

Gender and Sexuality Stereotypes of Lesbian Women in the Workplace

By

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ABSTRACT

How are lesbian women perceived at the workplace? This study investigates how gender, sexual orientation, and job type might simultaneously influence warmth and competence assessments of women in the workforce. While recent literature has extensively studied stereotypes affecting heterosexual women, there is little focus on how sexual orientation and job type might simultaneously influence perceptions of lesbian women. This study employs a 2x2 experimental design investigating if there is a job type effect and/or a sexual orientation effect that influences subjects' perceptions of the target's warmth and competence using the Stereotype Content Model (SCM). This paper hypothesizes that (1) lesbian women in agentic jobs, as compared to heterosexual women, will be perceived as more likable and more competent, and (2) lesbian women in communal jobs, as compared to heterosexual women, will be perceived as less likable and less competent. While these hypotheses were not supported by the experimental data, the results identify important areas of future research.

INTRODUCTION

Stereotypes are shaped by societal beliefs. Societal views, however, can change over time (Fiske et. al, 2002). In the past ten years, American society has shifted towards acceptance of the LGBTQ community, showing a “trend toward greater tolerance” (Smith, 2011). Despite recent legal wins for the queer community (such as the federal legalization of gay marriage in the U.S. in 2015), LGBTQ youth still struggle with social stigma, facing an increased risk of poverty, forced homelessness, and suicide (Higa et. al, 2014). This paradigm of increased policy protection yet persistent social discrimination could reflect mixed societal views about homosexuality, raising the question: How does society currently perceive LGBTQ individuals in the workplace?

It is well-documented within management literature that one’s identity characteristics, such as race or gender, can negatively influence others’ perceptions. For examples, see the motherhood penalty (Peplau and Fingerhut, 2004), high unlikability assessments of women in agentic jobs (Williams and Tiedens, 2015), and the gender-pay gap (Parker and Funk, 2020). As the current population of openly LGBTQ+ U.S. citizens rises to 7%, there is growing focus in management literature on how sexual orientation might influence stereotypes and perception biases (Jones, 2022).

However, much of current research focuses on heterosexual individuals at the expense of LGBTQ women. One researcher wrote that “lesbian leaders have received virtually no attention in mainstream leadership or organizational scholarship” (Morton, 2017). This paper aims to address this gap in literature by focusing on lesbian women in the workplace.

Additionally, little research has explored how sexual orientation, gender, and job type combined might influence perceptions of competence and warmth. Some research has analyzed

lesbian women in agentic (masculine) jobs, but little research has focused on perception biases that lesbian women in communal jobs might face.

Ultimately, the gap in sexual orientation literature inspired the following research question:

Research Question: How does (1) sexual orientation and (2) job type influence competency and warmth assessments of lesbian women in the workplace?

CONTRIBUTION & SIGNIFICANCE

Leadership Development

In management literature, benefiting from an identity characteristic, such as gender, is referred to as positive discrimination. For example, gender research shows that men are viewed as more competent in agentic jobs than women. This is a strength that, hypothetically, men can use to their advantage by altering their appearance to seem more masculine, if they desire. Similarly, could queer leaders positively benefit from perceptions of their sexual identity?

Understanding how sexual orientation might be positively perceived can inform queer women on how to play to their strengths. Subsequently, these findings could empower queer leaders in deciding if, when, and how to disclose their sexual identity. Knowledge is power, and with knowledge of potential positive discrimination, queer individuals could capitalize upon perceived strengths and minimize perceived weaknesses.

Many queer individuals struggle with if, when, or how to open up about their sexual orientation. This is called identity disclosure, or the personal decision for one to reveal their status as a sexual minority. In a 2015 study, researchers found that “the decision to come out is one of the most important decisions faced by gay employees,” and “one that many others

[heterosexual employees] do not have to make” (Chang and Bowring). The decision to “out” oneself as queer is influenced by assessments of safety; for example, a LGBTQ employee’s identity disclosure decision is influenced by their assessments of their workplace and coworkers. Thus, this research could empower queer women with knowledge to make informed decisions on when, if, or how to disclose their identity to their coworkers.

Today, over 21% of Generation Z identifies as LGBTQ (Jones, 2022). It is of rising importance for young queer leaders to understand the challenges they could face in the job market. This knowledge can help youth proactively counteract perception biases as they transition into the workforce. Rather than focusing on the negativity of stereotypes, queer leaders can use this knowledge to prepare themselves for their careers.

Balancing Role Prioritization

This research study can inform queer women on how perceptions of their role prioritization might affect career outcomes. Role prioritization is the concept of balancing one’s many identity characteristics. The Role Prioritization Model (RPM) states that perception penalties and benefits can arise “due to perceived fulfillment or neglect of communal roles and agentic roles” (Haines and Stroessner, 2019). For example, women and men who defy traditional gender roles can be negatively perceived and thus penalized. However, communal men and agentic women “can (sometimes) have it all” by successfully balancing their roles, write Haines and Stroessner. Applying this concept to the LGBTQ community, LGBTQ individuals who defy prescriptive stereotypes could be penalized; however, additional research could inform LGBTQ individuals on how one might engage in role prioritization.

DEI Policies

Industry-wide, corporations are incorporating diversity into their hiring and management practices. Not only is it ethical, it is a smart business decision for companies to foster diversity in their teams. Companies that encourage diversity are more productive, efficient, and successful, according to the Harvard Business Review. However, non-homogeneous teams should be diverse in not only race, but gender and sexual orientation as well (Rock and Grant, 2019). By understanding how sexual orientation biases could affect team dynamics, corporations can take proactive steps to protect homosexual individuals in the workplace. For example, Diversity, Equity, and Inclusion programs could teach allies how to effectively advocate for their queer coworkers.

Team Effectiveness

Studies show that effective corporate diversity practices must go beyond simply forming diverse teams; organizations must also work to keep and maintain healthy, diverse teams, according to a Harvard Business Review report in 2019. Heuristics, biases, and stereotypes influence how coworkers' perceive their teammates. It is thus important to arm team members with knowledge to understand their own perception biases. While it is common knowledge that stereotypes exist, studies show that individuals have difficulty identifying discrimination in real life. This means that while heterosexual allies might recognize that societally, queer people are stereotypes, they may have more difficulty identifying the same bias and microaggressions in their own workplace (Crosby et. al, 1986). Knowledge is power, and by understanding when queer women could face bias at work, allies can proactively advocate for their queer coworkers.

LITERATURE REVIEW

Background

More American people today are open with their sexual identity than ever before. Ten years ago, only 3.5% of the U.S. population openly identified as a member of the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community. Today, that number has doubled to 7.1 percent (Jones, 2022). The number of queer individuals in the workforce is growing, too; in 2021, 8 million workers self-identified as LGBTQ (Sears et. al, 2023). The rise of openly 'out' queer individuals could represent wider social acceptance of the gay community, and with it, changing social ideas of how queer people are perceived. To quote Fiske et. al (2002), "stereotypes come and go with the winds of social pressures." From the federal legalization of gay marriage in 2015 to new legal protections against employment discrimination, institutional policies are beginning to protect against overt, identity-based discrimination.

However, despite these legal and social advances, LGBTQ individuals continue to battle both covert and overt stigma. In their personal lives, their identity makes them more likely to experience forced homelessness, strained familial relations, and poverty than heterosexual individuals (Higa et. al, 2014). Additionally, discrimination of LGBT individuals occurs at startling rates in the workplace. In a 2021 study, researchers at the UCLA School of Law found that 46% of LGBT workers experienced workplace discrimination during their careers. Additionally, the unemployment rate of LGBTQ people is well above the national unemployment level: 8% vs. 4.1% (Sears et. al, 2021). As the queer population and workforce grows, employers will have to grapple with how to create an equitable workplace for their queer employees. The first step is understanding how LGBTQ individuals are perceived at work.

Stereotypes, or perception biases, are how society perceives the warmth, competence, and status of different individuals. Understanding the psychological dynamics that influence perception can help corporations proactively integrate diversity, equity, and inclusion policies into their operations (Fiske et. al, 2002). However, the influence of sexual orientation on an outsider's perceptions—for example, how a lesbian woman's sexual identity is perceived by others—has received little attention in management literature (Peplau and Fingerhut, 2004). Furthermore, few research papers have studied how multiple characteristics (such as job type, gender, and sexual orientation) could simultaneously influence perceptions. More research is needed to understand the landmines of potential perception biases in today's modern workforce.

The following theoretical concepts lay the foundation for my research question: How might (1) job type (communal or agentic) and (2) sexual orientation affect perceptions of queer women in the workplace?

Stereotype Content Model

In 2002, the stereotype content model (SCM) was developed by social psychologists to explain how stereotypes, or perceptions biases, are formed. Fiske et. al established that stereotypes stem from two universal dimensions of perception: 1) perceived warmth and 2) perceived competence (2002). Warmth measures how likable, trustworthy, or sociable one is, whereas competence measures how capable one is. Warmth and competence fall on a low to high scale; for example, high warmth implies one is friendly and trustworthy, whereas low warmth implies one is untrustworthy (Fiske, 2018).

Broadly speaking, one's assessment of a target's warmth and competence depends on whether the target belongs to a social ingroup or outgroup. Ingroups comprise the majority identity, while outgroups possess a trait that is fundamentally different from the ingroup (Fiske

et. al, 2002). In other words, outgroups are “othered” by the majority. Subsequently, outgroups are viewed as a threat by the ingroup, as outgroups are perceived to hold incompatible goals and thus are the ingroup’s enemy (Cuddy et. al, 2008). Fiske et. al attribute this to our innate “evolutionary need to recognize the intent of others and their capabilities to act on that intent” (2002).

Perceptions of warmth and competence in the SCM are influenced by two social variables: competition and status. Perceptions of status are influential to competence and warmth perceptions because status ties back to the evolutionary need to quickly recognize if others pose a threat. Thus, higher status individuals are judged to be more competent under the SCM. Similarly, non-competitive individuals are judged to be more likable than competitive individuals, as non-competitive individuals’ intentions are perceived to align with the perceiver’s goals. Competitive outgroups—groups perceived as possessing an identity and goals fundamentally different from the ingroup—often elicit negative emotions (Fiske et. al, 2002). Thus, when studying how race, gender, or sexual orientation might influence perceptions, it is imperative to keep status constant across experimental conditions as a control.

Importance of Understanding Stereotypes

Initial perception biases of identity characteristics have a cascading cognitive effect. Perceptions of warmth and competence produce affect, or emotional prejudices, and eventually behaviors. Subsequently, understanding stereotypes can allow society to break problematic patterns of behavior.

Additionally, perception biases can have tangible impacts on income and salary. Goldberg et. al found that women in masculine-typed jobs were perceived as violating a gender stereotype, and they subsequently earned significantly lower salaries than their male counterparts

(Goldberg et. al, 2004). Perception biases significantly influenced women's salary amount; today, the gender-wage gap still exists. Stereotypes are not harmless; they contribute to economic inequality.

Despite anti-discrimination legislation, women are still disproportionately more likely to experience hostile sexism or sexual harassment at work than men: 22% compared to 7%, respectively (Parker and Funk, 2020). Sexist attitudes, or stereotypes against women, contribute to gender inequity at work such as the gender wage gap, according to the Pew Research Center. One in four career women have earned less than their male coworkers for the same work (Parker and Funk, 2020). On a macro scale, perception biases contribute to a culture of hostile sexism against women in the workplace. More research is necessary to understand how perceptions might influence casual sexism.

Gender Stereotypes in the Workplace

Prescriptive stereotypes are how society expects an individual should behave based on their identity. Violating prescriptive gender stereotypes with counter-stereotypical behavior can result in negative consequences, as violations threaten the status quo. In a study titled "The subtle suspension of backlash: A meta-analysis of penalties for women's implicit and explicit dominance behavior," Williams and Tiedens found that female employees displaying dominance led to lower likability assessments than their male counterparts. Women who behave assertively (a stereotypically agentic action) were "viewed as less likable and ultimately less hireable" (Williams and Tiedens, 2015). This is an example of career women facing likability penalties because they violated the expected behavioral norms of the group. However, a major limitation of this study is that it only studied the perceptions of heterosexual women.

It is important to study homosexuality perception biases within gender-typed jobs because perceived fit with gendered jobs influences evaluations and recommendations. In a 2004 paper, Heilman et. al studied the biases affecting women working in a male-typed job. In three studies with 242 total participants, the researchers found that violating job-fit prescriptive stereotypes can have measurable implications on one's career success, writing that "success in nontraditional areas is double-edged for women." They found that even when a woman's competence was established in a male-typed job, they are "less liked and more personally derogated" than their male counterparts. These perceptions had measurable impacts on career outcomes (i.e. reward allocation, evaluations, and recommendations) as well as social costs (i.e. social rejection).

Research on heterosexual women in the workforce is well-documented (Williams and Tiedens, 2015; Heilman et. al, 2004; Phelan et.al, 2008; Rudman and Glick, 1999). However, literature studying homosexual women in the workforce is practically non-existent. If gender influences job-fit perceptions, how can sexuality biases also influence job-fit assessments in both communal and agentic jobs?

Gender and Sexual Orientation: Multiple-Group Membership

The studies mentioned above (Fiske et. al, 2004 and Williams and Tiedens, 2015) focused on how a single aspect of one's identity (gender) could influence perceptions. However, in real life, people hold multiple identity characteristics: gender, race, age, sexual orientation, disability status, etc. Early 2000s to 2020 management research focused on how a single identity is perceived, neglecting how multiple factors could simultaneously influence perception biases. In 2004, researchers hypothesized that belonging to multiple outgroups would increase negative perception biases and subsequently increase discrimination (Peplau and Fingerhut). This is called

the double jeopardy hypothesis, and if correct, would imply that female homosexuals would suffer from more discrimination than both men and heterosexual women. However, Strinic et. al's findings in "Multiple-group membership: warmth and competence perceptions in the workplace" paper did not support the double jeopardy hypothesis (2020).

To investigate the validity of the double jeopardy hypothesis, the researchers focused on how combinations of demographic group categories could simultaneously influence perception biases in the workplace. For example, the researchers investigated: "What kind of stereotypes are evoked when employers review a job application from a 55-year-old Arab woman?" Researchers varied gender (female or male), ethnicity (Arab or Swedish), sexual orientation (homosexual or orientation not mentioned), and age (thirty or fifty-five years old) in an experiment similar to Cuddy et. al's 2009 study. Participants from a sample of recruiters and working professionals were asked to rate the perceived warmth and competence (derived from Fiske et. al's SCM) of each of the 16 demographic group combinations in the context of work (Cuddy et. al, 2009).

To quantify warmth and competence perceptions, Strinic et. al used warmth and competence subscales with four questions each. The warmth subscale asked participants to rate the target groups on how friendly, warm, well-intentioned, and considerate the target groups are perceived by society, while the competence subscale asked how competent, talented, skillful, and ambitious the target groups were perceived. Participants used a 5-point Likert scale to rate perceived competence and warmth. Averages of the four questions were used to compare warmth and competence assessments (Strinic et. al, 2020).

Importantly, Strinic et. al found that there was a significant interaction between gender and sexual orientation in participants' perceptions of perceived warmth. Adding the "homosexual" label to a Swedish man resulted in a significantly higher warmth rating (3.83 vs.

3.20); however, Swedish homosexual women received lower warmth assessments than Swedish heterosexual women (3.28 vs. 3.68). Interestingly, Swedish homosexual women were found to be more competent than warm, contrary to years of studies finding that women, when orientation is unspecified, are viewed as more warm than competent. The study's key finding was that perceptions of warmth were sensitive to homosexuality; Swedish men were perceived as more warm when labeled as homosexual, while Swedish women were perceived as less warm when labeled as homosexual (Strinic et. al, 2008).

Strinic et. al suggest further study "examining intersections of specifically preselected groups," especially in a work context. A key limitation of their study is that Strinic et. al did not vary job type (i.e., communal or agentic, or female-typed vs. male-typed jobs). This is important to examine as Cuddy et. al found in 2011 that stereotypes could fit with different occupations. By understanding multiple-group stereotypes, researchers "could paint a more nuanced picture of the discrimination that people who simultaneously belong to multiple minority groups face in the labor market."

Sexual Orientation Stereotypes

Identity Disclosure

Some identities, unlike race, are invisible until they are revealed by the individual, such as sexual orientation. Identity disclosure is a queer individual's personal decision to reveal their sexual identity, influenced by factors like religion and social support (Barringer et. al, 2017). Identity disclosure is particularly relevant to the queer labor market, as research has found there are varying costs and benefits associated with disclosure at work. However, most research on sexual orientation stereotypes was conducted in a different social atmosphere; for example, a

study found that in the mid-nineties, $\frac{2}{3}$ of CEOs would not be willing to put a homosexual on their leadership committees in the mid-nineties (Chang and Bowring, 2015).

Identity disclosure influences perceptions of competence and warmth. For example, disclosing a homosexual identity affected how gay male leaders were perceived. In a 2009 study, researchers Blashill and Powlishta used a sample size of 177 male undergraduate students to test the hypothesis that gay men are more socially undesirable than heterosexual men. To measure perception biases, the researchers designed an experiment in which participants read a short vignette describing the hobbies of homosexual, unspecified, and heterosexual men. Then, they were asked to rate the target's social desirability (an SCM-derived metric); does the participant like the target, would the participant like to work with the target, and would the participant avoid working with the target?

The study found that when a gay man's identity was disclosed, participants who harbored more negative attitudes toward gay men found the men less socially desirable (less willing to work with and more likely to avoid them). This raises questions about how outing oneself in the workplace influences work outcomes. Ultimately, Blashill and Powlishta found that "gender role and sexual orientation each produced significant main effects," showing that both identity characteristics in combination played a role in a perceiver's perception biases.

A major limitation of this study is evident in the title; the sample focuses on males' perceptions of gay men. Blashill and Powlishta themselves suggest that research should explore how homosexual women might be perceived. The bulk of literature on sexual orientation biases studies gay men, but much less research studies the perception biases of queer women.

Portrayals of Effeminate and Masculine Sexual Orientation

One limitation of conducting a study on sexual orientation stereotypes is that stereotypes could differ within subgroups. For example, broad sexual orientation stereotypes are different from subgroup stereotypes (i.e., gay men who act masculine versus gay men who act effeminate). In a 2017 study, researchers Sink, Mastro, and Dragojevic found that the competence and warmth of two subgroups of gay men (effeminate vs. masculine gay men) were perceived differently. In the study, 169 heterosexual participants watched a television episode depicting effeminate and masculine gay men. Participants then answered questions on perceived masculinity and femininity, stereotypicality, warmth and competence, and portrayal valence using scale. Portrayal valence refers to the participant's perception of the character being a positive representation of gay men (Sink et. al, 2017).

Within the masculine and effeminate subgroups, the warmth ($M=3.70$ vs. $M=4.61$, respectively) and competence ($M=4.07$ vs. $M=3.85$, respectively) ratings were significantly different. However, it is important to note that the two groups did not differ in perceived portrayal valence. This has important implications for my study, as I do not make the distinction between lesbian subgroups to participants. While different subgroups could be viewed differently (i.e., masculine vs. femme lesbians), introducing subgroups adds additional noise and independent variables to my study. Sink et. al's finding that subgroups of gay men did not differ in portrayal valence is an indicator that my own study could effectively measure perception biases of lesbian women (2017).

Lesbian Women

Lesbian women hold membership in two marginalized groups based on their gender and sexual orientation. Some research proposes that lesbian women workers might suffer from "double jeopardy" in which they are doubly disadvantaged due to their gender and sexual

orientation (Peplau and Fingerhut, 2004). Theoretically, this could influence perceptions of perceived job fit, subsequently penalizing lesbian women. However, research from Peplau and Fingerhut (2004) did not support the double jeopardy hypothesis.

Instead, Peplau and Fingerhut found that lesbian working moms receive a perception 'boost' as compared to a perception malus of heterosexual mothers. Typically, when heterosexual women become mothers, they suffer from a motherhood penalty on competence perceptions at their job; their coworkers often perceive mothers as less engaged and less hireable. However, Peplau and Fingerhut found that this gender penalty did not apply for lesbian mothers, as lesbian parents were rated as competent as heterosexual fathers. Because "negative stereotypes pertaining to heterosexual mothers were not applied to lesbian mothers," Peplau and Fingerhut deduced that a sexual orientation effect could be at play (2004).

The researchers attribute this finding to different expectations of lesbian vs. heterosexual mothers; society expects heterosexual women to have a male breadwinner to rely on, and can thus afford to retire after a child. This results in the perception bias that new mothers are less career-oriented than they previously were. On the other hand, Peplau and Fingerhut suggest that society might hold different stereotypes of lesbian mothers, suggesting there are similarities in the perceptions of lesbian women and heterosexual men. Thus, because lesbian women do not have a male breadwinner to rely on, they retain their career orientation post-birth. This finding is pertinent to job type biases. The researchers suggested that if lesbians are indeed perceived as more masculine than heterosexual women, lesbians could hold an advantage over heterosexual women when applying for agentic jobs (Peplau and Fingerhut, 2004).

The key finding of this study is that lesbian and heterosexual women are not perceived uniformly. While the motherhood status significantly interacts with a heterosexual woman's

perceived competency assessments, lesbian women do not experience a drop in perceived career orientation after becoming mothers. This raises the question of how job type, gender, and sexual orientation might interact to produce different perception biases. Peplau and Fingerhut advised that additional studies of stereotypes of lesbian workers are needed (2004).

Hypotheses

Stereotype research (Fiske et. al, 2002; Cuddy et. al, 2011; Fiske, 2012;), gender research (Fiske, 2012; Williams and Tiedens, 2016), job type research (Heilman and Wallen, 2004), and sexual orientation research (Strinc et. al, 2020; Blashill and Powlishta, 2009; Sink et. al, 2015) inform the study's hypotheses that:

- 1) Lesbian women, as compared to heterosexual women, will be perceived as more competent and more warm in agentic jobs.
- 2) Lesbian women, as compared to heterosexual women, will be perceived as less competent and less warm in communal jobs.

DATA COLLECTION

Exploratory Investigation

The researcher interviewed Director Erin Cross of the Penn LGBT Center for preliminary guidance. Cross guided the thesis topic development by advising to frame research on the LGBT community through a lens that will be helpful to queer individuals in business. Cross raised important concerns about the difficulty of finding existing data on the topic. This informed the literature review and data collection process.

Limitations and Challenges

There is a lack of archival data on queer identities in business, as identity disclosure is voluntary. On Human Resources forms, employees have the option to disclose their sexual identity, but due to federal discrimination laws, employers cannot mandate this information be collected nor publicly disclosed. This posed a significant challenge to collecting data. Due to the lack of archival and historical data, it was necessary to design an original experiment. Drawing on past research, this study emulated the method used by Heilman et. al in their 2004 paper “Penalties for Success: Reactions to Women Who Succeed at Male Gender-Typed Tasks.”

Experimental Design

Data was collected via an online survey administered using Qualtrics and Prolific. The study’s duration was approximately 8 minutes. Participants were pre-screened for (1) location within the United States and (2) English fluency.

The proposal was developed in conjunction with Professor Aaron Wallen. It was submitted and approved by the IRB on November 28, 2023 (see Appendix A for the experimental design, Appendix B C for the IRB Submission, Appendix C for a copy of the IRB approval, and Appendix D for the IRB informed consent form).

Participants were told that the purpose of the study was to understand evaluations of job applications. First, participants read a short scenario in which they were the president of a (1) teacher's union (communal condition) or (2) firefighter's union (agentic condition); see Figure 1 below and Appendix A for all conditions. Participants were told they needed to hire a project leader for the union. Participants were then presented with a job description, where successful candidates needed to be (1) agentic condition: determined and autonomous, rational, outspoken and assertive, analytical, and direct, or (2) communal condition: committed and responsible, helpful, sociable and conscientious, supportive, and honest. Participants then read and evaluated a job application (see Appendix A, subsection Job Applications).

Figure 1

Agentic Experimental Condition Scenario

You are the newly-elected **president** of a large **firefighter's union** in Philadelphia. After working for ten years as a firefighter, you were dissatisfied with workplace conditions in your district. You ran for union president on the platform of pay raises for firefighters. Your platform resonated with your union members, many of whom feel they are underpaid for their work.

However, six months have passed since you began as union president. You have made little progress on negotiating pay raises with the city district. In last week's union meeting, prominent union members shared how they were dissatisfied with your slow progress. Instead of waiting for a negotiated pay raise, they threatened to strike... an outcome you desperately want to avoid.

You have decided to select a **project leader** to help you. A project leader will help you prepare for upcoming negotiations and appease disgruntled union members. Most importantly, a new project leader could help your union avoid a costly rogue strike.

Variables and Controls

The survey utilized a 2x2 experimental design. Participants were randomly assigned to one of four conditions in a 2x2 experimental design: agentic heterosexual, agentic homosexual, communal heterosexual, and communal homosexual. The independent variables are (1) sexual orientation (homosexual or heterosexual) and (2) job type (communal or agentic). The dependent variables are the assessments of perceived warmth and competence.

In all experimental conditions, the job applicant had the same employment history and

years of work experience to control for status. Their race was not mentioned. Pronouns (she/her/hers) were consistent across conditions. No picture was included.

Survey Constructs and Measures

Social desirability was used as a survey construct representing how much others want to work with an individual (Blashill and Powlishta, 2009). Social desirability was measured with the question “How much do you think you would like to work with this individual?” using a 9-point scale (see Appendix G, subsection Evaluative Measures).

In this study, subjects’ perceptions were measured using the Stereotype Content Model (SCM) dimensions of perceived warmth and competence. Warmth was measured using a 9-point bipolar scale, derived from Heilman et al., 2004. Participants were presented with a bipolar adjective pair (i.e., Bold—Timid) and asked to select a number one through nine representing their perception. For example, for the bipolar adjective pair Bold—Timid, 1 means “very bold,” 5 is “neutral,” and 9 is “very timid.” Participants were presented with the following warmth measures, which were averaged to form an overall composite warmth score: Not Abrasive—Abrasive, Unlikable—Likable, Untrustworthy—Trustworthy, Pushy—Accommodating, Selfish—Not selfish.

Competence was similarly measured using a 9-point bipolar scale. Participants answered the following competence measures, which were then averaged to form an overall composite competence score: Unambitious—Ambitious, Indecisive—Decisive, Weak—Strong, Unassertive—Assertive, Unproductive—Productive, Unintelligent—Intelligent, Incompetent—Competent.

Participants answered a total of 14 bipolar adjective questions, including an attention check and a throwaway question (see Appendix G, subsection Evaluative Measures).

Manipulation Checks and Attention Checks

To screen out inattentive respondents, participants answered 3 attention checks throughout the survey. Participants were told that incorrect answers would terminate their survey session.

After reading the short scenario, participants were asked to answer two questions to “ensure you understand the instructions.” These two questions asked the participant about their scenario’s job type and the associated job characteristics. The first question read: “Your role in this scenario is...” and correct answers confirmed that the participants were either the (1) president of a teacher’s union or (2) president of a firefighter’s union. This question allowed us to confirm that participants knew their job type condition (agentic or communal).

The second question asked participants to select all traits the participants should look for in an applicant. Correct answers selected “all of the above;” for the communal condition, these traits were committed and responsible, helpful, sociable and conscientious, supportive, and honest. For the agentic condition, those traits were determined and autonomous, rational, outspoken and assertive, analytical, and direct. This question served as a manipulation check to ensure that subjects understood their assigned job type condition.

The third attention check question was an attention check in the evaluation section of the survey.

Sample

Prior to launching the survey, the research team ran a test on the platform G*Power to determine the necessary sample size. A conservative estimate was roughly 76 participants. In compliance with Prolific’s minimum wage requirement, participants were paid at the rate of \$9/hour.

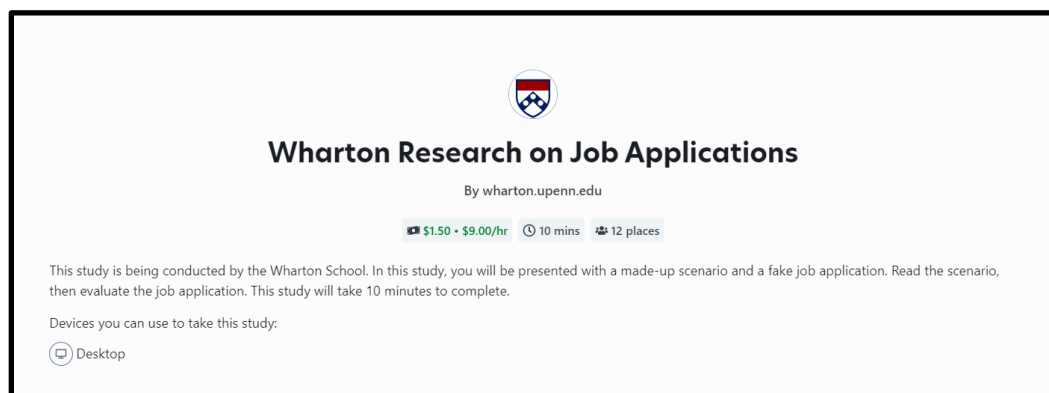
76 participants passed all attention checks and successfully completed the survey. Participants were randomly assigned to conditions. Ages of the participants ranged from 18 to 65+. Both heterosexual and homosexual participants were included in the analysis.

Beta Launch

A beta launch of the survey was conducted on November 29, 2023. A total of 12 participants (three participants per survey condition) were recruited via Prolific. Participants were pre-screened for location (within the United States) and English fluency using Prolific's standard sample function (survey was distributed to available participants). Participants were displayed the following message:

Figure 2

Prolific Message Displayed to Subjects



Participants were paid \$1.50 for the beta launch survey which was estimated to take 10 minutes to complete. The 12 participants in the beta launch took an average of 8 minutes to take the survey, and the pay was subsequently adjusted in the full survey launch to \$1.20. The beta launch was completed successfully, and the survey was extended to 64 additional subjects on December 2, 2023. The survey closed on December 2, 2023, after 76 participants successfully completed the survey.

DATA ANALYSIS

The raw data was first analyzed by creating a composite warmth score and a composite competence score. Five items measuring warmth were averaged together and seven items measuring competence were averaged together to compute the composite scores (see Figures 3 and 4 below). The Cronbach's alpha was computed to test the reliability of the composite scores. The Cronbach's alpha for the warmth composite score was 0.729 across 5 items. The Cronbach's alpha for the competence composite score was 0.944 across 7 items. The Cronbach's alphas were above the 0.70 threshold, which justified the method of creating composite scores.

Figure 3

Competence Items Statistics

Competence Items Statistics		
Item	Mean	Std. Dev.
Unambitious—Ambitious	7.6316	1.2841
Indecisive—Decisive	7.2237	1.493
Weak—Strong	6.9211	1.6951
Unassertive—Assertive	6.8947	1.4567
Unproductive—Productive	7.2105	1.6274
Unintelligent—Intelligent	7.25	1.5843
Incompetent—Competent	7.3553	1.5975

Figure 4

Warmth Item Statistics

Warmth Item Statistics		
Item	Mean	Std. Dev.
Unabrasive—Abrasive	5.1842	1.9846
Unlikable—Likable	6.1974	2.02
Untrustworthy—Trustworthy	6.6842	1.9405
Pushy—Accommodating	5.0789	1.853
Not selfish—Selfish	6.1184	1.9997

Data Analysis Summary

The data was not statistically significant and did not support the hypotheses.

No main effect was found for job type and warmth/competence evaluations. An ANOVA of the warmth composite score and sexual orientation revealed a main effect, although not statistically significant. The data also showed that an applicant's heterosexuality overpowered any other manipulation (i.e., the heterosexual mean across job types was more warm than the homosexual mean across job types). While an analysis between male and female subjects raises important questions, it falls outside of the scope of the current study. The data is analyzed in detail below.

Sexual Orientation Effect

Across job types, the heterosexual job applicant was perceived to have a mean competence score of 7.6557 out of a possible 9 points, whereas the homosexual job applicant was perceived to have an average competence score of 6.7452 out of a possible 9 points. Similarly, across job types, the heterosexual job applicant was perceived to have an average warmth composite score of 6.2667 out of a possible 9 points, while the homosexual job applicant was perceived to have an average warmth composite score of 5.4162 out of a possible 9 points. The manipulation of sexual orientation overpowered the job type manipulation.

An ANOVA of the warmth composite score and sexual orientation revealed a main effect, although not statistically significant: $F = 7.756, p = 0.007, \eta^2 = 0.097$, meaning that nearly ten percent of how the applicant's warmth was assessed by subjects was associated with sexuality. An ANOVA of the competence composite score and sexual preference revealed $F = 0.339, p = 0.562, \eta^2 = 0.117$, meaning that nearly twelve percent of how the applicant's competence was assessed by subjects was associated with sexuality. Both results were not

statistically significant; however, they show a main effect associated with sexual orientation and competence assessments.

Figure 5

Mean Competence Composite Scores across Conditions

	Agentic	Communal
Heterosexual	Mean: 7.9357 Std. Deviation: 0.82062	Mean: 7.3609 Std. Deviation: 0.70045
Homosexual	Mean: 6.6357 Std. Deviation: 1.87841	Mean: 6.8739 Std. Deviation: 1.25141

Figure 6

Mean Warmth Composite Scores across Conditions

	Agentic	Communal
Heterosexual	Mean: 6.2500 Std. Deviation: 1.00289	Mean: 6.2842 Std. Deviation: 1.03132
Homosexual	Mean: 5.3000 Std. Deviation: 1.46754	Mean: 5.5529 Std. Deviation: 1.67560

Job Type Effect

An analysis of variance (ANOVA) of the warmth-related attributes did not reveal a main effect for job type, $F = 0.226$, $p = 0.636$, $\eta^2 = 0.003$. Additionally, an ANOVA of the competence-related attributes did not reveal a main effect or significant effect for job type, $F = 0.339$, $p = 0.562$, $\eta^2 = 0.005$.

The analysis showed that there was no main effect for job type, meaning that job type was not found to be associated with warmth nor competence ratings.

Between-Subject Analysis of Male and Female Subjects

A distinction between the perceptions of male and female subjects was not hypothesized. However, the between-subject analysis of female and male subjects indicates that future research is necessary; current literature does not supply an explanation for the following data.

A between-subjects test for gender (female, $n = 32$, and male, $n = 41$) produced an interaction for competence within male subjects. When accounting for the participant's gender, men in the agentic homosexual condition evaluated competence at a mean of 5.9286 out of a possible 9 points, whereas men in the agentic heterosexual condition evaluated competence at a mean of 7.8929 out of a possible nine points. Speculation suggests that perhaps the female target of the agentic homosexual condition was viewed as more of a threat by men than the female target of the heterosexual condition. This might explain the higher mean competence score (mean = 7.8929) in the agentic heterosexual condition as compared to the mean competence score in the agentic homosexual condition (mean = 5.9286). An ANOVA of the male participants' competence assessments and the sexual orientation showed $F = 5.239$, $p = .028$, $\eta^2 = 0.124$. Within management literature, an $\eta^2 = 0.06$ indicates a medium effect and $\eta^2 = 0.14$ indicates a large effect. However, this effect was not found to be statistically significant. Additionally, an ANOVA of the male participants' competence assessments and the job type showed $F = 0.017$, $p = 0.898$, $\eta^2 = 0.000$. This indicates that there was no job type effect within male participants.

Figure 7

Male Participants: Warmth Composite Scores across Conditions

	Agentic	Communal
Heterosexual	Mean: 6.1750 Std. Deviation: 0.47132	Mean: 6.2444 Std. Deviation: 1.16952
Homosexual	Mean: 4.8833 Std. Deviation: 1.59649	Mean: 5.8500 Std. Deviation: 1.11559

Figure 8**Female Participants: Warmth Composite Scores across Conditions**

	Agentic	Communal
Heterosexual	Mean: 6.4182 Std. Deviation: 1.25045	Mean: 6.2222 Std. Deviation: 0.95627
Homosexual	Mean: 5.8857 Std. Deviation: 1.12462	Mean: 4.8400 Std. Deviation: 2.262831

Figure 9**Male Participants: Competence Composite Scores across Conditions**

	Agentic	Communal
Heterosexual	Mean: 7.8929 Std. Deviation: 0.84602	Mean: 6.9683 Std. Deviation: 0.66154
Homosexual	Mean: 5.9286 Std. Deviation: 2.01341	Mean: 6.9643 Std. Deviation: 1.16078

Figure 10**Female Participants: Competence Composite Scores across Conditions**

	Agentic	Communal
Heterosexual	Mean: 8.1429 Std. Deviation: 0.59590	Mean: 7.6825 Std. Deviation: 0.57044
Homosexual	Mean: 7.8367 Std. Deviation: 1.02827	Mean: 6.6571 Std. Deviation: 1.57388

CONCLUSION

Ultimately, the data analysis did not reveal any statistically significant results and the hypotheses were not supported. The data did not show significant results in regards to the influence of job type on perceptions of a homosexual woman's warmth and competence. An ANOVA of the warmth composite score and sexual orientation revealed a main effect, although not statistically significant. Additionally, it is relevant to note that non-significant findings are equally important in guiding future research. As the current body of literature on cisgender lesbian women is nearly nonexistent, this study can assist future researchers in refining both their hypotheses and experimental designs.

Importantly, there remains unanswered questions about potential differences in perception biases between male and female subjects. Future researchers could examine the interaction between the participant's gender and their perceptions of the target's sexual preference. While a difference in perceptions of warmth and competence between cisgender male and female participants was not hypothesized, the results of this study suggest additional research is needed. The data analysis did reveal an interesting (while non-significant) interaction among male participants, sexual orientation, and competence ratings. A larger sample size of both male and female participants could potentially reveal additional interactions. The total sample size, $n = 76$, included 32 participants who identified as female and 41 who identified as male, with the remaining participants preferring not to disclose or identifying as gender non-conforming.

Improving the Experimental Design

The study of stereotypes poses challenges for any researcher, as stereotypes are affected by a multitude of invisible and interacting factors. It is possible that noise was created from the

confounding variables that the study did not control for. Factors such as political orientation or religious affiliation often influence perceptions of sexual orientation. Future studies could control for political preference, religious affiliation, geographical location, or education level. The sample did not control for these factors.

By design, this study's focus on lesbian women was narrow to reduce noise. The study did not test for the effects of the race, age, appearance, or identity expression of lesbian women. Future researchers could increase the inclusivity of their work by increasing the representation in their studies. Each identity within the LGBTQ community is unique, and stereotypes could differ within these subgroups (see Sink, Mastro, and Dragojevic, 2017). It is quite possible that the perceptions of the imaginary job applicant Abby, graduate of a local university and twenty-six years old, differ from the perceptions of other intersectional identities.

Finally, the experimental design of this survey has its limitations. There is a risk of respondent inattentiveness in all online surveys. While attention checks were used, it is impossible to guarantee that all subjects fully understood and carefully completed the survey instructions. Additionally, the experiment employed a theoretical scenario uniquely devised by the researcher. It is possible that the factors in the scenario (i.e., the role of union leader) inadvertently created additional noise. Furthermore, because job applications do not disclose the applicant's sexual orientation, it was difficult to create a realistic scenario in which the sexuality could be disclosed. This required creating an elaborate scenario in which the job applicant's partner was stated to be a friend of the participant's. It is highly possible that the conditions in the scenario were too detailed, confusing, or created additional noise that impacted the data analysis.

Despite its imperfections, the experimental design raises important concerns for the broader management research community. Current research studying stereotypes often employ job applications in their studies, which allow for easier manipulation of gender, age, race (i.e., by changing the applicant's name or listing the year of college graduation). No method has been established for how to realistically manipulate a job applicant's sexuality, and this study took a new approach via its unique scenario design. Perhaps the scenario employed was too unrealistic, or conversely, perhaps the manipulation was too obvious. Regardless, the experimental design highlights challenges facing researchers who study sexuality stereotypes.

Finally, no experimental study can accurately and wholly represent the lived experiences of real lesbian women in the workforce. The kaleidoscope of identities within the LGBTQ community, and the perceptions associated with each, are too multifaceted to identify, measure, and decipher with one 8-minute online survey. Non-significant results in this study should not dissuade future researchers from exploring this topic. Rather, this study highlights the need for increased LGBTQ representation within management research.

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Appendix A: Survey Design

Scenario

Agentic Condition:

You are the newly-elected **president** of a large **firefighter's union** in Philadelphia. After working for ten years as a firefighter, you were dissatisfied with workplace conditions in your district. You ran for union president on the platform of pay raises for firefighters. Your platform resonated with your union members, many of whom feel they are underpaid for their work.

However, six months have passed since you began as union president. You have made little progress on negotiating pay raises with the city district. In last week's union meeting, prominent union members shared how they were dissatisfied with your slow progress. Instead of waiting for a negotiated pay raise, they threatened to strike... an outcome you desperately want to avoid.

You have decided to select a **project leader** to help you. A project leader will help you prepare for upcoming negotiations and appease disgruntled union members. Most importantly, a new project leader could help your union avoid a costly rogue strike.

Communal Condition:

You are the newly-elected **president** of a large **teacher's union** in Philadelphia. After working for ten years as a teacher, you were dissatisfied with workplace conditions in your school district. You ran for union president on the platform of pay raises for teachers. Your platform resonated with your union members, many of whom feel they are underpaid for their work.

However, six months have passed since you began as union president. You have made little progress on negotiating pay raises with the school district. In last week's union meeting, prominent union members shared how they were dissatisfied with your slow progress. Instead of waiting for a negotiated pay raise, they threatened to strike... an outcome you desperately want to avoid.

You have decided to select a **project leader** to help you. A project leader will help you prepare for upcoming negotiations and appease disgruntled union members. Most importantly, a new project leader could help your union avoid a costly rogue strike.

Task

Agentic Condition:

Task: As union president, you must decide who to choose as your **project leader**. Remember: the stakes are high. You must choose the applicant that is the best fit for your union's needs.

Read the following applicant information and then evaluate the applicant.

Communal Condition:

Task: As union president, you must decide who to hire as your **project leader**. Remember: the stakes are high. You must choose the applicant that is the best fit for your union's needs.

Read the following applicant information and then evaluate the applicant.

Appendix A (continued)

Job Applications

Agentic Homosexual Condition:

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a firefighter for a large district in the city.

In her day-to-day job, Abby:

- Analyzes and executes fire evacuation plans.
- Leads informative fire safety meetings with the community.
- Trains and supervises new firefighters
- Directs a five-person team in creating emergency response plans
- Drafts reports for the LGBTQ Committee of the firefighter's union

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the LGBTQ Committee of the firefighter's union. The LGBTQ Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the LGBTQ Committee. Her speech about avoiding potential strikes was direct and rational, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's practicality. If you choose Abby as project leader, you secure the support of the LGBTQ Committee, but risk losing support of the Community Outreach Committee.

Abby and her wife, Rebecca, are both members of the firefighter's union. You have met Rebecca and Abby on many social occasions over the last year. Rebecca helped campaign in support of your run for Union President. Rebecca's enthusiastic support helped you win your election. Rebecca confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her wife, who enthusiastically supported your campaign.

If appointed, Abby would be the first lesbian woman in union history to serve as project leader.

Appendix A (continued)

Agentic Heterosexual Condition:

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a firefighter for a large district in the city.

In her day-to-day job, Abby:

- Analyzes and executes fire evacuation plans.
- Leads informative fire safety meetings with the community.
- Trains and supervises new firefighters
- Directs a five-person team in creating emergency response plans
- Drafts reports for the Women's Committee of the firefighter's union

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the Women's Committee of the firefighter's union. The Women's Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the Women's Committee. Her speech about avoiding potential strikes was direct and rational, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the Women's Committee, but risk losing the support of the Community Outreach Committee.

Abby and her husband, Tyler are both members of the teacher's union. You have met Tyler and Abby on many social occasions over the last year. Tyler helped campaign in support of your run for Union President. His enthusiastic support helped you win your election. Tyler confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her husband, who enthusiastically supported your campaign.

If appointed, Abby would be the first woman in union history to serve as project leader.

Appendix A (continued)

Communal Homosexual Condition:

Applicant: **Abby**

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a school counselor for a large district in the city.

In her day-to-day job, she:

- Supports students with their college applications.
- Engages in sensitive conversations with distressed students.
- Mentors new teachers.
- Collaborates with a five-person team to develop student mentorship programs.
- Helps the LGBTQ Committee in drafting reports.

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the LGBTQ Committee of the teacher's union. The LGBTQ Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the LGBTQ Committee. Her speech about avoiding potential strikes was conscientious and encouraging, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the LGBTQ Committee, but risk losing the support of the Community Outreach Committee.

Abby and her wife, Rebecca, are both members of the teacher's union. You have met Rebecca and Abby on many social occasions over the last year. Rebecca helped campaign in support of your run for Union President. Her enthusiastic support helped you win your election. Rebecca confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her wife, who enthusiastically supported your campaign.

If appointed, Abby would be the first lesbian woman in union history to serve as project leader.

Appendix A (continued)

Communal Heterosexual Condition:

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a school counselor for a large district in the city.

In her day-to-day job, she:

- Supports students with their college applications.
- Engages in sensitive conversations with distressed students.
- Mentors new teachers.
- Collaborates with a five-person team to develop student mentorship programs.
- Helps the Women's Committee in drafting reports.

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the Women's Committee of the teacher's union. The Women's Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the Women's Committee. Her speech about avoiding potential strikes was conscientious and encouraging, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the Women's Committee, but risk losing the support of the Community Outreach Committee.

Abby and her husband, Tyler are both members of the teacher's union. You have met Tyler and Abby on many social occasions over the last year. Tyler helped campaign in support of your run for Union President. His enthusiastic support helped you win your election. Tyler confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her husband, who enthusiastically supported your campaign.

If appointed, Abby would be the first woman in union history to serve as project leader.

Appendix B: IRB Submission

The proposed study is a component of an undergraduate Wharton thesis.

Participants will:

1. Read a short scenario in which they are the president of a 1) teachers' union or 2) firefighters' union.
2. Read the desired qualities for the job application. The job description is consistent with either 1) masculine-stereotyped qualities or 2) feminine-stereotyped qualities.
3. Read a job applicant's information. The job applicant is disclosed as either 1) homosexual or 2) heterosexual.
4. Evaluate the job applicant by answering questions.

The study will be administered via Qualtrics. Below are all information and materials that will appear in the proposed study.

Scenario:

You are the newly-elected **president** of a large [condition one: **firefighter's union**; condition two: **teacher's union**] in Philadelphia. After working for ten years as a firefighter, you were dissatisfied with workplace conditions in your district. You ran for union president on the platform of pay raises for [**firefighters/teachers**]. Your platform resonated with your union members, many of whom feel they are underpaid for their work.

However, six months have passed since you began as union president. You have made little progress on negotiating pay raises with the city district. In last week's union meeting, prominent union members shared how they were dissatisfied with your slow progress. Instead of waiting for a negotiated pay raise, they threatened to strike... an outcome you desperately want to avoid.

You have decided to select a **project leader** to help you. A project leader will help you prepare for upcoming negotiations and appease disgruntled union members. Most importantly, a new project leader could help your union avoid a costly rogue strike.

Task:

As union president, you must decide who to choose as your project leader. Remember: the stakes are high. You must choose the applicant that is the best fit for your union's needs.

Read the following applicant information and then evaluate the applicant.

Job role description:

- [Agentic job role condition] The project leader should be:
 - Determined and autonomous
 - Rational
 - Outspoken and assertive
 - Analytical
 - Direct
- [Communal job role condition] The project leader should be:
 - Committed and responsible
 - Helpful
 - Sociable and conscientious
 - Supportive
 - Honest

Manipulation Check:

Question 1: Your job role is... [President of a Teacher's Union/President of a Firefighter's Union]

Question 2: The new negotiator should be... [select traits from a list]

Job Applicant Conditions:

1. Condition one: **agentic job type, homosexual applicant.**

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a firefighter for a large district in the city.

In her day-to-day job, Abby:

Analyzes and executes fire evacuation plans.

Leads informative fire safety meetings with the community.

Trains and supervises new firefighters

Directs a five-person team in creating emergency response plans

Drafts reports for the LGBTQ Committee of the firefighter's union

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the LGBTQ Committee of the firefighter's union. The LGBTQ Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the LGBTQ Committee. Her speech about avoiding potential strikes was direct and rational, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's practicality. If you choose Abby as project leader, you secure the support of the LGBTQ Committee, but risk losing support of the Community Outreach Committee.

Abby and her wife, Rebecca, are both members of the firefighter's union. You have met Rebecca and Abby on many social occasions over the last year. Rebecca helped campaign in support of your run for Union President. Rebecca's enthusiastic support helped you win your election. Rebecca confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her wife, who enthusiastically supported your campaign.

If appointed, Abby would be the first lesbian woman in union history to serve as project leader.

2. Condition two: **agentic job type, heterosexual applicant.**

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a firefighter for a large district in the city.

In her day-to-day job, Abby:

Analyzes and executes fire evacuation plans.

Leads informative fire safety meetings with the community.

Trains and supervises new firefighters

Directs a five-person team in creating emergency response plans

Drafts reports for the Women's Committee of the firefighter's union

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the Women's Committee of the firefighter's union. The Women's Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the Women's Committee. Her speech about avoiding potential strikes was direct and rational, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the Women's Committee, but risk losing the support of the Community Outreach Committee.

Abby and her husband, Tyler are both members of the teacher's union. You have met Tyler and Abby on many social occasions over the last year. Tyler helped campaign in support of your run for Union President. His enthusiastic support helped you win your election. Tyler confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her husband who enthusiastically supported your campaign.

If appointed, Abby would be the first woman in union history to serve as project leader.

3. Condition three: **communal job type, homosexual applicant.**

Applicant: Abby

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a school counselor for a large district in the city.

In her day-to-day job, she:

Supports students with their college applications.

Engages in sensitive conversations with distressed students.

Mentors new teachers.

Collaborates with a five-person team to develop student mentorship programs.

Helps the LGBTQ Committee in drafting reports.

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the LGBTQ Committee of the teacher's union. The LGBTQ Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the LGBTQ Committee. Her speech about avoiding potential strikes was conscientious and encouraging, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the LGBTQ Committee, but risk losing the support of the Community Outreach Committee.

Abby and her wife, Rebecca, are both members of the teacher's union. You have met Rebecca and Abby on many social occasions over the last year. Rebecca helped campaign in support of your run for Union President. Her enthusiastic support helped you win your election. Rebecca confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her wife, who enthusiastically supported your campaign.

If appointed, Abby would be the first lesbian woman in union history to serve as project leader.

4. Condition four: **communal job type, heterosexual applicant.**

Applicant: Abby

Abby (she/her/hers) is twenty-six years old and a graduate from a local university. Abby is a school counselor for a large district in the city.

In her day-to-day job, she:

Supports students with their college applications.

Engages in sensitive conversations with distressed students.

Mentors new teachers.

Collaborates with a five-person team to develop student mentorship programs.

Helps the Women's Committee in drafting reports.

It is important for you to consider how the union will perceive Abby.

Consider the following information on the next slide.

Abby is the leader of the Women's Committee of the teacher's union. The Women's Committee is known for its influential vote in union meetings. At the last union meeting, Abby spoke on behalf of the Women's Committee. Her speech about avoiding potential strikes was conscientious and encouraging, but it did not appease the pro-strike faction.

In fact, a colleague of yours from the Community Outreach Committee pulled you aside afterwards to criticize Abby's speech. The Community Outreach Committee desperately needs increased funds, and prefers a more radical approach to Abby's conscientious plan. If you choose Abby as project leader, you secure the support of the Women's Committee, but risk losing the support of the Community Outreach Committee.

Abby and her husband, Tyler are both members of the teacher's union. You have met Tyler and Abby on many social occasions over the last year. Tyler helped campaign in support of your run for Union President. His enthusiastic support helped you win your election. Tyler confided in you that Abby is interested in running for Union Vice President in future election cycles. If you appoint Abby as project leader, it could give her valuable experience for future union leadership.

However, you worry that the union will perceive Abby's appointment as a favor to her husband who enthusiastically supported your campaign. It is important for you to consider how the union will perceive Abby.

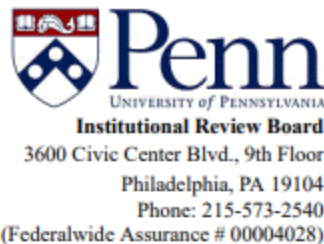
In a letter of recommendation, Abby's boss describes her as a helpful contributor at team meetings. Her boss attended college with you, and you trust his judgment.

If appointed, Abby would be the first woman in union history to serve as project leader.

Evaluate the applicant.

Thank you for completing this study.

Appendix C: IRB Approval



DATE: 28-Nov-2023
 TO: Aaron Wallen
 CC:

RE:
 IRB PROTOCOL#: 854795
 PROTOCOL TITLE: Gender and Sexuality Stereotypes of Lesbian Women in the Workplace

SPONSOR: NO SPONSOR NUMBER
 REVIEW BOARD: IRB #8

IRB SUBMISSION: NOTICE OF EXEMPTION

Dear Dr. Wallen,

The above referenced protocol was reviewed by the Institutional Review Board on 27-Nov-2023. It has been determined that the proposal meets eligibility criteria for IRB review exemption authorized by 45 CFR 46.104, category 3, 2.

ONGOING REVIEW:

- The IRB must be kept apprised of any and all changes in the research that may have an impact on the IRB review mechanism needed for a specific proposal. You are required to submit modifications to the IRB if any changes are proposed in the study that might alter the exemption determination, or any applicable HIPAA waiver determination. New procedures that may have an impact on the exemption determination, or HIPAA waiver determination cannot be initiated until Committee approval has been given.
- Consistent with the federal regulations, IRB approval of this protocol will not expire and no continuing reviews will be required for this protocol. The IRB may occasionally contact you to confirm that the trial is still ongoing and that you are adhering the previously stated requirement to submit modifications.

COMMITTEE APPROVALS: You are responsible for assuring and maintaining other relevant committee approvals. This human subjects research protocol should not commence until all relevant committee approvals have been obtained.

If your study is funded by an external agency, please retain this letter as documentation of the IRB's determination regarding your proposal.

If you have any questions about the information in this letter, please contact the IRB administrative staff. A full listing of staff members and contact information can be found on our website: <http://www.irb.upenn.edu>

***This letter constitutes official University of Pennsylvania IRB correspondence. ***

Appendix D: IRB Informed Consent Forms

STEREOTYPES

**UNIVERSITY OF PENNSYLVANIA
RESEARCH PARTICIPANT
INFORMED CONSENT FORM**

Protocol Title: Gender and Sexuality Stereotypes of Lesbian Women in the Workplace

Principal Investigator: Aaron Wallen
aawallen@wharton.upenn.edu

Emergency Contact: Fiona Miller
fimiller@wharton.upenn.edu
(540) 354-3583

Research Study Summary for Potential Participants

You are being invited to participate in a research study. Your participation is voluntary, and you should only participate if you completely understand what the study requires and what the risks of participation are. You should ask the study team any questions you have related to participating before agreeing to join the study. If you have any questions about your rights as a human research participant at any time before, during or after participation, please contact the Institutional Review Board (IRB) at (215) 898-2614 for assistance.

The research study is being conducted to INVESTIGATE JOB APPLICATION EVALUATIONS.

If you agree to join the study, you will be asked to complete the following research procedures: READ AND EVALUATE A SCENARIO, ANSWER FOLLOW-UP QUESTIONS.

Your participation will last for 10 MINUTES.

THERE ARE NO DIRECT BENEFITS TO PARTICIPATING. PARTICIPATION PRESENTS LITTLE TO NO RISKS.

You are free to decline or stop participation at any time during or after the initial consenting process.

Why am I being asked to volunteer?
You are being asked to take part in a research study because YOU ARE AN ADULT 18+. Your participation is voluntary which means you can choose whether or not to participate.

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STEREOTYPES

If you do not understand what you are reading, do not provide your electronic consent. Please ask the researcher to explain anything you do not understand, including any language contained in this form. If you decide to participate, you will be asked to check a box.

What is the purpose of the study?
The purpose of the study is to learn more about:

- How job applications are evaluated by participants.
- Additionally, this study is part of a student research thesis.

How long will I be in the study?
The duration of the study is approximately 10 minutes.

What am I being asked to do?

- Read a scenario.
- Read a job description.
- Evaluate a job application.
- Answer questions about the job application.

What are possible risks or discomforts?
There are little to no risks or discomforts related to this study design.

How will I benefit from the study?
You are not expected to get any benefit from being in this research study.

Will I be paid for being in this study?

- Participants will be compensated in compliance with Prolific minimum wage standards.
- The estimated compensation is \$1.50 for completion of this study.

When is the Study over? Can I leave the Study before it ends?
This study is over after the participant completes a ten-minute online survey. Note that if you decide to participate, you are free to leave this study at any time. You may do this by exiting out of the online survey. Data from participants who withdraw from the study will not be used by the researchers. You will not receive compensation unless you complete the survey. The study will close once the desired number of participants have completed the survey.

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STEREOTYPES

The study might be stopped at any time because the Primary Investigator feels it is necessary for the welfare, rights, or safety of participants. Such an action would not require your consent, but you will be informed if such a decision is made and the reason for this decision. Additionally, the study might be stopped if the Sponsor or the study Principal Investigator has decided to stop the study.

Could I be withdrawn from the study?

You could be removed from the study if you fail the required attention checks in this study. If you fail the attention check, your online screen will display a message stating that your survey is over. You will not receive compensation if you fail the attention check and are withdrawn from the study.

How will my personal information be protected during the study?

We will do our best to make sure that the personal information obtained during the course of this research study will be kept private. However, we cannot guarantee total privacy. Your personal information may be given out if required by law. If information from this study is published or presented at scientific meetings, your name and other personal information will not be used. The Institutional Review Board (IRB) at the University of Pennsylvania will have access to your records.

Participation in this study will be entirely confidential. Data will be collected by administering Qualtrics questionnaires via computer. No one will be able to access the digital, confidential data other than principal investigators given that the data will be password-protected. Any identifying IDs used solely for payment will be removed from the data for any analysis and when the data is shared or posted online. Each participant will be assigned a separate, arbitrary ID number. No personally-identifiable data will be associated with the digital data file. This ID number will link participants' data across tasks for data analysis purposes.

What may happen, in the future, to my information collected on this study?
Your information will not be stored or shared for future research purposes.

Who can I call with questions, complaints or if I'm concerned about my rights as a research participant?
If you have questions, concerns or complaints regarding your participation in this research study or if you have any questions about your rights as a research participant, you should speak with the Principal Investigator listed on page one of this form. If a member of the research team cannot be reached or you want to talk to someone other than those working on the study, you may contact the IRB at the number on page one of this form.

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STEREOTYPES

When you sign this form, you are agreeing to take part in this research study. This means that you have read the consent form, your questions have been answered, and you have decided to volunteer. Your signature also means that you are permitting the University of Pennsylvania to use your personal information collected about you for research purposes within our institution. You are also allowing the University of Pennsylvania to disclose that personal information to outside organizations or people involved with the operations of this study.

By checking the box below in the online survey, you are agreeing to take part in this research study. Checking the box below serves as your electronic signature.

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