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Student Assessments of Professor Effectiveness

By

Roger E. Knutson

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

Masters of Arts

in

Industrial/Organizational Psychology

Minnesota State University, Mankato

Mankato, Minnesota

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STUDENT ASSESSMENTS OF PROFESSOR EFFECTIVENESS

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STUDENT ASSESSMENTS OF PROFESSOR EFFECTIVENESS

ABSTRACT

Student Assessments of Professor Effectiveness

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Mankato, 2014

Despite progressive changes, subtle sexism is still present in modern society. The present study used role congruity theory to explain how subtle sexism influences the ratings students provide for professors. Participants were presented with fictional scenarios where professor gender was manipulated and source of a mistake (student versus professor) was manipulated. For each scenario, students provided ratings of competence, likability, and likelihood to take another class with the professor. Multiple t-tests revealed no difference in student ratings between female professors and male professors who made mistakes and between female professors and male professors overall, although there was a significant difference in student ratings between professors who made mistakes and students that made mistakes. Student ratings revealed that female professors were rated lower than male professors when the professor made a mistake, suggesting that perceptions of faculty who make mistakes is more negative for female professors than for male professors. This implies that sexism is still present in modern society and influences how students can form perceptions of professors. Future research could focus on the detection of specific language used by students in their interactions with professors.

STUDENT ASSESSMENTS OF PROFESSOR EFFECTIVENESS

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Chapter 1: Introduction

Despite progressive societal shifts since the civil rights movement in the 1960's, sexism is still present and ingrained within American culture (Swim, Mallett, Stangor 2004). An investigation conducted by Catalyst (2013) showed that overall, trends in sex discrimination charges brought to the EEOC has remained relatively stable in the workplace, falling from 30.7% in 1997 to 28.5% in 2011. Such discrimination can result in disparities between men and women's earnings for equal work, overrepresentation of men in leadership positions, limited occupational choices for men and women, and pay inequity. Research has shown, however, that this sexism is not limited to traditional workplaces and is abundant within academic settings as well, making it difficult for women to advance to leadership positions as administrators and faculty (Staiger and Ovando 2003). Sexist discrimination is reflected not only within the limited opportunities for advancement within academia but from interactions between professors and their students as well (Clune 2003). Ultimately, this is reflected through students, who tend to possess differential expectations and provide differential ratings of an instructor based on the professor's gender. The difficulty is that end-of-term ratings are thought to be similar between male and female professors, and tenure and promotion decisions are made on the basis that that there is no gender bias in ratings provided by students (Kardia et al. 2001). However, research suggests that gender bias is prevalent in ratings. For example, Clune (2009) found that students have differential expectations depending on the gender of their professor. Similarly, Basow and Silberg (1987), not only found that students rate professors differently depending on professor gender, but that male and female students provide differential ratings and each possess differing expectations for professors depending on professor gender. Specifically, male professors tend to be rated higher than female professors overall in areas such as enthusiasm and overall teaching

ability. As these brief examples demonstrate, students have differing expectations for male and female professors, which are expressed through differential ratings. These discrepancies can potentially be explained by sexism and role congruity theory.

Subtle Sexism and Role Congruity Theory

One reason why these discrepancies exist in ratings of faculty is the existence of subtle sexism. Subtle sexism is the open and harmful treatment of women that goes unnoticed due to being normative (Swim and Cohen 1997). Whereas classical sexism involves overt discriminatory behaviors, subtle sexism involves more ambiguous types of discrimination (for example, misuse of gendered language, unnecessarily holding the door open for a women, etc. Myriad studies have indicated that individuals who engage in subtle sexism are unaware of their own behavior. For example, research by Butler and Geis (1990) indicated that, although female and male leaders were given equal ratings by both male and female raters, nonverbal rater behavior directed towards female leaders was more negative than behavior directed towards male leaders. Furthermore, the authors asserted that the individuals were likely unaware that, through their behavior, male and female leaders were being treated differently.

According to Banaji and Greenwald (1994), as referenced by Swim and Cohen (1997), subtle sexism is consistent with research showing that stereotypes could be a reflection of automatic processes that are unintentional and/or occur outside of the awareness of the stereotype. As previously stated, subtle sexism is thought to be unintentional on the part of the individual but could possibly be indicative of an underlying unconscious sexist framework. This subtle sexist behavior is, in turn, reinforced by others' behaviors. For example, referring to a hypothetical leader as "he" rather than "he or she" may not be noticed or corrected by others, thus reinforcing the subtle sexist language (Swim & Cohen, 1997). Thus, these automatic sexist

stereotypes are what, in turn, leads to beliefs about how men and women should behave in a certain role. These beliefs form the basis of role congruity theory.

Role congruity theory, proposed by Eagly and Karau (2002), posits that due to societal expectations, it is difficult for women to rise to leadership roles, and therefore, they occupy fewer leadership positions compared to men. This is due to the expectation that women should display communal traits, such as kindness, affection, sympathy, and helpfulness. Men, however, are expected to display agentic traits, such as assertiveness, confidence, and control.

Additionally, agentic traits tend to be more favorable, valued, and more often associated with high-status positions. When women are in roles that value or emphasize agentic traits, they are forced into a gender-inconsistent role. This incongruity in expectations results in two types of prejudices often experienced by female leaders: being seen as less qualified than males for their positions and being evaluated less favorably than men who exhibit the same behavior. As the incongruity between the gender role and the leadership role increases, so does prejudice. The more a position requires traits that are traditionally incongruent with the individual's gender, the more the negatively the individual will be evaluated and the more he or she will be seen as unqualified for the position or subsequent positions.

The bulk of research in role congruity theory centers on leadership positions. Ritter and Yoder (2004) investigated role congruity theory using a factorial research design where the researchers manipulated dyads, specifically, the sex of the dominant partner, sex of the non-dominant partner, and the demands of the task the partners performed together (masculine, feminine, or neutral task). Results indicated that incongruence between masculinized task demands and gender stereotypes negatively influenced women emerging as a leader emergence, even when women possess the agentic quality of dominance that is consistent with their leader

role. Thus, this study suggests that even when women possess the requisite agentic traits for a position, it remains difficult for them to emerge as a leader due to role incongruity.

This effect is not limited to lab studies; Garcia-Retamero and López-Zafra (2006) conducted research exploring how industry and gender affect ratings of CEO candidates. As is suggested by role congruity theory, their results indicated that the more gender-incongruent the industry, the more prejudice is shown toward female candidates. Surprisingly, however, when female CEOs were associated with the success of an organization, they are assessed more favorably than male leaders. Furthermore, Garcia-Retamero and López-Zafra found that top female leaders were rated as more communal and agentic than top male leaders, but experienced more challenges from double standards, such as being expected to be kind and reserved because of being a female. Ultimately, they found that successful female leaders were rated more positively than successful male leaders; however, at lower positions, or in less successful situations, women were rated lower than their male counterparts.

These same expectations, whether within an occupational leadership position or within an artificial laboratory setting, lend further credence to role congruity theory. Furthermore, these role expectations may occur with respect to roles other than business leadership, such as faculty positions. Hence, this provides an explanation for why student ratings of faculty may differ based on gender, which are discussed in more detail in the following section.

Student Evaluations of Professors

Clune (2009) conducted a study examining student perceptions on instructor credibility. Instructor credibility, which is defined as the extent to which an instructor is perceived by their students “to be competent, to have character, and to be caring” (p. 1), was assessed via an online questionnaire presenting a hypothetical “good instructor” and with questions about previous

“good” male and female instructors. This allowed participants to conceptualize instructors from various academic disciplines and, thereby, actively engage in subtle sexism, as reflected by their responses. Results indicated that male professors are often considered credible and assertive, whereas female professors were often considered caring and responsive. Additionally, Clune’s findings are consistent with role congruity theory’s subtle sexism, where the display of gender-consistent leadership traits are not only reflected on as positive by students, but also valued and memorable.

Basow and Silberg (1987) shed further light on the issue of differential student evaluations of professor effectiveness based on gender. Students rated professors on a variety of traits and a short form of the BEM Sex-Role Inventory, which essentially corresponds to their perceptions of their professor’s agentic and communal traits. The results showed that male students were more critical of female professors than male professors overall, and female students rated female professors lower than male professors on instructor-student interaction, dynamism-enthusiasm, and overall teaching ability. The researchers suggested that students were more critical of female professors’ instructor-individual student interaction performance because female professors may be expected to be more available for student contact, which is a subtly sexist expectation. This suggestion directly relates to expected gender roles and role congruity theory, which would suggest when in a leadership role, female professors should display communal traits, which are gender-congruent with their role.

A more recent study conducted by Bosow (1995) collected student evaluations over a four-year period and revealed inherent, yet subtle, gender bias in student ratings. While male and female students rated male professors similarly, female professors were rated more negatively by male students and received the highest ratings from female students. More specifically, male

students rated female professors negatively in thought stimulation, appropriate speech, fairness, and non-repetition. With regard to ratings related to teaching, male professors were rated higher in knowledge, whereas female professors were rated higher on respect, sensitivity, and student freedom to express ideas. These findings coincide with role congruity theory, such that male professors are seen as more knowledgeable, and therefore more qualified, than female professors. Additionally, feminine traits, such as sensitivity and student comfort, were rated higher by students for female professors than for male professors, indicating a greater value of communal traits over agentic traits for female professors. This reflects student expectations that female professors should be nurturing, caring, and respectful over being credible, dominant, and assertive.

Kierstead (2009) further investigated sex-role stereotyping in student ratings of professors by examining how the amount of warmth shown by professors would impact student ratings. Examining out-of-class socializing with professors, Kierstead found that, overall, male professors were rated more favorably than female professors. Social contact did not impact the ratings for male professors; however, female professors with social contact received higher ratings than female professors who did not socialize. In other words, male professors received a benefit from socializing that female professors did not; meanwhile, female professors were penalized when they did not conform to expectations by socializing. In a similar vein, an additional study by Kierstead (published in the same article) examined the impact of male and female professors' smiling during a video lecture on student evaluation of the professor's performance, whether they'd take the class, and a list of adjectives describing the professor. The results showed that, while unsmiling males were rated higher than smiling male professors, smiling female professors were rated higher than unsmiling female professors. Overall, however,

more students reported desire to take the course taught by male professors. Whereas smiling males were described as knowledgeable and informed, smiling females were described as happy. Finally, unsmiling women were described the most critically, with words such as “unfriendly” and “humorless,” whereas unsmiling males were described as unexciting, but still considered knowledgeable. These findings provide further credence that role congruity theory is relevant to academia and that subtle sexism drives negative student evaluations when female professors do not fulfill gender expectations.

Instead of examining student evaluations of professors, Rubin (1981) investigated the traits students preferred for college professors and how the professors should be addressed. These reflected how students would grant status to professors and which stereotypes they expected professors to exhibit. Results showed that female professors were more often associated with nurturing qualities and male professors were associated with openness. A subsequent study found that female students used first names of female professors more often in private settings, but used a title for male professors. Male students, on the other hand, tended to use titles and last names more often than female students for both male and female professors. These findings are important for the context of the current study, as they not only provide further evidence for role congruity theory, but also shows that there are differences in how males and females address professors in terms of assigning status.

Additionally, Rubin’s findings demonstrate that there are differential behaviors between male and female students with regard to assigning status. Female students tend to build stronger interpersonal relationships with female professors and, as a result, tend to use first names with female professors. Conversely, the nature of agentic traits (assertiveness, confidence, and control) that male professors are expected to exhibit makes it more difficult to establish personal

relationships for female students. When combined with subtle sexism, role congruity theory explains the findings in the aforementioned studies and why students would possess differential expectations of professors, and subsequently rate them differently based on gender. Students exhibit similar differential expectations and assessments when negative assessment is actually warranted, such as when a professor makes a mistake.

Leadership Error

As noted previously, Garcia-Retamero and López-Zafra (2006) found in their field study that the success of an individual affects the way ratings differ among gender; specifically, they found that successful women were rated higher than their male counterparts, but unsuccessful females were rated lower than their male counterparts. Hence, it is important to also consider a faculty member's effectiveness and how this influences student ratings. Student perceptions of mistakes made by themselves versus professors is one way that might determine how students assign status to their professor. Depending on the source of the error, whether it is due to the professor, the student, or a neutral error (e.g., changing a test date due to inclement weather), students may treat professors differently. Hunter, Tate Dzieweczynski and Redell-Avers (2011) identified four common themes among definitions of errors. First, errors must be avoidable on the part of the actor and not occur due to situational factors. Second, errors can result from either action or inaction. Third, errors result in unintended outcomes not originally part of the goal or plan of action. Fourth and finally, error type needs to be specified within different positions, professions, or contexts, because it may be domain specific. Senders and Moray (1991) provide further insight, stating that error type vary depending on research domain. Thoroughgood, Sawyer, and Hunter (2013) point out that signifying the difference between leader error and leader ineffectiveness is important.

Leader error can only be applied to a leader working towards goals or outcome associated with their role. In the case of the present study, professor errors could only be applied to goals or outcomes associated with being a professor (e.g., preparedness for class, grading assignments, and meeting with students). For the current study, leader errors will consist of professor behaviors that are inconsistent with or counterintuitive to the responsibilities associated with their role. These behavioral inconsistencies will violate student expectations of competent professor behavior. As a result, these professor errors can result in perceptions of ineffectiveness from students.

Thoroughgood et al. (2013) further discuss the impact of leader error on follower perceptions, specifically competence. Thoroughgood and colleagues detailed the importance of followers perceiving their leader as competent or, as in the case of the current study, that students perceive professors as competent. According to theories of charismatic leadership (Conger, 1999; Conger and Kanungo, 1987), leaders who display confidence or other attributes of charisma can be perceived as more influential or competent. This can carry over to professors as well, with charismatic professors appearing more competent to students.

Errors greatly damage follower (or student) associations with competence and are likely to hold more negative opinions toward the leader. Thoroughgood et al. (2013) cite additional research on implicit leadership theories, which suggest that cognitive schemas held by people specify traits and behaviors expected of leaders based on “past socialization and personal experiences with leadership” (pg 33). Thoroughgood et al. (2013) explain that these schemas assist in understanding and reacting to managerial behavior when activated, which then influence how leaders can be perceived and evaluated by observers. When the activated schema aligns

with the behavior of the leader, that leader then fits the schema stereotype of an ideal leader. If the activated schema does not align, however, it will likely impact assessments of the leader.

This same schematic approach to leader assessment can be applied to student perceptions of professor effectiveness. By committing errors, professors are breaking prototypical expectations that students have acquired. Thus, this can combine with role theory in that faculty members who violate both prototypes (e.g. female professor who makes an error) may be judged more harshly than a faculty member who violates zero or one prototype.

The Present Study

Based on the existing literature, the present study has numerous objectives. In addition to exploring the impact professor gender has on student reactions, it is expected that students will rate professors more negatively in scenarios when the professor is the error source. The three variables examined are professor competence, professor likability, and likelihood to take another class with the professor. The hypotheses pertaining to student ratings of professors based on gender are as follows:

H1a: Female professors will be rated as less competent than male professors, overall.

H1b: Female professors will be rated as less likable than male professors, overall.

H1c: Students will rate themselves as less likely to take classes taught by a female professor over a male professor, overall.

Similarly, with regard to student perceptions of professors who make mistakes based on gender, it is hypothesized that:

H2a: Ratings of competence will be lower for female professors who make mistakes compared to male professors who make mistakes.

H2b: Ratings of likability will be lower for female professors who make mistakes than for male professors who make mistakes.

H3c: Likelihood to take another class with the professor will be rated lower for female professors who make mistakes than for male professors who make mistakes.

For student ratings of professors based on student or professor error, it is hypothesized that:

H3a: Ratings of competence will be lower for scenarios involving professor errors than for scenarios involving student errors.

H3b: Ratings of likability will be lower for scenarios involving professor errors than for scenarios involving student errors.

H3c: Likelihood to take another class with the professor will be rated lower for scenarios involving professor errors than for scenarios involving student errors.

Chapter 2: Method

Participants

The sample of participants consisted of 136 students who were enrolled in psychology classes. The sample was made up of 33 male and 102 female participants, ranging from 18-35 years old. The sample was composed of 108 Caucasians, 8 African-Americans, 4 Asian/ Pacific Islanders, 1 Native American, 5 Hispanics/Latinos, and 5 participants identifying their race as "Other." The sample consisted of 22 freshmen, 14 sophomores, 63 juniors, and 36 "fifth" year or beyond but still undergraduate.

Measures

Dependent Variables. In order to assess student judgments on the various dependent variables, we asked participants to fill out items adapted from McCroskey and Teven's (1999) Teacher Credibility Scales. The original scale presents respondents with a 7-point semantic differential scale, where respondents indicate where in a continuum of a bipolar scale best describes their instructor (e.g. competent/incompetent). The original scale includes 18 items but, because our vignettes were relatively brief, participants in this study likely would not have been able to effectively judge all the original items (e.g. honesty). Hence, we reduced the number of items to 10, and added in two new items: an item on likability (likable/unlikable) and an item on whether they would take a class with this professor again (would take a class with this professor again/would not take a class with this professor again). Three additional items were added to gauge student reactions. See the appendix for the full measure.

Procedure

Participants logged into an online survey and were immediately provided consent. Subsequently, participants provided demographic information. Afterwards, they read a series of six scenarios that describe a professor and the situation (see Appendix) in which either the student or the professor are making a mistake. After each scenario, they completed the measures of competence, likability, and interest in taking future classes.

Chapter 3: Results

Prior to conducting analyses, mean scores were calculated for each hypothesis. For hypothesis 1, mean scores for student ratings of professor competence, likability, and desire to take another class with the professor were calculated separately for female professors and male professors across all scenarios. For hypothesis 2, mean scores for student ratings of professor competence, likability, and desire to take another class with the professor were calculated separately by professor female and male professors who were responsible for the error in the scenario. For hypothesis 3, mean scores for student ratings of professor competence, likability, and desire to take another class with the professor were calculated separately for scenarios involving professor errors and scenarios involving student errors. Additionally, participants reported how realistic scenarios were on a 5 point likert scale. For the most part, although only some participants experienced each scenario, the scenarios were rated as *very realistic* by students.

Table 1

Realism of scenario (on 5 point scale)

| Realism of scenarios | Mean and Standard Deviation | |
|---|-----------------------------|-----|
| | Mean | SD |
| <i>How realistic was this scenario?</i> | 4.25 | .65 |

In order to test the hypotheses, a 2 (gender) x 2 (error source) repeated measures ANOVA was conducted. Because conditions were randomized on the survey, there was not an equal number of participants per cell for each dependent variable.

For the first set of hypotheses, I hypothesized that there would be a main effect of gender on student evaluations for each dependent variable. In terms of competence, the analyses indicated no effect of gender, $F(1, 67) = .05, p = .81$. On average, male and female professors were rated similarly on competence. This effect is illustrated in Figure 1. In terms of likability, the analysis indicated no effect of gender, $F(1, 66) = .05, p = .52$. On average, male and female professors were rated similarly on competence, which is illustrated in Figure 2. In terms of taking additional classes with the professor, the analysis indicated no effect of gender, $F(1, 67) = .06, p = .81$. On average, male and female professors were similarly rated by students in taking additional classes with professors, which is illustrated in Figure 3.

For the second set of hypotheses, I hypothesized that there would be an interaction between error source and professor gender, such that female professors would be rated much lower than their male counterparts in response to a professor error. In terms of competence, the analyses demonstrated no interaction between gender and error source, $F(1, 67) = .33, p = .57$. This effect is illustrated in Figure 1. In terms of competence the analysis demonstrated no interaction between gender and error source, $F(1, 66) = .03, p = .87$. This effect is illustrated in Figure 2. In terms of taking additional classes with the professor, the analysis demonstrated no interaction between gender and error source, $F(1, 67) = .33, p = .57$, which is illustrated in Figure 3.

Finally, for the third set of hypotheses, I expected that professors would receive lower ratings when they were responsible for errors. With respect to competence, there was a strong effect of error on judgments, such that professors who made errors were rated much lower than professors who did not make errors, $F(1, 67) = 264.51, p < .001$. Thus, H3a was supported. Figure 1 illustrates this effect. In regards to likability, there was a strong effect of error on judgments, such that professors who made errors were rated much lower than professors who did not make

errors, $F(1, 66) = 242.86, p < .001$, thereby supporting H3b. Figure 2 illustrates this effect. With respect to taking another class with a professor, there was a strong effect of error on ratings, such that professors who made errors were rated lower than professors that did not make errors, $F(1, 67) = 264.5, p < .001$. As such, H3b was supported, as illustrated in Figure 3.

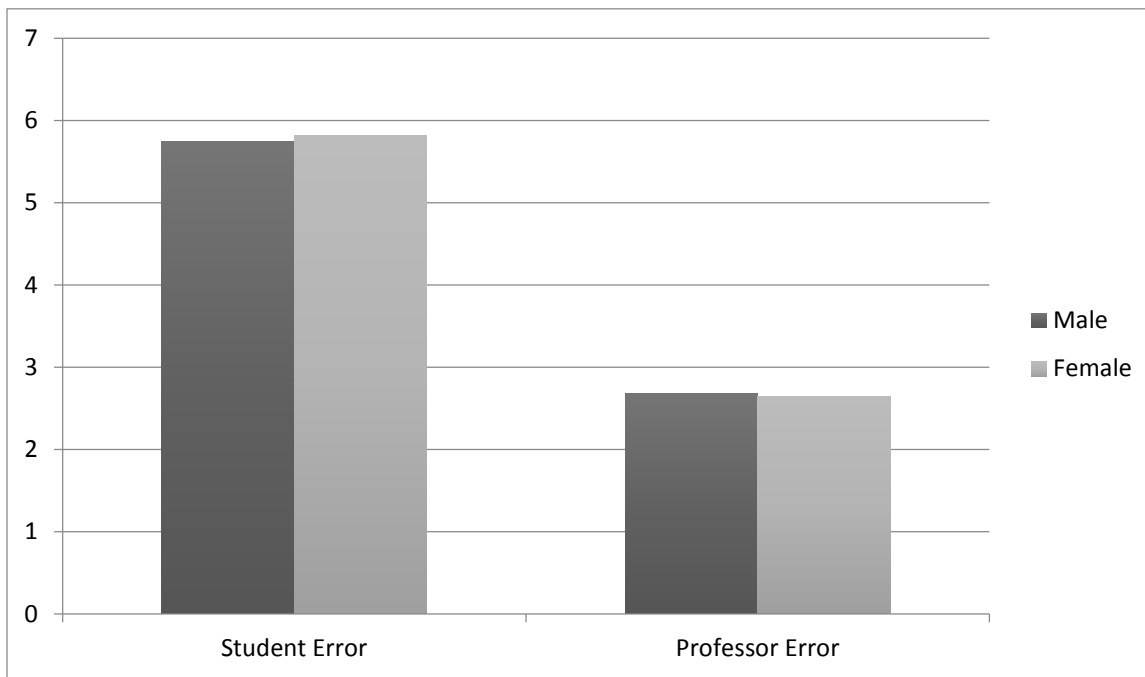


Figure 1. Mean ratings of professor competence. N=68.

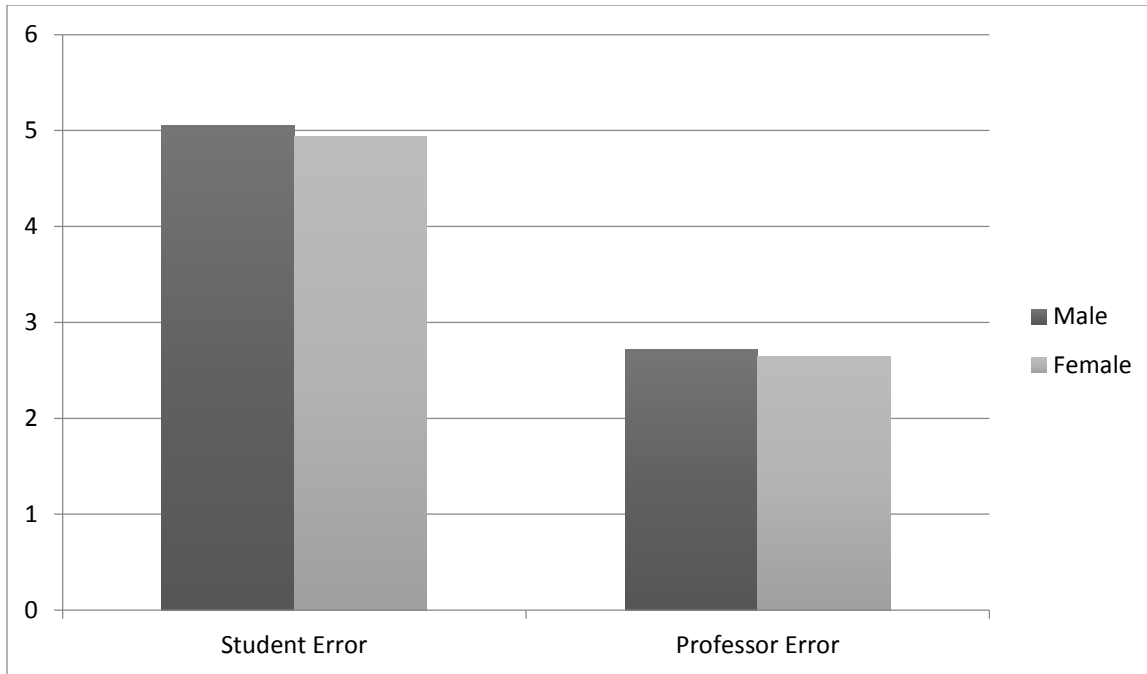


Figure 2. Mean ratings of professor likability. N=67

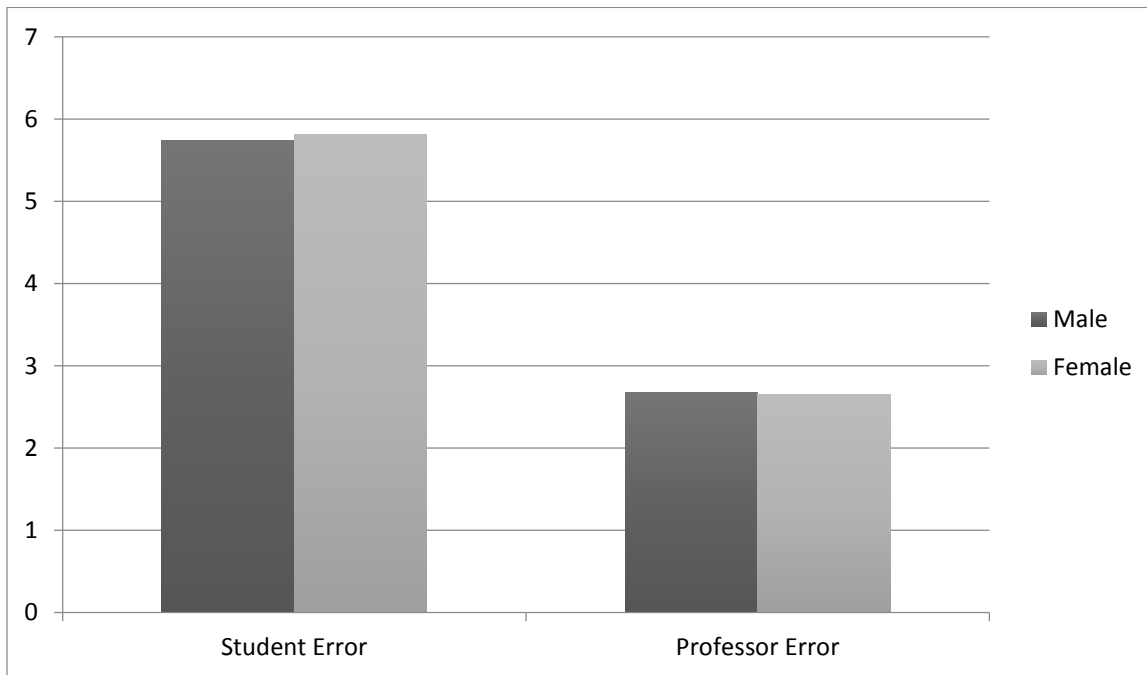


Figure 3. Mean ratings of likelihood to take an additional class with professor, N=67.

Chapter 4: Discussion

The current study examines subtle sexism in student evaluations of professor effectiveness. Scenarios where professor gender is manipulated and whether the professor or student made a mistake were presented to participants as a means to elicit subtle sexism in subsequent ratings of professors for each scenario. Role congruity theory suggests that due to subtle sexism, female professors will regularly be rated as less effective than male professors by students.

For hypothesis 1, I predicted that female professors would be rated lower than male professors on competence, likability and likelihood for students to take additional classes. Results indicated that despite being rated lower overall, there was no significant difference between ratings for female professors and male professors. In regards to hypothesis 2, I predicted that female professors who made a mistake would be rated lower than male professors who made a mistake for competence, likability, and likelihood for student to take additional classes. The results indicated although female professors that made mistakes were rated lower overall than male professors that made mistakes, the difference was not significant. For hypothesis 3, I predicted that student ratings of competence, likability, and likelihood to take an additional class would be more critical of professors that make mistakes than ratings for professors when students make mistakes. The results revealed significant difference between student's ratings of professors that made mistakes and student mistakes for each variable, providing support for H3a, H3b, and H3c.

There are numerous reasons for why hypothesis 1 and 2 were not significant. Due to the limited range in ratings, there is likely a central tendency bias from participants. This could be a result of having such a large scale (1-7), which may have made participants less willing to rate

on extremes. Another possible explanation could be due to test-taking fatigue. With each scenario, there were over 15 scales to respond to after writing an email to each fictional professor, which may have pushed participants into answering the initial scenarios more honestly, then rushing through subsequent scenarios. An additional reason for the results is the lack of power in the scenarios to adequately prime subtle sexism in participants, which can be attributed to each scenario itself and/ or the salience of professor gender in each scenario. If the scenarios themselves were not vivid enough to evoke bias in ratings. Alternatively but exclusively, the gender of the professors within the scenarios may have not been salient enough to evoke differential ratings. Overall, as seen in Table 1, the scenarios were rated as realistic by participants, and for the most part, the presented scenarios were novel for participants.

There are numerous limitations to the study. To begin, the sample consisted of mostly female participants. As noted previously, female students tend to have differential gender expectations of professors relative to male students, and these expectations are reflected in the ratings students provided (Clune 2003, Basow 1995, Rubin 1981). Furthermore, there were some interesting differences in how scenarios were evaluated. Specifically, ratings for the three scenarios within each condition were rated relatively similarly, with a few exceptions (see Table 2). For example, in terms of competence, participants tended to rate scenarios for all conditions very similarly with the exception of the female, professor error condition. Similarly, in terms of likability, participants rated scenarios similarly with the exception of the male professor error condition and the female professor student error conditions. In regards to taking additional classes with professors, participants rated scenarios similarly with the exception of the female, professor error condition. Although there is not enough data to explain why this is the case, it is possible that for the female professor, professor error condition, participants considered

contextual cues, or relied more on their personal experiences to help them make judgments. This may explain similar correlations between ratings of competence and ratings of likelihood to take additional classes with the professor for this condition.

Table 2

Reliabilities among scenarios for each outcome variable.

| Gender/Error Source | Cronbach's Alpha | | |
|---------------------|------------------|------------|------------------|
| | Competence | Likability | Additional Class |
| Male/Professor | .81 | .59 | .81 |
| Female/Professor | .55 | .90 | .55 |
| Male/Student | .93 | .86 | .92 |
| Female/Student | .82 | .47 | .82 |

Although there is extensive research in gender bias in student ratings, there has been very little exploration into how subtle sexism drives faculty ratings. My study, which used fictional scenarios to prime subtle sexism in students, may not have had powerful enough scenarios to elicit a stereotyped response from the participant; similarly, the professor's gender may not have been salient enough in each scenario to activate schemas that would lead to a stereotyped response. Surprisingly, across ratings of competence, likability, and likelihood to take a subsequent class with a professor, female professors were rated consistently lower than male professors. This falls in line with previous research and role congruity theory, which suggests that females will be judged as less favorable for roles that are incongruent with their gender; this effect, though small, is intriguing and warrants further investigation (Eagly and Karau 2002).

Future studies would benefit from creating more vivid scenarios, which may more effectively evoke subtle sexism in participants. One difficulty in creating such scenarios, however, is that student interpretation of the scenario is limited to their experience in college. As such, certain scenarios may not be as meaningful to students who are earlier in their academic career relative to students who have taken more classes due to differing levels of collegiate experience. In order to accommodate for this, researchers could screen scenarios to a variety of students to assure they are universally meaningful.

Although part of students' perceptions of their professors is based on previous positive and negative experiences with previous professors, subtle sexism still may drive many of their initial perceptions and subsequent assessments (Thoroughgood et al. 2013). Future studies could examine subtle sexism in the language used by students when interacting with professors. The most effective means of accomplishing this would be using similar scenarios and having students draft emails to fictional professors based on each scenario.

To summarize, subtle sexism is abundant in society today and role congruity theory explains why students may provide differential ratings of professors based on gender. Although the current study did not find significant results between female and male professors and between female and male professor that each made mistakes, female professors were still universally rated lower overall by students in competence, likability, and likelihood to take a class with the professor again. This shows that there is inherent differences in ratings between male and female professors that should be explored further in subsequent studies.

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Appendix

Professor Mistakes:

You are taking a psychology course with Professor Matthew/ Madeline Stoltz. After taking an important midterm, you noticed that you had a zero for the exam on D2L, while other people in class have received their grades. You've spoken to **her** twice about fixing the problem, and **she** said **she'd** fix it within the week. It is now three weeks later, and you still have a zero. You know that **she** will be submitting grades soon and you need your incorrect grade fixed this week. You are unable to visit **her** during her office hours this week. Please write an email to your professor to address this issue.

You have been trying to set up an appointment with Professor Kevin/Kaitlin Meyer to discuss your academic plan and job opportunities, and to get some paperwork signed. Professor Meyer has been difficult to get a hold of, however, and never happens to be in **her** office during office hours. Furthermore, your professor is slow to respond to the couple of emails you've previously sent. When you finally were able to arrange an appointment, and **she** did not show up. You need to have this meeting this week in order to get your paperwork done on time. Please write an email to your professor to address this issue.

You are currently enrolled in Professor Mark/ Mary Morrison's sociology class. Your professor seems to be fairly disorganized and forgetful both in class and when you've visited **her** office. **She** often posts study guides a few days before the test, and you have noticed that the most recent study guide is clearly not meant for your class. You suspect your professor has uploaded

the wrong document, and having the study guide over the weekend will really help you prepare for the upcoming test. Please write an email to your professor to address the issue.

Student Mistakes:

You have a friend who is having a minor medical procedure, and you need to accompany your friend to the doctor. You have to miss class to do this, and after you get your friend home from the doctor, you realize that you have just missed a major test in your chemistry class. Professor Patrick/ Patricia Johnson does not typically allow make-up exams. However, another friend who has taken a class with this professor says that she will sometimes allow exceptions to her policies. Please write an email to your professor to address the issue.

The day after a term paper was due in an online dropbox for Professor Daniel/ Danielle Kotter's philosophy class, you realized you uploaded the wrong document. The term paper is one of only two graded components of the class and you know she will automatically deduct 50% from the paper grade for a late paper. You know that this mistake could potentially cause you to fail the course despite the effort you put into the paper and the overall quality of the final draft. Please write an email to your professor to address the issue.

You had an appointment set up with Professor Martin/ Maria Connors to review a major project for the class and provide an update on your progress. Unfortunately, you made a mistake in your calendar when planning this meeting, and you realize you have missed the meeting. Not only is

the project important to you, but it is a major part of your grade. **Her** feedback will be very important in helping you complete the project, and you know that **she** had booked a full hour to go over the project. Please write an email to your professor to address the issue.

Teacher Credibility Scale Revised

Each item was rated on a seven point semantic differential scale.

Competent: Competent-Incompetent

Likability: Likable- Unlikable

Would take a class with this professor again:

Would take a class with this professor again-Would not take a class with this professor again

Who is responsible in this scenario?

-Student

-Professor

-Neither

How realistic was this scenario:

Very Unrealistic-Very Realistic

Have you experienced this scenario:

Yes-No