tentative man (TF-TM) or a direct man (TF-DM). All variables were created by summing across relevant kinds of errors depicted in Table 1. Because different questions require considerations of unique variables, in the results section, I describe how I created variables, how I analyzed the data, and what findings emerged from analyses.

To test the prediction that tentatively stated comments might be less well remembered than directly stated comments, we created four variables. These include variables to reflect the number of errors made in the recognition of comments made by:

- (1) tentative female speakers, which equals the sum of the four errors in column 1 of Table 1 ($TF_{err} = TF_{TF} + TF_{DF} + TF_{TM} + TF_{DM}$),

(2) direct female speakers, which equals the sum of the four errors in column 2 of Table 1 ($DF_{err} = DF_{TF} + DF_{DF} + DF_{TM} + DF_{MD}$),

(3) tentative male speakers, which equals the sum of the errors in column 3 of Table 1 ($TM_{err} = TM_{TF} + TM_{DF} + TM_{TM} + TM_{DM}$), and

(4) direct male speakers, which equals the sum of the errors in column 4 of Table 1 ($DM_{err} = DM_{TF} + DM_{DF} + DM_{TM} + DM_{DM}$).

The above four error variables were submitted to a speaker gender (male or female) X type of language (tentative or direct) X participant gender (male or female) mixed model Analysis of Variance (ANOVA). Speaker gender and type of speech were within participants factors in this analysis, whereas participant gender was a between-participants variable.

Four effects emerged from this analysis. There was a marginally significant participant gender main effect, $F(1,126)=3.79, p=.054$; more recognition errors were made by male participants ($M=7.65$) than female participants ($M=6.73$). As predicted, there were also significant main effects of type of language, $F(1,126)=15.38, p<.001$, and speaker gender, $F(1,126)=4.17, p=.0431$. Participants made more errors in their attempts to identify the source of ideas that were tentatively stated ($M=3.95$) than directly stated ($M=3.25$) and they made more errors identifying comments made by female speakers ($M=3.77$) than male speakers ($M=3.43$). The speaker gender effect was also moderated by participant gender as evidenced by a significant speaker gender X participant gender interaction, $F(1,126)=4.17, p=.0431$. Male participants made more errors when identifying comments that were made by female speakers ($M=4.15$) than male speakers

($M=3.49$), whereas female participants similarly recognized the comments of female speakers ($M=3.37$) and male targets ($M=3.36$).

Next we examined whether misremembered comments were more likely to be attributed to male speakers. To examine this possibility, we submitted errors to a speaker gender X speaker language X gender of target misattributed X participant gender mixed model ANOVA. Participant gender was a between participants variable in this analysis; all other variables were within participants factors. This analysis produced several significant effects, including the replication of all significant effects noted above. Beyond the effects noted above, there was a significant interaction between participant gender and the gender of the target to whom comments are misattributed, $F(1,126)=5.88$, $p=.017$. When guessing the gender of the person who made a comment, female participants were more likely to misattribute comments to male speakers ($M=.44$) than female speakers ($M=.40$), whereas male participants were less likely to misattribute comments to male speakers ($M=.44$) than female speakers ($M=.52$). There was also a speaker gender X gender of person misattributed significant effect, $F(1,126)=107.15$, $p<.001$. This final effect exhibits a strong categorization effect, showing more within type of language errors ($M=4.98$) than between type of language errors ($M=2.22$). In other words, comments made by tentative speakers are more likely to be attributed to other tentative speakers than direct speakers. Likewise, comments made by direct speakers are more likely to be attributed to other direct speakers than tentative speakers.

Importantly, the speaker gender X speaker language X gender misattributed interaction did not approach significance, $F(1,126)=.73$, $p>.394$. There was no evidence

that tentative comments of women or tentative comments more generally were likely to be misattributed to men more than women.

Analysis of Competence and Warmth

Ratings of target competence and warmth were submitted to a sex of participant (male, female) X type of language (tentative, direct) X speaker gender (male, female) X type of rating (competence, warmth) mixed model Analysis of Variance (ANOVA). Sex of participant was a between participants variable in this analysis, whereas type of language, speaker gender, and type of rating were all within participants variables. This analysis produced two significant main effects. There was a significant main effect of speaker gender, $F(1,125)=3.99, p=.048$. Overall, averaging across competence and warmth ratings, men ($M=6.24$) were perceived more favorably than women ($M=6.18$). In addition, there was also a significant main effect of speaker language, $F(1,125)=19.81, p<.001$; direct language ($M=6.36$) was rated more favorably than tentative language ($M=6.05$). This has potential implications for women due to their stereotypical tentative speaking style.

Three significant two-way interactions also emerged from the analysis of competence and warmth. First, as shown in Table 2, there was a significant rating type X target gender two-way interaction, $F(1,125)=7.17, p=.009$. Whereas male speakers were rated as similarly competent ($M=6.17$) and warm ($M=6.14$), $F(1,125)=.79, p>.37$, female speakers' were perceived as more warm ($M=6.32$) than competent ($M=6.20$), $F(1,125)=7.40, p=.008$.

As shown in Table 3, there was also a significant rating type X language interaction, $F(1,125)=31.40, p<.001$. Replicating Carli (1990), direct speakers ($M=6.43$)

were perceived as more competent than tentative speakers ($M=5.95$), $F(1,125)=35.92$, $p<.001$. In addition, direct speakers ($M=6.30$) were seen as more warm than tentative speakers ($M=6.16$), $F(1,125)=3.94$, $p=.049$.

There was also a target gender X language interaction, $F(1,125)=9.10$, $p=.003$. As shown in Table 4, overall positivity was similar for tentatively speaking men ($M=6.07$) and women ($M=6.04$), $F(1,125)=.17$, $p<.68$. Perceivers of favorability were, however, higher of direct speaking women ($M=6.49$) than direct speaking men ($M=6.24$), $F(1,125)=18.18$, $p<.001$.

Importantly, the three-way interaction among variable type, language and speaker gender did not approach significance, $F(1,125)=1.20$, $p=.275$.

Chapter 4

Discussion

The present research is based on two main research questions. The first question that this research was seeking to answer is the question of whether communication style of an idea plays a role in whether or not the source of an idea is remembered. More specifically, this work examined whether people have trouble recognizing the source of tentatively stated ideas, as compared to directly stated ideas. In other words, the prediction is that tentatively stated ideas will be remembered as discussion contributions but are more likely to be misattributed to the wrong speaker. Based on the analysis of errors presented in this study, findings were consistent with this prediction. The sources of tentative ideas were much less well remembered than were the sources of directly stated ideas. The data also showed that the ideas of women were less well remembered. Importantly, these two main effects additively combined, such that contributions of tentatively speaking women were far less well remembered than the contributions of directly speaking women or tentatively speaking men that were, in turn, less well remembered than the contributions of directly speaking men.

This finding can have significant implications for women. As previously explained, women are generally stereotyped as tentative speakers. In addition, tentative speakers are typically judged as less competent than direct speakers and women are stereotypically perceived to be less competent than men. Together, we suggest that these tendencies could provide the basis for findings showing that tentatively speaking women

are at once perceived as incompetent *and* successfully influence and persuade men (Carli, 1990). More specifically, we predicted that the source of ideas that were tentatively stated may be less well remembered, such that high quality ideas that are tentatively stated may be misattributed. The data were consistent this idea. More specifically, findings indicated that male participants made more errors when attempting to identify the contributions of female speakers than male speakers. People also made more errors when attempting to identify who uttered a high quality idea that was tentatively stated rather than directly stated. .

The next main question addressed by the present work was whether gender influenced to whom tentatively stated arguments were misattributed. For example, if a woman presents high quality ideas using tentative language, the high quality argument might be misattributed to a man. Consistent with predictions, when women were asked to guess who made a high quality argument that had been tentatively stated, they were much more likely to attribute the unclaimed comment to a male participant than they were to attribute it to a female. By contrast, and contrary to predictions, men showed an opposite pattern; men were more likely to attributed high quality ideas to women than men.

The results of the measures of competence and warmth also have some very interesting implications for women. The data suggests that men receive higher ratings of competence and warmth. The data also suggested that direct speakers were perceived more favorably than tentative speakers, being both more competent and more warm. This essentially means that the stereotypical male speaking style is regarded as more competent and warm than the stereotypical female speaking style. Taking this data one

step further, it is not surprising that men were rated with similar levels of both competence and warmth. However, women did not share this trend, as they were rated significantly higher in warmth (and lower in competence).

Together, the findings point to interesting new questions. In particular, one may wonder how tentative speakers, who are typically women and who are perceived as less competent and warm, respond to having their high quality ideas misattributed to others (men or women). If one's high quality comment is misattributed to a man, a woman might feel as though she is the victim of a sexist act. However, if one's high quality comment is misattributed to another woman, she may feel as though she is a target of stereotyping, as is the case when members of one group are confused with other members of their in-group. Either of these outcomes may cause women to feel like they do not belong in the group. When women's ideas are misattributed, they may also feel as though she has faded into the background and her contributions are not valued, because of her gender.

To examine how women respond when their ideas are misattributed, I am currently conducting a study where students participate in an online chat about the benefits of a Penn State tuition hike. During the discussion, participants present their own arguments regarding the benefits of a tuition hike in one of three experimental conditions. In the control condition, participants receive credit for their ideas. In the other two conditions, the participant's ideas are misattributed to either a same-gender other or an opposite gender other. After participating in the online discussion, participants report feelings of motivation to contribute to the discussion, belonging, self-esteem and emotions (including feelings of frustration, anger, anxiety, hope, and contentment).

Much current theory and research point to the subtle and nuanced nature of sexism and the adverse consequences of such acts (e.g., Vescio, Gervais, Snyder, & Hoover, 2005). In line with prior work, ongoing research examines whether the misattribution of tentatively stated ideas and women's contributions to discussions may represent a subtle form of sexism that is at once hard to detect and has adverse effects on women's sense of belonging and value.

Table 1: Possible Attribution Errors

Person to whom comment erroneously ascribed	Person who actually made a given comment			
	Tentative Female (TF)	Direct Female (DF)	Tentative Male (TM)	Direct Male (DM)
Tentative Female (TF)	TFTF	DFTF	TMTF	DMTF
Direct Female (DF)	TFDF	DFDF	TMDF	DMDF
Tentative Male (TM)	TFTM	DFTM	TMTM	DMTM
Direct Male (DM)	TFDM	DFDM	TMDM	DMDM

Table 2: Rating Type X Target Gender Interaction

	Competence	Warmth
Male Speakers	6.17 ^a	6.14 ^a
Female Speakers	6.20 ^a	6.32 ^b

Note: within rows and columns, means with different superscript significantly differ at $p < .05$

Table 3: Rating Type X Language Interaction

	Competence	Warmth
Tentative Speakers	5.95 ^a	6.16 ^c
Direct Speakers	6.43 ^b	6.30 ^b

Note: within rows and columns, means with different superscript significantly differ at $p < .05$

Table 4: Target Gender X Language Interaction

	Male	Female
Tentative Speakers	6.07 ^a	6.04 ^a
Direct Speakers	6.24 ^b	6.49 ^c

Note: within rows and columns, means with different superscript significantly differ at $p < .05$

Appendix A

Discussion Transcript Order A

Instructions: In previous research, we asked students to imagine the possibility of Penn State tuition hike and to consider the possible benefits that could follow from such a tuition hike. We then asked students to share their ideas. On the pages that follow, you will be asked to read the ideas of eight students, who shared their ideas about the possible benefits of a Penn State tuition hike.

We ask that you

1. Please read through the arguments in the order in which they are presented.
2. Quickly read through all material once
3. Please refrain from looking back to previous statements and/or pages

Note: The eight students will be identified by name and picture.



Megan

*More tuition could fund a large advising staff, right? I mean, Regular contact with academic advisors **might** [instead of “can”] prevent students from making mistakes that delay progress and graduation, don't you think?*



Kate

A tuition hike would assure that Penn State has ample counseling services and health services. Student mental and physical health services assure that students are physically healthy and socially supported.



Jane

Um, having high quality faculty members is kind of important. I mean, Penn State has to pay competitive salaries to attract the most prominent, productive, and visible faculty, don't we?



Frank

More tuition would mean more money to better support the student fellowships. Half of the students receive fellowships. That makes Penn State's tuition doable for students from less privileged backgrounds.



Sam

I'm no expert, but services that benefit students seem kinda important. Being able to get discounted computers improves students' scholarship, don't you think? And free Napster access keeps students happy.



Bob

A tuition hike could fund hires to ensure there are more faculty instructors in introductory classes. Securing letters of recommendation requires contact with professors, rather than graduate student teaching assistants.



Jess

The university could use more computer classrooms, which a tuition hike could fund.

Computer classrooms enhance research, methods, and writing courses. Computer classrooms allow students to work along with instructors.



Joe

It's so important that the University has a great library. I mean, the library is the cornerstone of the University, right? And great libraries must hold classic and contemporary works.



Frank

A tuition hike could provide more funds for independent study projects, which are important for students. If you need letters of recommendation, working one-on-one with a faculty member is helpful.



Jess

Penn State is known for thon and should better support thon. Thon is the biggest student run philanthropy in the country. Thon brings respect, admiration, and visibility to Penn State.



Sam

I don't know. A large faculty is important, isn't it? The faculty to student ratio is 17:1. A smaller ratio would be better for students and faculty, *don't you think?*



Megan

More computer labs would be so great. Am I wrong or are the computer labs always [instead of “are”] *full during peak hours? Additional computer labs across campus would give students better computer access.*



Bob

Money from a tuition hike could provide more convenient computer access across campus. Additional computer access points in the dorms, HUB, and library would facilitate student learning, performance, and accomplishments.



Jane

Smaller classes would be so good. Students would be engaged and ask more questions if classes were smaller, don't you think? I mean, that could sorta facilitate participation and learning.



Joe

Having a more diverse student population seems pretty important. I'm no expert, but attempts to recruit students from diverse ethnic backgrounds require recruitment efforts, scholarships, and support services, don't they?



Kate

Funds from a tuition hike could be used to provide more advanced course offerings. Juniors and seniors need 400 level classes. Small, advanced classes provide opportunities for discussions with faculty.

Appendix B

Discussion Transcript Order B



Megan

A tuition hike would fund hires to ensure there is a large advising staff. Regular contact with academic advisors can prevent students from making mistakes that delay progress and graduation.



Kate

More tuition could fund counseling services and health services, right? I mean, student mental and physical health services might assure that students are physically healthy and socially supported, don't you think?



Jane

A tuition hike would assure that Penn State has many high quality faculty members. Penn State has to pay competitive salaries to attract the most prominent, productive, and visible faculty.

**Frank**

I'm no expert, but student fellowships seem kinda important. Half of the students receive fellowships. That makes Penn State's tuition doable for students from less privileged backgrounds, don't you think?

**Sam**

Funds from a tuition hike could be used to provide services that benefit students. Being able to get discounted computers improves students' scholarship. And free Napster access keeps students happy.

**Bob**

More faculty instructors in introductory classes would be so great. I mean securing letters of recommendation sorta requires contact with professors, rather than graduate student teaching assistants, don't you think?

**Jess**

It's so important that the university has more computer classrooms. I mean, computer classrooms enhance research, methods, and writing courses. Computer classrooms allow students to work along with instructors, right?



Joe

More tuition means money that could be used to support a great library. The library is the cornerstone of the University. And great libraries must hold classic and contemporary works.



Frank

Having more funds for independent study projects seems pretty important. I'm no expert, but if you need letters of recommendation, working one-on-one with a faculty member is helpful, isn't it?



Jess

I don't know. Thon is important, isn't it? Thon is the biggest student run philanthropy in the country. Thon brings respect, admiration, and visibility to Penn State, don't you think?



Sam

The university could use a large faculty, which a tuition hike could fund. The faculty to student ratio is 17:1. A smaller ratio would be better for students and faculty.



Megan

Money from a tuition hike could provide more computer labs across campus. Computer labs are full during peak hours? Additional computer labs across campus would give students better computer access.



Bob

More convenient computer access across campus would be so great. I mean, additional computer access points in the dorms, HUB, and library would facilitate student learning, performance, and accomplishments, right?



Jane

A tuition hike could support smaller classes, which are important for students. Students would be engaged and ask more questions if classes were smaller. That could facilitate participation and learning.



Joe

Penn State needs a more diverse student population and having diversity requires money and resources. Attempts to recruit students from diverse ethnic backgrounds require recruitment efforts, scholarships, and support services.



Kate

Um, having more advanced course offerings is kind of important. Juniors and seniors need 400 level classes, don't we? I mean, small, advanced classes provide opportunities for discussions with faculty.

Appendix C

Competence And Warmth

*Participants were asked to answer this questionnaire for all 8 of the speakers.

Consider each of the students who presented the ideas you read on the proceeding pages. Please rate each student on the following dimensions.




Bob is. . .

					thoughtful						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					friendly						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					competent						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					good natured						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					confident						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					warm						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					intelligent						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	
					sincere						
Not At All	1	2	3	4	5	6	7	8	9	Extremely	

Appendix D

Behavioral Preference

If you were asked to participate in a similar group discussion with four other people, with which four individuals would you feel most comfortable? Please place an "X" in the blank beside the four people with whom you would like to participate in a similar discussion. **Please select only four people.**

Person A. _____  Bob

Person B. _____  Jess

Person C. _____  Sam

Person D. _____  Frank

Person E. _____  Kate

Person F. _____  Joe

Person G. _____  Jane

Person H. _____  Megan

Appendix E

Surprise Recognition

*Participants filled out more than 1 table.

You will now be presented with a series of statements, which are numbered 1 through 32. Some of these statements were made by discussion group members and others were not. We ask that you read each statement and indicate whether or not it was actually said during the discussion. In addition, if it was said during the discussion, we ask that you also identify who made the comment.

More specifically,

1. Please read the statements, which appear in the second column.
2. Indicate if the statement is "new" (i.e., was not in the discussion / I have not seen it before) or "old" (i.e., was said in the discussion / I read it in the first pages of the questionnaire) by placing a check in the appropriate box.

New means the statement was not said by any of the eight students.

Old means the statement was said by one of the eight students.

3. If you checked **New** you are done and may move onto the next statement. The Speaker Box is left empty.

If you checked **Old**, you then identify who made the statement by placing the letter that appears beside the student (e.g., A, B, C, D, E, F, G or H) in the **Speaker** box. For example,



	Statement	New <u>not</u> said in discussion	Old said in discussion	Speaker If <u>old</u> , who said
	The grass is green and the sky is blue.		X	D

Please indicate whether each statement is new or old. Additionally, if you indicate that an item is **Old**, please also identify who made the statement by placing the letter that appears beside the student (e.g., A, B, C, D, E, F, G or H) in the **Speaker** box.

Person A:  Bob

Person E:  Kate

Person B:  Jess

Person F:  Joe

Person C:  Sam

Person G:  Jane

	Statement	New not said in discussion	Old said in discussion	Speaker If <u>old</u>, who said
	“... more capstone courses. There are only 15 students in a capstone class, so faculty members get to know students better.”	X		
2	“...a well organized alumni association . We have largest alumni association in the country. That helps students get internships and jobs.”	X		
	“...more money for the undergraduate research expo. During the expo students get to talk about their research with interested faculty.”	X		
	“...has a great library. The library is the cornerstone of the University, and great libraries must hold classic and contemporary works.”		X	F
	“...more computer classrooms. Computer classrooms enhance research, methods, and writing courses. Computer classrooms allow students to work along with instructors.”		X	B
	“...services that benefit students. Being able to get discounted computers improves students’ scholarship. And free Napster access keeps students happy.”		X	C
	“...computer labs. Computer labs are full during peak hours. Additional computer labs across campus would give students greater computer access.”		X	H
	“...larger art museums. Museums are important and ours should be bigger like those in the rest of the Big 10.”	X		
	“...student fellowships. Half of the students receive fellowships. That makes Penn State’s tuition doable for students from less privileged backgrounds.”		X	D
0	“...more awards for undergraduate achievements. Increasing funds for honors college and department awards would make money available to more students.”	X		
1	“...counseling services and health services. Student mental and physical health services assure that students are physically healthy and socially supported.”		X	E

Appendix F

Discussion Arguments

1. A tuition hike would assure that Penn State has ample counseling services and health services. Student mental and physical health services assure that students are physically healthy and socially supported.
2. It's so important that the University has a great library. The library is the cornerstone of the University, right? And great libraries must hold classic and contemporary works.
3. A green fee could be a good idea, to help PSU become more sustainable...lower electricity costs by more renovation projects would be another idea.
4. Penn State is known for thon and should better support THON. THON is the biggest student run philanthropy in the country. THON brings respect, admiration, and visibility to Penn State.
5. Funds from a tuition hike could be used to provide more advanced course offerings. Juniors and seniors need 400 level classes. Small, advanced classes provide opportunities for discussions with faculty.
6. Having a more diverse student population seems pretty important. I'm no expert, but attempts to recruit students from diverse ethnic backgrounds require recruitment efforts, scholarships, and support services, don't they?

Appendix G
Measure of Motivation

Please answer the following questions with regards to your argument for why a tuition hike should be implicated at Penn State.

1. How interested are you in the possibility of an increase in tuition?

1	2	3	4	5	6	7
Srrongly Agree			Neutral			Strongly Disagree

2. How hard did you work on your persuasive arguments?

1	2	3	4	5	6	7
Srrongly Agree			Neutral			Strongly Disagree

3. How important is it to you to generate the best argument you can for a chance to earn the cash reward?

1	2	3	4	5	6	7
Srrongly Agree			Neutral			Strongly Disagree

4. How likely do you think it is that you will earn the cash reward?

1	2	3	4	5	6	7
Not At all						Extremely

Appendix H

Measure of Emotions

Please indicate how you are feeling at this moment using the below scale.

At this moment I feel...

	Not At All	Extremely	Trait	Not At All Extremely
Appreciated	1	2 3 4 5 6 7	Dejected	1 2 3 4 5 6 7
Furious	1	2 3 4 5 6 7	Pleased	1 2 3 4 5 6 7
Anxious	1	2 3 4 5 6 7	Happy	1 2 3 4 5 6 7
Self- assured	1	2 3 4 5 6 7	Angry	1 2 3 4 5 6 7
Confident	1	2 3 4 5 6 7	Ignored	1 2 3 4 5 6 7
Outraged	1	2 3 4 5 6 7	Sad	1 2 3 4 5 6 7
Calm	1	2 3 4 5 6 7	Unappreciated	1 2 3 4 5 6 7
At Ease	1	2 3 4 5 6 7	Agitated	1 2 3 4 5 6 7
Gratified	1	2 3 4 5 6 7	Low-spirited	1 2 3 4 5 6 7
Resentful	1	2 3 4 5 6 7	Important	1 2 3 4 5 6 7
Frustrated	1	2 3 4 5 6 7	Accepted	1 2 3 4 5 6 7
Hopeful	1	2 3 4 5 6 7	Unhappy	1 2 3 4 5 6 7
Mad	1	2 3 4 5 6 7	Secure	1 2 3 4 5 6 7
Embarrassed	1	2 3 4 5 6 7	Melancholy	1 2 3 4 5 6 7
Discouraged	1	2 3 4 5 6 7	Satisfied	1 2 3 4 5 6 7
Uneasy	1	2 3 4 5 6 7	Unhappy	1 2 3 4 5 6 7
Optimistic	1	2 3 4 5 6 7	Relaxed	1 2 3 4 5 6 7

Appendix I

Measure of Belonging

Please answer the following questions based on your feelings regarding the group conversation that you just participated in based on the following scale.

1. I feel like I belong in this discussion.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

2. I feel like I fit in well with other students in my discussion group.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

3. I feel like I am similar to other students in my discussion group.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

4. I feel comfortable in my discussion group.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

5. I feel like I can “be myself” in my discussion group.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

6. I feel like my ideas and contributions are valued in my discussion group.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

7. The environment in my discussion group inspires me to do the very best job I can do.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

8. I feel like I am treated fairly by others in my discussion group.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

9. I felt that I contributed high quality ideas to the discussion.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

10. I felt non-existent during the discussion.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

11. I felt as though my existence was meaningless during the discussion.

1	2	3	4	5	6	7
Srrongly			Neutral			Strongly
Agree						Disagree

Appendix J
Measure of Self-Esteem

Please answer the following questions based on how you are feeling at the moment.

1. On the whole, I am satisfied with myself.

1	2	3	4	5	6	7
Srrongly Agree			Neutral	Strongly Disagree		

2. At times I think I am no good at all.

1	2	3	4	5	6	7
Srrongly Agree			Neutral	Strongly Disagree		

3. I feel that I have a number of good qualities.

1	2	3	4	5	6	7
Srrongly Agree			Neutral	Strongly Disagree		

4. I am able to do things as well as most other people.

1	2	3	4	5	6	7
Srrongly Agree			Neutral	Strongly Disagree		

5. I feel I do not have much to be proud of.

1	2	3	4	5	6	7
Srrongly Agree			Neutral	Strongly Disagree		

6. I certainly feel useless at times.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

8. I wish I could have more respect for myself.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

10. I take a positive attitude toward myself.

1	2	3	4	5	6	7
Strongly Agree			Neutral			Strongly Disagree

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ACADEMIC VITA

Alyssa P. Simon

1751 Waterford Court, Pittsburgh PA, 15241/aps5130@psu.edu

Education

B.S., Psychology, 2013, The Pennsylvania State University, University Park, PA

Honors and Awards

- Dean's List Spring 2010-present
- Schreyer Honors College Academic Excellence Scholarship

Association Memberships/Activities

- Penn State Lion Scouts
 - Tour guide
- IFC/Panhellenic Dance Marathon (THON)
 - Morale, OPPerations, Springfield
- Schreyer Honors Orientation (SHOtime) Mentor
- Schreyer Honors College FTCAP Mentor

Working Publications and Papers

- When Women's Ideas are Misattributed to Men: The Effect of Gendered Language and Argument Quality on Misattributions of Discussion Contributions