

Fall 12-7-2021

## Can Gender Pronouns in Interview Questions Work as Nudges?

Fei Lu

Follow this and additional works at: [https://digitalcommons.spu.edu/iop\\_etd](https://digitalcommons.spu.edu/iop_etd)



Part of the [Industrial and Organizational Psychology Commons](#)

---

### Recommended Citation

Lu, Fei, "Can Gender Pronouns in Interview Questions Work as Nudges?" (2021). *Industrial-Organizational Psychology Dissertations*. 30.

[https://digitalcommons.spu.edu/iop\\_etd/30](https://digitalcommons.spu.edu/iop_etd/30)

This Dissertation is brought to you for free and open access by the Psychology, Family, and Community, School of at Digital Commons @ SPU. It has been accepted for inclusion in Industrial-Organizational Psychology Dissertations by an authorized administrator of Digital Commons @ SPU.

Can Gender Pronouns in Interview Questions Work as Nudges?

Fei Lu

A dissertation submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

In

Industrial-Organizational Psychology

Seattle Pacific University

School of Psychology, Family, & Community

[Dec 7<sup>th</sup>, 2021]

Approved by:

Paul Yost, Ph.D.  
Chair & Associate Professor of Industrial-  
Organizational Psychology  
Dissertation Chair

Dana Kendall, Ph.D.  
Former Associate Professor of Industrial-  
Organizational Psychology  
Committee Member

Chris Roenicke, Ph.D.  
Manager, Research Operations  
Amazon  
Committee Member

Reviewed by:

Paul Yost, Ph.D.  
Chair & Associate Professor of Industrial-  
Organizational Psychology

Katy Tangenberg, Ph.D.  
Dean and Professor  
School of Psychology, Family, & Community

## Dedication

### *To my parents -*

Dad, thank you for being the rock for mom and me. Thank you for always believing in me ever since I was a little girl, even in the times I don't believe in myself. Till this day, I still remember you telling me: if you think it's the right thing, regardless of what others say, you should do it. I will always keep this in mind to carry me down the road.

Mom, thank you for everything you do for our family, for being a role model of practicing kindness, and being a successful woman who perfectly maintains the balance of having a thriving career and being a wonderful wife and mom.

Thank you both for your utmost love. You may not know exactly what I was working on, but you supported all my decisions and stood behind me and uplifted me in hard times. Thank you for encouraging me with your own work ethics to work hard, while at the same time, telling me none of these is worth doing if it's compromising my wellbeing.

### *To Ming -*

They say when you are doing a PhD, your entire family is doing the PhD. I guess that means you and our dog. I am glad I met you when you were already half-way through your PhD, but sorry you had to go through the whole process again with me. Thank you for always being there when I need to process emotions and for offering constructive feedback. Thank you for taking care of me, Bubble (without whom, this dissertation would have been done a bit earlier, but we would have missed a lot of joy) and pretty much everything else in my life while already working so many hours every day. As you said in your acknowledgement, "this dissertation is as much yours as it is mine".

## **Acknowledgments**

I would like to express the deepest gratitude to those who have helped me throughout the process.

### ***To my dissertation chair and committee members -***

Dr. Paul Yost, I remember those days from OB when I walked out of your office hours with more questions than when I walked in. Thank you for always challenging me and believing in me, for your guidance, investment and dedication in my development.

Dr. Dana Kendall, thank you for willing to jump on board even when you are about to leave the country. Thank you for your commitment and for the rigor you bring to research. You inspire me to be a better researcher and practitioner.

Dr. Chris Roenicke, thank you for being the best mentor anyone could ever ask for during the past three years. Thank you for your invaluable insights and wisdom, for your time helping me grow professionally and during this dissertation process.

### ***To my current and previous colleagues -***

Dr. Stephanie Lopez, I am incredibly happy that I get to work with you. Thank you for your understanding, for cultivating the psychological safety within our team, for encouraging me and helping me to pursue the things that I am interested in. To my Nordstrom People Analytics family, you make work fun! To my DS team (Boaz et al.), thank you for bearing with my incessant talking on dissertation, for all the data-related discussions and tips on visualization. I've learned so much from every one of you.

Drs. Coty Gonzalez, Julia Tillmann and Jevon Powell, thank you for being amazing managers and supervisors while I was at Carnegie Mellon University, Limeade and Scontrino-Powell. Thank you for offering and continuing to offer steady support to me. Dr. David Hagmann, thank you for always having interesting research insights ready to share every time we have a conversation. Dr. Emily Ho, thank you for being a visiting scholar at our lab at CMU 5 years ago. From doing research to personal life, thanks for always being there for me since then, visiting me in Seattle and for all our phone calls and video chats.

### ***To the friends I made in the program -***

Dr. Helen Chung, thank you for being the very first person I talked to in the program, for always checking in with me and celebrating with me on my small wins.

Dr. Deanna Haney-Loehlein, thank you for having me as your TA for stats, for all the fun times in class, and for cheering for me every step of the way from passing comps, getting a job, to defense.

Dr. Kristen Thornton, thank you for always making time for me, encouraging me, and always being there to help.

Drs. Audrey Kinase Kolb, Emily Marshall, Vatia Caldwell, thank you for answering all my random questions, for cheering me up, validating my feelings and passing on wisdom and tips on surviving the program. I am forever thankful for your friendship.

To my cohort, I will miss the discussions and laughter we had together. As Dr. McKenna said, I'll see you at your weddings.

## Abstract

Organizations that are historically male-dominated have struggled to attract and retain an equitable representation of women (Debs et al., 2021; Germain et al., 2012; Hall et al., 2018). Using the two systems processing model from Cognitive Psychology, this study assessed whether gender pronouns can function as environmental cues (“nudges”) to disrupt the patterns of mental models on biases and stereotypes. It was proposed that participants can be “nudged” to decrease the impact of gender stereotype biases in the interview process in male-dominated professions (e.g., Information Technology) such that pronouns used in the interview questions will interact with the interviewee’s gender. Results from 1056 participants (Male = 498, Female = 558) revealed that proposed interaction was not supported, indicating that female pronouns did not improve female participants’ selection performance, interviewee engagement and other outcomes, but main effects by gender and by pronoun condition were found to be significant. Across conditions, women scored higher on Situational Judgment Test, used more words in Situational Interviews, while men took a longer time to respond, reported a higher sense of belonging, a higher intent to pursue employment and higher perceived organizational support. Across genders, the “you” condition had a higher score on word count ( $WTS = 12.57, p < .05$ ) and intent to pursue employment ( $WTS = 7.1, p < .05$ ). This is indicative that using second person “you” in scenarios may help participants assume the perspective of the agent, thus transcending the problems that may come with third-person pronouns.

*Keywords:* Nudge, mental models, personnel selection, pronouns, diversity

## Table of Contents

Abstract.....	4
CHAPTER I.....	7
Introduction.....	7
Literature Review.....	9
Two Systems.....	9
Nudge.....	12
Personnel Selection.....	13
How Men and Women Feel About Diversity.....	15
The Current study – Nudge in Personnel Selection.....	16
Gender Pronouns as Nudges.....	18
Hypotheses.....	19
Nudge Outcomes.....	20
CHAPTER II.....	26
Method.....	26
Participants.....	26
Power Analysis.....	27
Measures.....	29
Nudge Condition.....	29
Gender.....	32
Introduction of Outcomes.....	33
Attention Check.....	36
Manipulation Check.....	36
CHAPTER III.....	37
Result.....	37
Data Preparation.....	37
Assumptions.....	41
Analysis.....	42
CHAPTER IV.....	52
Discussion.....	52
Summary.....	52
Implications.....	54

Limitations .....	56
Conclusions and Future Research .....	58
References.....	61
Appendix A Demographic Survey .....	83
Appendix B Hypothetical Job Description .....	85
Appendix C SIs and SJTs With Corresponding Scores .....	87
Appendix D Measures.....	92
Appendix E Demographics for IT Group .....	93

## CHAPTER I

### Introduction

The year of 2021 is being referred to as the “Great Resignation”, partially resulting in a record-breaking number of job openings and employers are struggling to find talent. Taking the information technology (IT) industry as an example, a recent survey conducted by *MThree* (2021) suggested that one reason for the existing gap is organizations’ inability to demonstrate diversity and equity in ways that minority groups such as women felt welcome and valued. In recent years, organizations have been attempting to adopt strategies to increase diversity, but many of these strategies fail to incorporate evidence-based techniques (Devine et al., 2017) or create long-lasting effects (Chang et al., 2019), and may even have unintended negative consequences (Dover et al., 2019). It takes effort from every stage of the employee cycle to achieve the goal of building a diverse workforce and culture. One of the first steps is to ensure that diverse candidates are attracted to organizations. For example, many professions such as IT that are historically gender-imbalanced (e.g., male-dominated) have struggled to attract and retain qualified women (Debs et al., 2021; Hall et al., 2018), and they have been longing to achieve the goal of gaining a more balanced gender representation (González-González, 2018; van den Brink et al., 2010).

As potential solutions, scholars have recommended devoting more resources and working on processes and structures to combat biases like gender stereotypes (Devine et al., 2017; Rheingans et al., 2018), one of which is to look for the systemic reasons that prevent organizations from achieving its diversity goals, such as systemic biases that humans have cognitively when making decisions (Kuncel & Dahlke, 2020). Theory and research suggest that organizations tend to hire individuals that are similar to established members, which decreases



adaptability and can be dangerous to organizations if they become too homogeneous, as Schneider and colleagues (1987, 1995) suggests in the Attraction-Selection-Attrition (ASA) model. Are there ways organizations may be able to use behavioral techniques to promote diversity instead of homogeneity? For example, are there signals in the environment to cue candidates to consider certain aspects of the organization when they make decisions on offer acceptance or perceptions on how likely they will be supported? In other words, are there aspects of the hiring and selection process that can be programmed to “make it easier” (Thaler & Sunstein, 2008) to increase the underrepresentation of candidates who are attracted to and selected by an organization?

The purpose of this dissertation is to explore these rather “effortless” processes that can help achieve better organizational outcomes, specifically how they can diversify their workforces. It is proposed that the language used in selection interviews will impact candidates’ performance in the interviews and attraction to the organization.

More than transferring literal information, language as the tool of social interaction, activates associated cognitive representation in one’s mind. Words and text convey messages of thoughts and emotions that include the construction of social categorizations, such as stereotypes of gender (Chung & Pennebaker, 2007; Sczesny et al., 2015). By adopting gender pronouns in the interview process that are aligned with the desired diversity, it is proposed that using female pronouns (e.g., “she” and “her” pronouns) in situational interview questions and situational judgment test questions will nudge female candidates in a male-dominated profession to perform better and be more attracted to the organization than using than male (e.g., “he”) or neutral pronouns (e.g., “you”). Specifically, female candidates are hypothesized to be more likely to perform better on the interview questions, be more engaged and motivated to do well on these

questions, have a higher expected sense of belonging, have a higher intent to pursue employment in the organization, and have a higher perceived organizational support.

### **Literature Review**

To begin, the two systems of cognitive processing are reviewed, providing the theoretical foundation for this current study. I will introduce and discuss the focal concept, “nudge” in relation to the two systems. Next, I will describe a proposed application of the utilization of “nudge” in personnel selection by changing gender pronouns in the interview questions, followed by a discussion on what outcomes are expected.

### **Two Systems**

Human beings function under two models of thinking which psychologists often refer to as the two systems: System 1 and System 2 (Kahneman, 2012; Stanovich & West, 2000). System 1 is the automatic and quick responding system that operates with minimal effort. It offers innate skills and generates impressions, intuitions, and feelings. It also includes learned associations from past experience that are stored in memory. This type of knowledge and solutions can be easily assessed without intention. System 2, on the other hand, is the slow thinking process that involves conscious reasoning. System 2 allocates attention and effort to complicated activities like thinking and reflection, as well as making deliberate choices when given options. System 1 routinely provides suggestions to guide behaviors, which System 2 tends to adopt, with minimal modification. However, when System 1 fails to offer these suggestions that can turn into behaviors and responses (such as the request to solve a complex math problem), System 2 then takes control to endorse and solve the problems. One of the ways it does so is to continuously monitor one’s behaviors and detect a potential error that is about to be made. For example, when System 1 elicits the shortcut to stereotypes, which are generalized beliefs towards individuals in

certain social groups that are usually activated by situations (Marx & Ko, 2019), System 2 can step in to restore control (Kahneman, 2012).

### *Mental Shortcut from System 1*

System 1 functions as a default to provide suggestions for behaviors and these suggestions are often accurate guidance (Kahneman, 2012). Take mental models as an example. These are dynamic systems that are enduring and accessible with limited conceptual representations of the external environment (Doyle & Ford, 1998). One type of memory system, semantic memory, constructs these mental models from both concrete and abstract information, regardless of whether or not one has been involved personally. It forms the cognitive representations of the environmental stimuli and how they can be used (Chi, 1991). It can be inferred then that mental models are information added together and constructed in the mind, but not always correct.

One of these mental models is the gender representation of a profession (Garnham et al., 2012). For example, it has been found that in multiple languages, people are more likely to think of a male for a profession such as an engineer, and a female for a kindergarten teacher (Sczesny et al., 2015). In the English language, gender stereotypes tend to influence the representation of a certain profession or occupation (Garnham et al., 2012). For example, research suggests that people are more likely to think of a male when they hear the word “surgeon” and neglect the possibility of a female doing the same job (Barlow, 2014). Prior studies showed that it took participants longer to respond cognitively when they were asked to process information that contradicts the stereotypical gender of role names (Carreiras et al., 1996). People’s perspectives of certain groups are homogenized so that anyone from this group is expected to possess or not possess a certain quality (e.g., within-category stereotyping, Marx & Ko, 2019). The

perspectives are accessed via System 1 without deliberation, but the stereotypes, especially when inaccurate, can be harmful. In addition to undermining the performance of the target group when compared to their counterparts (i.e., women may be viewed as low performers in doing male-typed tasks: Chatman & O'Reilly, 2004; Steele, 1997), stereotype threats can also perpetuate the cycle of more male candidates getting into these fields where the workforce are already predominantly male and discourage women from entering by sending the message that they are unwelcomed (Germain et al., 2012). This is also true to male candidates entering female-dominated fields such as nursing and education. The current study will focus on women entering male-dominated fields as an example.

### ***Redesign the Cues for System 2***

Fortunately, environmental cues can disrupt a stereotype. For instance, if individuals experience some counter-stereotypic examples, their stereotype could be weakened (Marx & Ko, 2019). This is because the external immediate environment can trigger one's internal psychological activities to process information differently. Research on situational cues found that when women were shown a video of a math, science, and engineering conference with an unbalanced gender representation, they reported a lower sense of belonging and less interest in participation than those who watched the gender-balanced video (Murphy et al., 2007). The situational cues presented, such as being the minority group in the environment, signaled threats that prompted people to feel isolated or ostracized. This process, termed as "automaticity", suggests that by carefully building an immediate environment, mental processes can be triggered without much conscious guidance (Bargh & Williams, 2006). While conscious processes often need to actively search for past experience to anticipate future events, unconscious processes can rely on default modes, thus freeing the mind from devoting too much attention effortfully. In

other words, by setting up cues in the environment, desired behaviors can be elicited automatically (Gollwitzer, 1999). This means using System 2 functions to create certain environmental cues, may enable people to reduce biases that System 1 produces and suggest the right direction without relying on conscious processing.

Having a better understanding of the cognitive processes can enable people to make use of systemic biases (Thaler & Sunstein, 2008). “Nudge” is one potential intervention to change biases. With limited capacity of attention that can only be allocated to some activities (Kahneman, 2012), using some “nudge” techniques, one may be able to design the cues in the environment to endorse *non*-stereotypical thoughts and behaviors in organizations to potentially promote a more inclusive workforce in the long run.

## **Nudge**

Emerged from research on decision making and behavioral economics, nudge is a concept that has recently received an increasing amount of attention (Barton & Grüne-Yanoff, 2015; Hansen, 2016; Heukelom & Sent, 2017; Thaler & Sunstein, 2008). Nudges are the rearrangement of choice options in the environment that prompts people to change their behaviors in predictable ways and they influence decisions while still providing the freedom of choice without mandating or forbidding other options (Thaler & Sunstein, 2008). Nudge interventions help take advantage of the unconscious interaction between people and their environment (Marchiori et al., 2016) and have been valuable approaches to implement strategies to improve desired outcomes (Benartzi et al., 2017). They have been used in various domains. For example, governments have used default options, a classic nudge application, to increase the number of voluntary organ donors to save lives (Johnson & Goldstein, 2003); companies have implemented an opt-out, as opposed to an opt-in technique to encourage employees’ retirement-

saving behaviors (Madrian & Shea, 2001); and shops have learned that they can nudge customers to sensible choices by placing more healthy food at the cash register desk (Kroese et al., 2016; Van Gestel et al., 2018).

Nudges are deployed by “choice architects”, which refers to agents who can organize the context where others make decisions (Thaler & Sunstein, 2008). Furthermore, one can be a choice architect without realizing it. By intentionally deploying nudges, choice architects have the ability to change behaviors. This includes reinforcing stereotypes in communication, if not used carefully. Conversely, it is proposed that nudges can be used to signal that non-majority groups are welcome. This application can be adopted and used through personnel selection for organizations.

### **Personnel Selection**

Organizations tend to attract “like” people over time, those sharing similar values and talents. As mentioned previously, this is not always optimal (Schneider, 1987). With respect to organizational adaptability, research suggests that when an organization only contains people that are similar, they are less capable to cope with potential changes in the environment and may experience decreased effectiveness because people and processes and structures left inside the organization are only viable to the old environment (Schneider, 1995). Instead, organizations should look for the “right types” (Argyris, 1958); that is, those that share some commonality of the expected attributes, as well as inclinations that can help make the change that is needed to adapt to changes in the external environment (Hanges et al., 2006; Schneider, 1987).

Take gender as an example. Gender disparity exists in workplaces like the Science, Technology, Engineering and Mathematics (STEM) field (Hall et al., 2018; Hill et al., 2010; Strenta et al., 1994) and disparities have persisted (Stout et al., 2011). Many organizations that

are historically gender-imbalanced have the desire to gain a balanced gender representation (González-González et al., 2018; van den Brink et al., 2010) so that more diverse perspectives can be heard (Fine et al., 2020). For male-dominated fields, gender-balanced goals can help ensure there are less structural and procedural obstacles to women's success (Meyerson & Kolb, 2000). Organizations in STEM struggle to attract and retain qualified women (Debs et al., 2021; Hall et al., 2018), and personnel selection can be one of the starting to attract female candidates (van den Brink et al., 2010).

A lot of research on selection procedure reaction is on perceived organizational justice and scholars have suggested that more attention should be paid to other outcomes such as the social information that was communicated through the selection process (Cortina & Luchman, 2012). When organizations differentiate themselves by emphasizing diversity during the hiring process, they may be better able to attract groups of minorities (Thomas & Wise, 1999). Thus, in addition to assessing talents, selection procedures are recognized to serve the function of communication about an organization's culture, values, and mission to job applications (Schmitt & Chan, 1999). Candidates also decide which employer to pursue (Rynes & Miller, 1983). Two common selection methods used today are the situational interview and the situational judgment test (Cortina & Luchman, 2012). The situational interview (Latham et al., 1980) presents a series of hypothetical scenarios and candidates indicate how they would respond to the scenarios. The scenarios are built from job analysis to identify the knowledge, skills, and abilities required to do the job (Latham et al., 1980). The interview questions reflect what candidates may actually encounter in the real job.

Similar to situational interviews, situational judgment tests also aim to assess how applicants would behave in situations that are representative of the job and important to

performance, but with multiple options to each situation for candidates to choose from (McDaniel et al., 2001). Both situational interviews and situational judgment tests yield high validity (Christian et al., 2010; Latham et al., 1980; McDaniel et al., 1994).

### **How Men and Women Feel About Diversity**

Overall findings on how different genders feel about gender composition at work yields some inconsistency. Men in the majority group are less aware of the gender imbalance situations in organizations (Flood et al., 2020). When male employees are surveyed on gender matters, the majority agreed or strongly agreed that diverse leadership (when significant numbers of women are included) generates better organizational performance, but one third are not aware of the difficulties women face and do not think gender-diversity measures are fair (McKinsey, 2013). In organizations that have been predominantly male, changes to increase female representation may make male employees feel disadvantaged (Williams & Bauer, 1994). Studies on perception towards gender composition showed that men reported a greater likelihood to transfer out of their work group as the proportion of women increased, and their positive affect was highest when being in a male-dominated group (Chatman & O'Reilly, 2004). Men also tend to be more sensitive to being in the minority group, less satisfied, and less committed (Chatman & O'Reilly, 2004; Tsui et al., 1992). However, on the other hand, research on gender-balanced work groups indicates that although men reported lowest job satisfaction working in mixed gender groups, they had highest job satisfaction when the environment is all men, or female-dominated settings (Wharton & Baron, 1987).

For women, although they tend to choose women as friends and men as for their instrumental needs (Ibarra, 1992), women who work in gender balanced groups are more likely to leave than those in female-dominant groups, more likely to “internalized and accept



organizational norms and values” (normative commitment, Caldwell et al., 1990), and perceive higher cooperation when their coworkers are all women (Chatman & O’Reilly, 2004). When it comes to an organization's effort to promote diversity, female employees held more positive attitudes about an organizational effort to promote diversity (Kossek & Zonia, 1993).

### **The Current study – Nudge in Personnel Selection**

Although evidence suggested that personnel selection is a tool of communication between the candidates and the organization (Schmitt & Chan, 1999), and research suggests that women sometimes feel less included in male-dominated organizations after they entered (e.g., Cheryan et al., 2009; Hall et al., 2018), limited research has studied how different genders experience the selection process differently and how their experiences are related to their perceptions of the organization. This study aims to address the gap in this area and explore the cost-efficient implementation (i.e., nudge) as a way to signal to female candidates that they are desired in the organization. In particular, it will assess the extent to which the interview can encourage non-majority candidates (women in a male-dominated occupation) to “see” themselves in the interview questions and potentially perform better.

Research indicates that the presentation of choices matters in terms of decision making (Thaler & Sunstein, 2008), and nudges can steer how people perceive options presented (through language) cognitively and create mental shortcuts or draw on established heuristics in the decisions they make. The gender of the pronouns used in interview scenarios may communicate the gender of the people expected to inhabit a role. Although the information around the actual content (i.e., critical incidents and workplace problems) remains the same, the pronouns can unconsciously direct the readers’ attention and trigger stereotypes (Takahashi, 2019).

Language is the media of communication, and the way one chooses to use certain words reflects attention, thoughts, and feelings (Tausczik & Pennebaker, 2010). In general, content words convey what the actual meaning of the communication is (e.g., nouns, regular verbs), while style words, also called function words, reflect how the communication goes (e.g., “it”, “a”, “and”, Chung & Pennebaker, 2007; Tausczik & Pennebaker, 2010). Regardless of their small percent in all the words that exist in the English language (Baayen et al., 1995), style words make up 55% of all the words we use daily (Rochon et al., 2000). Because style words like pronouns are associated with how the messages are communicated from the writer or speaker, they are more related to people’s social and psychological world, as well as reflecting the underlying cognitive activity (Chung & Pennebaker, 2007). They can help identify the focus, which then indicates intentions or priorities (Tausczik & Pennebaker, 2010). In the hiring context, when job postings and interviews used gender masculine pronouns, female applicants perceived a lack of fit for the positions they applied to (Bem & Bem, 1973). In mock interviews, women experienced negative feelings such as a lower sense of belonging and group-based ostracism when gender-exclusive language (“he”) was used compared to when gender-inclusive language (“he” or “she”) was used (Stout & Dasgupta, 2011).

Thaler and Sunstein (2008) argued in *Nudge* that there is no “neutral” design of how the choices are being presented to decision makers, which means even small and seemingly insignificant or trivial designs can have the power to gently steer people’s behavior in a significant way as those designs would instruct people’s attention in a specific direction. In other words, as long as decisions are influenced by the pronouns used, a default option is set through choice architecture. Therefore, it is proposed that candidates are “nudged” to see themselves in

the job positions when language cues indicate that they fit the role, especially for those such as IT jobs where female candidates are not the dominant schema (Cheryan et al., 2009).

For example, studies have shown that exposure to female experts in the STEM field promoted positive attitudes in women, including enhanced self-efficacy and motivation to pursue their careers and stay in STEM (Marx et al., 2005; Marx & Roman, 2002; Stout et al., 2011) because it conveys the message that the role model can be emulated and they can succeed in STEM (Lockwood & Kunda, 1997; Marx et al., 2005). Although research remains to be done on whether or not having female role models helps with the initial recruitment for getting more women into the field (e.g., college classes, majors), multiple studies suggest that having female role models is indeed helpful for women who are already in STEM fields (Cheryan et al., 2011b; Marx & Roman, 2002; Stout et al., 2011) which is the target population of interest in this study.

### **Gender Pronouns as Nudges**

Prior literature provided evidence that gender-related behavior is variable and context dependent (Deaux & Major, 1987). Environmental cues can elicit identity-related psychological concerns such that people search for cues as to whether they will be included, especially in times of transitioning to a new environment (Emerson et al., 2014; Murdock-Perriera et al., 2019; Murphy & Taylor, 2012). Women in gender-unbalanced domains specially relied on these cues such as the numerical representation of female gender to “assess the degree of identity threat” in the environment (Murphy et al., 2007, p.884). In a similar vein, studies found that when women are the majority of the group, their math performance is the highest, and the performance decreases as the proportion of the relative number of males in the group goes up (Inzlicht et al., 2000); and when female engineering students were randomly assigned to groups with different gender composition, those with higher women representation had higher participation and more

positive experience (e.g., less threat and challenges, Dasgupta et al., 2015). On the other hand, studies found men were unaffected by the environmental cues (i.e., gender composition, Hall et al., 2018; Inzlicht et al., 2000; Murphy et al., 2007).

From the perspective of signaling theory, to reduce information asymmetry, one party undertakes certain actions to send visible signals to the other in terms of its underlying quality (Connelly et al., 2011). For instance, companies use heterogeneous leadership to signal their embrace and dedication to diversity and creating social values (Miller & Triana, 2009). Signals can also come in the form of intent (Stiglitz, 2000), such that using gender pronouns does not necessarily signal the composition of the workforce demographics, but the intent of the organization to build a gender-balanced workforce being received can be important. Job candidates can formulate their perceptions toward the organization using these signals when other information is incomplete such as unobservable values (Suazo et al., 2009). The pronoun-nudges in this study function as signals sent from the organization.

## **Hypotheses**

Based on the above review, it is proposed that for a historically male-dominated profession such as information technology (IT), the pronouns used (he, she, or neutral [you]) in situational interview questions or situational judgment questions will impact the performance of the non-dominant group (females), such that using female pronouns for the person described in the scenarios (e.g., “she”) will promote stronger performance among female candidates, male and neutral pronouns should have similar negative effects because they trigger existing male-dominated profession schemas. It is likely that men will seek to maintain the status quo to minimize the possible effort for change (Godenzi, 1999), and therefore, will not respond

favorably or unfavorably towards the scenarios that use female pronouns, resulting in similar responses across all conditions.

### **Nudge Outcomes**

In the following section, the interview performance dimensions that will be affected are discussed. Specifically, it is proposed that the use of female pronouns in the situational interviews and situational judgement tests will increase selection performance (the score in situational judgment test), interviewee engagement (response time, word count, applicant motivation), expected sense of belonging in the organization, intent to pursue employment in the organization, and perceived organizational support.

### ***Selection Performance***

**Situational Judgment Test (SJT) Scored Answers.** Situational Judgment Tests (SJT) have been found to yield predictive validity across job-relevant circumstances (McDaniel et al., 2007; Webster et al., 2020; Weekley et al., 2006), as well as providing incremental validity above and beyond job-related KSAOs (Lievens et al., 2008). They can be developed using critical incidents collected in a job analysis or be based on theory (Mumford et al.2008), and serve as a measurement to both procedural knowledge (Motowidlo & Beier, 2010) and other types of knowledge such as team performance (Mumford et al.2008).

It is proposed that the situational cues (i.e., situational interview questions with female pronouns) will nudge female candidates to perceive the organization as more gender-inclusive and female candidates will perform better on the questions (by scoring higher) because compared to men, women are more concerned and affected about gender-exclusive language (Rubin & Greene, 1991), and when the tasks to perform did not signal a strong gender exclusiveness, women tend to perform better (Kricheli-Katz & Regev, 2021).

*Hypothesis 1.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition will score significantly higher when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates perform similarly across all three conditions.

### ***Interviewee Engagement***

**Response Length of Time.** The length of time candidates take to respond to interview questions is an indirect measure of how thorough their answers are and their engagement with the question. Studies have used an individual's response time as an indicator of their motivation or engagement to learn and when the responses are quicker, it is likely that participants are less engaged (Beck, 2004; Ozcelik et al., 2013). It is hypothesized that when female candidates perceive the organization as more gender-inclusive for them, they will tend to be more motivated to be selected into the organization, which will be reflected in the length of time that candidates spend answering the question. Precisely, it is proposed that female candidates will spend more time answering the situational interview questions when female pronouns are used. Men, on the other hand, are less likely to notice the stereotypes when seeing themselves in the IT profession that they should be unaffected by the pronouns used.

*Hypothesis 2.a.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition will spend significantly more time answering the situational interview questions when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will spend a similar amount of time across all three conditions.

**Situational Interview (SI) Word Count.** The change in perception may also be reflected by word count. Word count relates to how engaged people are in a conversation (Tausczik &

Pennebaker, 2010). Studies on teamwork communication showed that when members of groups work together, those that received high ratings tended to use more words (Leshed et al., 2007). When female candidates perceive the organization as more gender-inclusive, they are more motivated and willing when interacting with fellow employees (e.g., in scenarios as captured in this study). That is, in situational interview questions, female candidates should answer with more thorough answers (i.e., using more words) if they are nudged to think of a female as the protagonist in the scenario than when they are presented with scenarios that have male (he) or neutral (you) pronouns.

*Hypothesis 2.b.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition will provide answers with significantly more words when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will perform similarly across all three conditions.

**Applicant Motivation.** Although response time and word count are tangible and can be easily retained, they are indirect measurements of how motivated and engaged participants may be. Applicant motivation is a subjective measure of the motivation and engagement to perform well on the selection test of job candidates because it reflects the willingness to exert effort and hard work (Campbell & Pritchard, 1976) and also affect applicant performance on selection tests (Arvey et al., 1990). It is hypothesized when female applicants read the scenarios that use female-pronouns, they will be more motivated and will report higher applicant motivation.

*Hypothesis 2.c.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition will report

significantly higher applicant motivation when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will report similarly across all three conditions.

### ***Expected Sense of Belonging***

Sense of belonging is an important psychological concept that can be understood as “the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment” (Hagerty et al., 1992, p. 173). Maslow (1943) considered it as one of psychological needs for human beings as we all have the desire to build relationships and connect with others. Individuals’ perceptions of human relationship and sense of belonging can be a vital determinant of their mental health and mental breakdown (Dasberg, 1976), as well as their cognitive processes (Baumeister & Leary, 1995). In organizations, a sense of belonging is associated with retention and individual success (O’Meara et al., 2017; Walton & Cohen, 2007); compliance (Baumeister et al., 2002) and job satisfaction (Winter-Collins & McDaniel, 2000). Studies on the gender gap suggest that when environment (e.g., “ambient identity cues”) broadcast only the masculine culture, women tend to feel a lower sense of belonging because these “ambient identity cues” could signal exclusion and cause deterrence (Cheryan et al., 2009). Therefore, expected sense of belonging will be considered as one of the outcome variables.

*Hypothesis 3.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition are more likely to experience a higher expected sense of belonging in the organization when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will feel similarly across all three conditions.



### *Intent to Pursue Employment in the Company*

Although many studies have used attractiveness of organizations as the surrogate measure of organizational pursuit (e.g., Highhouse et al., 1999; Macan et al., 1994), scholars have reexamined the dimensionality of attractiveness of organization and its prediction to organizational pursuit behavior (Highhouse et al., 2003). Researchers have not only found support for Fishbein and Ajzen's theory (1975) that intention predicts behavior (in this case, organizational pursuit) better than attitude, but also that the commonly used construct attractiveness to organization is indeed distinct from intentions toward the company because the intention to pursue the job in an organization, as opposed to being passively attracted to the organization, implies more proactive action (Highhouse et al., 2003). Candidates can be attracted to many organizations, but probably do not intend to pursue all of them. In a job interview, intentions to pursue an organization is operationalized as one's decision of whether or not to accept a job offer from the organization, whether they will work hard for the organization and how likely they are going to recommend this organization (Hausknecht et al., 2004). Highhouse and colleagues (2007) argued that the signals candidates attach to organizations can play an important role when it comes to intent to pursue the organization. A previous study on interns at an engineering company indicated that when determining intent to accept a job offer if given one, the organization and company environments were the most critical factors, with results stronger for female interns than male interns (Huynh & Chen, 2020). Therefore, in this study, I will be using intention to pursue the organization as another outcome variable. Specifically, females presented with female pronouns in the situational questions are hypothesized to feel more "fit" and therefore, have a higher intent to pursue employment in the organization than

female candidates in other conditions and male candidates are hypothesized to not experience any changes in their intent.

*Hypothesis 4.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition are more likely to have a higher intent to pursue employment in the organization when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will feel similarly across all three conditions.

### ***Perceived Organizational Support***

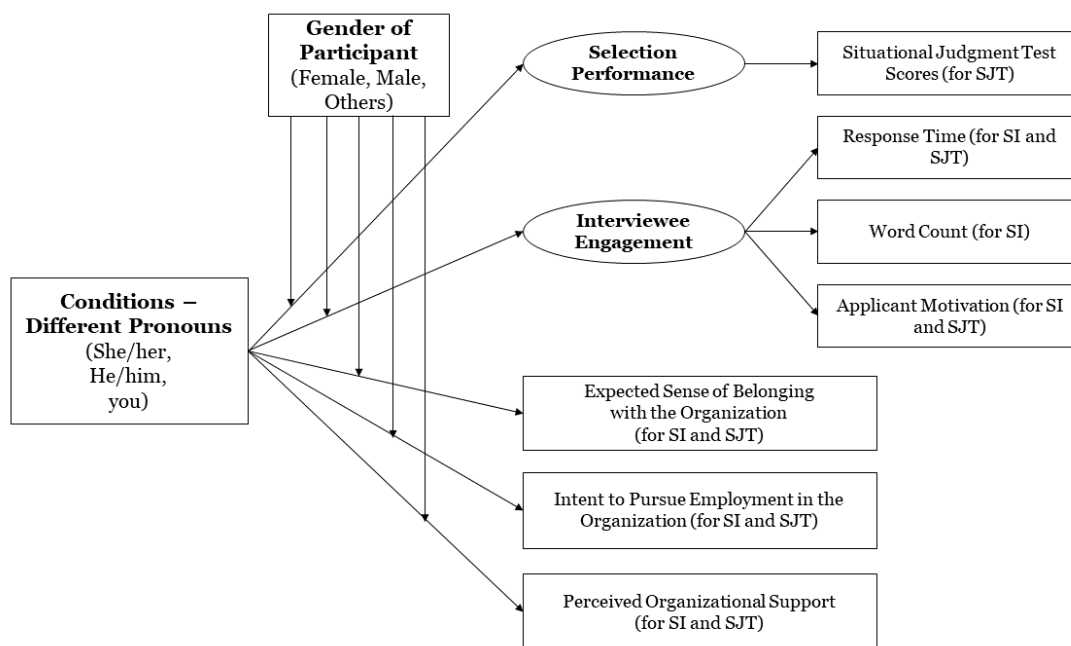
Social Exchange Theory suggested that when individuals receive favorable treatment, they reciprocate the favor (Cropanzano & Michell, 2005; Gouldner, 1960; Homans, 1958). When employees are treated well, they tend to be obliged to exert more effort and loyalty to their employer (Bateman & Organ, 1983; Brief & Motowidlo, 1986; Gouldner, 1960; Eisenberger, 1986; Rhoades & Eisenberger, 2002). This supportive treatment is often referred as Perceived Organizational Support (POS), the extent to which employees believe that they are being valued and cared about by their organization (Eisenberger et al., 1986). When employees perceive the support from their organization, they care about the organization's welfare and produce more positive outcomes such as performance (Nye & Witt, 1993) and lower absenteeism (Eisenberger, 1986). POS is related to affective organizational commitment (Rhoades et al., 2001) and job satisfaction (Rhoades & Eisenberger, 2002). Therefore, POS makes it a desirable outcome measure for this study. Characteristics of selection can affect a candidate's perception of organizational fairness (Hausknecht et al., 2004, Macan et al., 1994). It is expected that when being presented with the gender pronouns, female candidates who see the female pronouns are

expected to think that they will be treated fairly, even in a male-dominant organization, thus developing feelings of POS.

*Hypothesis 5.* There will be a significant interaction between the pronouns used and candidate gender such that female candidates in the female pronoun condition are more likely to experience a higher perceived organizational support in the organization when compared to the male pronoun (he) or neutral pronoun (you) condition, while male candidates will feel similarly across all three conditions.

**Figure 1**

*Overall Integrated Research Model*



## CHAPTER II

### Method

#### Participants

Participants were recruited through the online subject pool platform *Prolific*, where they register to complete surveys. *Prolific* allows researchers to set criteria and follow recruitment

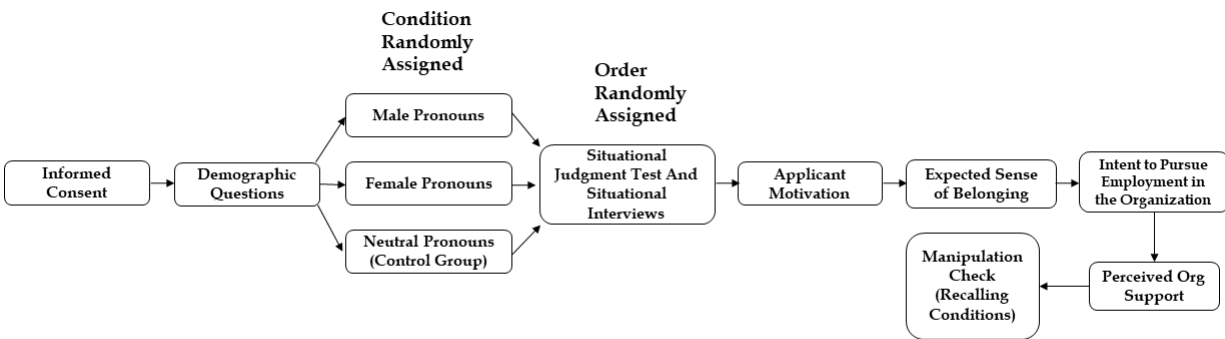
practices to protect participants' rights, as well as providing a diverse pool of participants (Palan & Schitter, 2018). In terms of data quality, according to a recent study (Brown et al., 2020) on crowdsourcing expertise using situational judgment tests, it is recommended that studies continue to use crowdsourcing methods as subject matter experts in a field, which concurs with prior work that suggested crowdsourcing platforms tend to yield comparable data quality to other methods (e.g., Behrend et al., 2011). In this study, only participants who (a) live in the United States, (b) are 18 years or older, (c) have submitted 15 or more surveys and (d), have obtained an approval rate of 98% were allowed to take the survey. The average reward per hour for participants in this study was shown to be about \$14 on *Prolific*.

### **Power Analysis**

Power analysis was conducted using statistical package *pwr* in R (Champely et al., 2020). This package was developed based on the power analysis functions discussed by Cohen (1988). Specifically, the function for General Linear Model (GLM) `pwr.f2.test` is used to calculate power for the current study in factorial two-way Analysis of Variance (ANOVA), which is a type of GLM. Meta-analysis on moderated multiple regression with categorical variables found that researchers usually hypothesize for a small moderating effect size ( $f^2$ ), .02, yet the median observed effect size ( $f^2$ ) is only .002 (Aguinis et al., 2005). Therefore, a smaller and more realistic effect size (Aguinis et al., 2005) was adopted. Using an effect size = .011, from  $(0.02+0.002)/2$ , with a planned alpha level = .1, approximately 1100 participants were recruited in order to potentially obtain a statistical power of .8 or above.

### **Figure 2**

*Procedure for the Current Study*



*Note.* Participants went through the procedure in this figure.

Participants were directed to a survey link on Qualtrics to take the survey. They started with demographic questions (see [Appendix A](#)), and then were randomly assigned to one of the three experimental conditions: the Female-Pronoun group (where situations were worded with a female as the protagonist – e.g., she), the Male-Pronoun group (he), and the Gender-Neutral group (you). Participants were asked to complete the situational judgment tests and situational interviews in a random order, after which they reported their motivation to do well in these questions, their perceived expected sense of belonging toward the organization, intent to pursue employment in the organization, as well as their perceived organizational support. Among these questions, an attention check item was placed along with the items on expected sense of belonging, for the purpose of ensuring data quality (Meade & Craig, 2012).

To minimize the heterogeneity about how participants respond to the manipulation, which could create error in the measurement, potentially causing a Type II error, a manipulation check was used to ensure the internal state of the participants are correctly induced by the intervention (Aronson et al., 1990). In the present study, this means participants in the different conditions would have to realize the use of the different pronouns, which would trigger different attitudes and intentions. Thus, in the end, participants went through a manipulation check, asking

them to identify the gender of the main character in the scenarios they read, which was aimed to assess the awareness of the pronoun condition.

## Measures

### Nudge Condition

Before the conditions were presented, participants were told to imagine they are applying to an IT job as a recent graduate, in particular, a job as a software engineer working for an information technology company. Background information of the company was introduced, and job description was presented (see [Appendix B](#))

The focal interest of this current study was to assess how participants, when presented with different gender pronouns in interview questions, will likely perform, their interviewee engagement, expected sense of belonging in the organization, intent to pursue employment in the organization and perceived organizational support. These gender pronouns are presented in three conditions embedded in situational questions: Female Pronouns (i.e., she/her), Male Pronouns (i.e., he/him) and Gender-Neutral pronouns (i.e., you), which is the most commonly worded pronoun in these situational questions. For each SI and SJT, the gender of the protagonist (the central character in the scenario) was introduced at the beginning of the scenario as male, female or “you”. Thus, participants were asked to frame the scenario from the perspective of a female, male or neutral perspective. The following questions illustrate the female-pronoun “She/Her” condition. The scenarios for the other conditions: “He/Him/His” and “You/Your”, as the gender-neutral condition (also the control condition) are provided in [Appendix C](#).

These situational questions were adopted from previously used and validated SJTs, which were used to develop measures to assess multiple domains of skills, such as job candidate’s authentic leadership (Campos & Rueda, 2020), ability to adapt to the environment (Grim, 2010),

intention to be inclusive when facing potential biases in the workplace (Chang et al., 2019), and integrity (Becker, 2005; Teng et al., 2020). The scoring for the answers to these questions are presented in the parentheses (not included for the participants).

***Scenarios for SI:***

1) Ms. Smith is the manager of a software development company. Two team leaders, who report directly to her, got into a conflict. It started to negatively impact the teams' performance on their tasks, because these two leaders are responsible for sectors of which results are immediately linked to one another. She, the manager, talked about the case in a meeting with her superior and her peers. They found a possibility to transfer one of the team leaders to another sector, in which there was an available position, but this team leader would have to face many changes. If you were Ms. Smith, what would you do? (Campos & Rueda, 2020)

2) Ms. Johnson is on the same team with Dan, who's also her friend. She often hangs out with Dan on the weekends or after work. Dan is not a good team member. He often comes into work late, leaves early, and fails to do good work. As Dan's friend, Ms. Johnson ignores his faults at work and lets her supervisor worry about it. But now she has been promoted and will be in charge of the team. On her first day in charge, she sees Dan come to work late. What should she do? (Grim, 2010)

***Scenarios for SJJ:***

1) Ms. Young has started working with a new client. The client has asked for her input to help assign client team members to the project. There are 8 qualified candidates, and the client has offered to provide her with whatever she needs to formulate her input. If you were her, what would you be most likely and least likely to request? (Chang et al., 2019)

- a. Anonymized work history and a sense of strengths and growth areas for each candidate (Least likely-1; Most likely+1)
- b. Resumes and a brief written statement of each candidate's interest in the project (Least likely-0; Most likely-0)
- c. A 15-minute individual interview with each of the candidates (Least likely-0; Most likely-0)
- d. Their judgment on who would be easiest to work with since all 8 are qualified (Least likely+1; Most likely-1)

2) Imagine you are Ms. Brown being asked by her manager to write a proposal for a project. After getting the details, she spent a considerable amount of time researching and writing after hours. She gave the report to her manager on Monday, but it came back with edits everywhere, and it was clear that her manager changed the direction of the proposal without telling her. To make matters worse, the manager expects the new proposal in two days. If you were Ms. Brown, what would you most likely do? What would you least likely do? (Teng et al., 2020)

- a. Immediately get to work on the new direction, expecting to work late (Most likely +1; Least likely: -1)
- b. Pray for guidance in how to proceed (Least likely +1; Most likely-1)
- c. Enlist the aid of one of your peers to help with part of the proposal (Least likely-0; Most likely-0)
- d. Tell yourself that you are really good at this and that you will be able to do a good job (Least likely-0; Most likely-0)

3) Imagine you are Ms. Green, an engineer that has been asked to work with a group of three other engineers to design a new product. Each engineer has created their own design, and



they are meeting together to discuss what to do. Ms. Green has seen the other designs and believes hers is the best. The other engineers seem to agree, but two of them want to change the design. She thinks the changes reduce the quality of the product. If you were her, of the following, which would you be most likely to do? Which would you be least likely to do?

(Becker, 2005)

- a. Work with the others to produce a design that everyone is fairly satisfied with. (Most likely +1; Least likely -1)
- b. Let the others make the changes as they see fit, as long as they don't drastically alter the basic plan. (Most likely -0; Least likely -0)
- c. Bring in your boss to help resolve the disagreement. (Most likely -1; Least likely +1)
- d. Explain why you think the original design is better and refuse to change your mind unless better ideas are offered. (Most likely -0; Least likely -0)

## **Gender**

The understanding of gender has evolved during recent years (Morgenroth & Ryan, 2020). More evidence has supported that gender isn't a non-overlapping binary, but a complex socially constructed spectrum that involves one's physical and emotional characteristics along a continuum (Baltes-Löhr, 2018). However, the English language is still largely expressed as a binary using male vs. female pronouns, and this distinction is deeply embedded in the culture, the gender conditions were bimodal in the current study. However, in the demographics, participants were given the option to self-identify as "female", "male", or "prefer to self-describe".

## **Introduction of Outcomes**

For situational judgment tests, participants were assessed on their answers (i.e., choosing one of the provided options as the best solution they would want to approach in the given scenario as the selection performance). For both types of questions, the time it took participants to finish a question was also recorded, as a measure of interviewee engagement, along with word count for situational interview questions and self-reported applicant motivation. Their perceived expected sense of belonging, intent to pursue employment with the organization and perceived organizational support were also captured. All measures are presented in [Appendix D](#).

### ***Selection Performance***

**SJT Scored Answers.** Participants were measured on their multiple-choice scores in Situational Judgment Test based on the scoring keys developed in the corresponding validation research (Becker, 2005; Campos & Rueda, 2020; Chang et al., 2019; Grim, 2010; Teng et al., 2020). For example, in scenario 3, if participants choose “Work with others to produce a design that everyone is fairly satisfied with” to be their most likely approach, they gain +1 point; and if other participants choose this as the approach that they are least likely to take, they lose one point. Thus, across the three SJT questions, participant total scores could range from -6 to 6.

### ***Interviewee Engagement***

**Response Length of Time.** Response time was measured as the total time it took for each participant to complete the situational interview and situational judgment tests. The survey was set up in a way that all 5 interview questions and only these questions were on one page, and then the embedded feature in Qualtrics was used to capture the total time spent on that page to assess the total time participants spent on the interview questions.

**Word Count.** For situational interview questions, the word count of the answer was assessed as an indicator of how much effort participants are putting into answering the question and their engagement in the communication (Tausczik & Pennebaker, 2010). This was calculated using R.

**Applicant Motivation.** The Test Attitude Survey (TAS) was initially developed by Arvey and colleagues (1990) to assess job candidates' motivation on effort and hard work exertion, which later was further combined with alternative motivational concepts to assess other relevant dispositions of the test takers. The final version of TAS includes multiple dimensions (Motivation, Lack of Concentration, Belief in Tests, etc.), and for the purpose of the current study, items from the Motivation dimension were adopted. More specifically, these items were chosen and asked to participants: (a) I tried to do the very best I could on these questions, (b) While answering these questions, I concentrated and tried to do well, (c) I was extremely motivated to do well on these questions. The overall Cronbach's  $\alpha$  for these three items equals to .73. Participants rated these items a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Together with Response Time and Word Count, these three measurements are used to reflect the underlying construct interviewee engagement.

### ***Expected Sense of Belonging***

Four questions measuring sense of belonging from a previous organizational study (Murphy & Dweck, 2010) were used for all participants. The word "organization" was used to replace the word "club" (used in the original research). Participants were asked to indicate the extent to which they would anticipate feeling the following emotions in the organization: (a) I anticipate feeling that I belong as a member of this organization, (b) I anticipate feeling comfortable during organization meetings and activities, (c) I anticipate feeling accepted during

organization meetings and activities, and (d) I might stick out like a sore thumb during company meetings and activities (reverse). Internal reliability, Cronbach's  $\alpha = 0.76$ . These items were rated on a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

### ***Intent to Pursue Employment with the Organization***

Based on previous research (Highhouse et al., 2003), five items were used to assess candidates' intention to pursue the organization. The items reflect a "forward-looking approach" and explicitly focus on the behavioral intentions of the organization. Four items were chosen to assess this construct: (a) I would accept a job offer from this company, (b) I would make this company one of my first choices as an employer, (c) I would exert a great deal of effort to work for this company, and (d) I would recommend this company to a friend looking for a job. To fit this study better, one question (Q3) from the original scale was dropped and four questions total were retained to measure intent to pursue employment. The internal consistency (Cronbach's  $\alpha$ ) of this scale is equal to .86. Participants rated their agreement items on a Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

### ***Perceived Organizational Support***

Eisenberger and colleagues developed the Survey of Perceived Organizational Support (SPOS, 1986). Eight items that load heavily on the main factor have been used as a reduced version to measure perceived organizational support in various studies (Baranick et al., 2010; Casper & Buffardi, 2004; Eisenberger et al., 1997; Eisenberger et al., 2002; Hutchison, 1997). Four items from the scale that were most applicable for a post-interview were selected and slightly modified to reflect perceptions of future support: (a) Help will be available from the organization when I have a problem, (b) The organization will show very little concern for me (reverse), (c) The organization will care about my opinions, and (d) The organization will be

willing to help me when I need a special favor. Participants were asked to indicate the degree of their agreement or disagreement with each statement on a five-point Likert scale (1 = *strongly disagree*, 5= *strongly agree*). In this study, alpha based on these four items was found to be .74.

### **Attention Check**

Data quality from online subject pools can sometimes be a concern that results from inattentive responses (Buchanan, 2000), which can produce within-group variability that leads to attenuated correlations, biasing the result (Meade & Craig, 2012). Therefore, to ensure the quality of data collection, within the questions that measure participants' intent to pursue employment in the organization, one attention checking question was added: "Please respond with 5 '*strongly agree*' for this item". Those whose answers did not align with the instructed option were eliminated from the sample prior to data analysis.

### **Manipulation Check**

At the end of the survey, a self-report question was asked to assess whether participants noticed the gender pronouns used in the scenarios: "The gender of the main character in the scenarios you were asked to respond to earlier was (choose one): (1) female (Ms., she, her), (2) male (Mr., he, his, him), (3) neutral (you), (4) mixed, or (5) I don't recall. This provided a measure of the extent to which participants were aware of and consciously processed the condition they were in. Nudge research suggests that the cuing effect occurs with conscious or unconscious processing and so this measure was added to assess the extent to which people recognized the condition they were in.

## CHAPTER III

### Result

#### Data Preparation

After screening, only 2% of the participants failed the attention checking question ( $N = 27$ ), therefore, they were eliminated from the analysis with much concern of biasing the result. On the other hand, 273 participants (26%) failed the manipulation checking question. While knowing the percentage is helpful in understanding whether the intervention was implemented as expected, eliminating all that failed the question could potentially introduce biases in the result (Aronow et al., 2019), leading to a Type I error. In addition, as will be discussed later, this assumes that nudges must be consciously registered. Thus, the 273 participants were kept for analysis, and post-hoc analyses were conducted to assess the effects of recalling the pronouns used versus not recalling them. The rest of the data were then checked to make sure there were no duplicates and appropriate items were reverse-coded. The highest percent of missingness at the individual level was 10%, far less than the proposed 24% threshold (Olinsky et al., 2003), indicating no deletion was needed and all participant's data could be used for preliminary and follow-up analyses. The existing missingness was Missing Completely at Random (MCAR: Little, 1988) determined by the R package VIM (Visualization and Imputation of Missing Values). Available items are later used to conduct analysis (i.e., "AIA", Parent, 2013).

Among the outcome variables including selection performance (SJT score), interviewee engagement (time to respond, word count, applicant motivation), expected sense of belonging, intent to pursue employment with the organization, and perceived organizational support, the ratio variables—time to respond and word count—generated wide ranges with strong skewness. This resulted in extreme outliers. The method proposed by Leys and colleagues (2013), Median

Absolute Deviation (MAD) was computed to avoid the sensitivity outliers brought to sample means. The outliers which were three times the MAD were winsorized (i.e., replacing extreme observations with less extreme values: Dixon, 1960) and the low or high boundaries were substituted for extreme scores. Table 1 shows the demographic information of the participants, a total of 1078. Table 2 – 4 includes the breakdown demographics for each condition. A correlation matrix of the relationships between variables is provided in Table 5.

**Table 1**

*Participant Demographics*

<b>Gender</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>	<b>Count</b>	<b>%</b>
Male				498	46.2%
Female				558	51.8%
Other				19	1.8%
NA				3	0.3%
<b>Age</b>	31.76	9.58	18-73		
<b>Education</b>					
Less than high school				14	1.3%
High school graduate or equivalent				252	23.4%
Associate degree				97	9.0%
College degree				402	37.3%
Advanced degree (graduate or professional)				313	29.0%
NA				0	0.0%
<b>Race</b>					
White or Caucasian				804	74.6%
Black or African American				184	17.1%
Native American or American Indian				6	0.6%
Asian or Asian American				36	3.3%
Pacific Islander				1	0.1%
Biracial or multiracial				33	3.1%
Other				11	1.0%
NA				3	0.3%

*Note.* (N = 1078)

**Table 2**

*Demographics for “She” Condition*

<b>Gender</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>	<b>Count</b>	<b>%</b>
Male				172	48.0%

Female				181	50.6%
Other				5	1.4%
NA				0	0.0%
<b>Age</b>	31.52	9.6	18-71		
<b>Education</b>					
Less than high school				1	0.3%
High school graduate or equivalent				85	23.7%
Associate degree				38	10.6%
College degree				132	36.9%
Advanced degree (graduate or professional)				102	28.5%
NA				0	0.0%
<b>Race</b>					
White or Caucasian				268	74.9%
Black or African American				64	17.9%
Native American or American Indian				2	0.6%
Asian or Asian American				11	3.1%
Pacific Islander				1	0.3%
Biracial or multiracial				8	2.2%
Other				3	0.8%
NA				1	0.3%

Note. (N = 358)

**Table 3**

*Demographics for "He" Condition*

<b>Gender</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>	<b>Count</b>	<b>%</b>
Male				157	43.85%
Female				190	53.07%
Other				8	2.23%
NA				3	0.84%
<b>Age</b>	32.11	9.67	18-70		
<b>Education</b>					
Less than high school				7	1.96%
High school graduate or equivalent				88	24.58%
Associate degree				32	8.94%
College degree				138	38.55%
Advanced degree (graduate or professional)				93	25.98%
NA				0	0.00%
<b>Race</b>					
White or Caucasian				263	73.46%
Black or African American				62	17.32%
Native American or American Indian				2	0.56%
Asian or Asian American				13	3.63%
Pacific Islander				0	0.00%
Biracial or multiracial				11	3.07%
Other				6	1.68%
NA				1	0.28%



Note. (N = 358)

**Table 4**

*Demographics for “You” Condition*

<b>Gender</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>	<b>Count</b>	<b>%</b>
Male				169	46.7%
Female				187	51.7%
Other				6	1.7%
NA				0	0.0%
<b>Age</b>	31.66	9.49	18-73		
<b>Education</b>					
Less than high school				6	1.7%
High school graduate or equivalent				79	21.8%
Associate degree				27	7.5%
College degree				132	36.5%
Advanced degree (graduate or professional)				118	32.6%
NA				0	0.0%
<b>Race</b>					
White or Caucasian				273	75.4%
Black or African American				58	16.0%
Native American or American Indian				2	0.6%
Asian or Asian American				12	3.3%
Pacific Islander				0	0.0%
Biracial or multiracial				14	3.9%
Other				2	0.6%
NA				1	0.3%

Note. (N = 362)

**Table 5.**

*Correlation Matrix Between Variables*

<b>Outcomes</b>	<b>1. Selection Performance</b>	<b>2. Interviewee Engagement</b>			<b>3. Expected Sense of Belonging</b>	<b>4. Intent to Pursue Employment</b>	<b>5. Perceived Organizational Support</b>
	<b>a. SJT Score</b>	<b>a. Time to Respond</b>	<b>b. Word Count</b>	<b>c. Applicant Motivation</b>			
<b>Measured By</b>							
<b>Mean (SD)</b>	2.47 (1.92)	405.6 (182.78)	58.70 (30.95)	4.73 (0.47)	3.76 (0.75)	3.93 (0.8)	3.64 (0.73)

<b>Median</b>	3	364.88	55	5	3.75	4	3.75
<b>Range</b>	[-4, 6]	[38.39, 730.87]	[0, 121]	[1, 5]	[1, 5]	[1, 5]	[1, 5]
<b>1.a</b>	--	-0.05	0.15**	0.07*	0	-0.06	-0.03
<b>2.a</b>		--	0.36**	0.01	0.13**	0.19**	0.14**
<b>2.b</b>			--	0.08**	0	-0.03	-0.02
<b>2.c</b>				<b>0.73</b>	0.18**	0.20**	0.18**
<b>3</b>					<b>0.76</b>	0.59**	0.60**
<b>4</b>						<b>0.86</b>	0.65**
<b>5</b>							<b>0.74</b>

Out of the 1,078 participants, 19 people identified themselves as “other” in the gender selection and within these 19 people, several categories were presented. These subgroups have much smaller sample size compared to the other male/female gender groups and likely include a wide variety of gender identities (e.g., highly heterogeneous within group); therefore, their data was set aside, along with the other 3 participants whose gender information was missing for potential follow-up analysis and are not included in the primary hypothesis testing. Therefore, a total of 1056 people were retained for the analysis.

### Assumptions

The following assumptions for a regular analysis of variance were considered: 1) The predictor variables are categorical and outcome variables are continuous; 2) Samples are independent from each other; 3) The population variance of the scores on the outcome variables for each group is equal; and 4) The sampling distribution of the outcome variables are normally distributed (Field et al., 2012). The first two assumptions were met by the design of this study. Homogeneity of variance assumption was met except for the variable intent to pursue employment checked by Levene’s Test. Normality, on the other hand, was violated for all dependent variables as indicated by the significant results in the Shapiro-Wilk tests.

## Analysis

### *The Interaction of Gender and Condition*

To test the hypotheses, analyses for general factorial design (e.g., Factorial Independent ANOVA) were conducted. Specifically, R package “GFD” (a package for General Factorial Design) was used and the non-parametric Wald-Type Statistics (WTS), were reported to combat the violation of assumptions (Friedrich et al., 2017). Results revealed non-significant interaction at the alpha level = .1 between the pronoun nudge conditions (with three levels), and participant gender (with two levels) for hypothesis 1 – Selection Performance ( $WTS = 1.26, df = 2, p = 0.53$ ), hypotheses 2a-2c – Interview Engagement, including time to respond ( $WTS = 2.29, df = 2, p = 0.32$ ), word count ( $WTS = 1.02, df = 2, p = 0.6$ ), applicant motivation ( $WTS = 0.16, df = 2, p = 0.86$ ), hypothesis 3- Expected Sense of Belonging ( $WTS = 0.29, df = 2, p = 0.86$ ), hypothesis 4- Intent to Pursue Employment with the Organization ( $WTS = 0.93, df = 2, p = 0.63$ ), and hypothesis 5 - Perceived Organizational Support ( $WTS = 1.66, df = 2, p = 0.44$ ). Thus, the hypotheses that the relationship between participant gender and the outcome variables would be affected by the gender pronoun nudges were not supported. Table 6 provides a detailed summary for WTS scores and their corresponding  $p$ -values. Scores are provided in Table 7. Distributions of the scores, along with means and the 90% confidence intervals are presented in Figures 3 to 9.

**Table 6**

*General Factorial Design (Wald-Type Statistics) Result*

	Situational Judgment Test Scores			$\eta^2$ (generalized)
	Test statistic	df	p - value	
Condition	0.62	2	0.73	0.06%
Gender	56.36	1	< .0001***	5.00%
Condition by Gender Interaction	1.26	2	0.53	0.12%

### **Time to Respond**

	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	0.06	2	0.97	0.01%
Gender	27.21	1	< .0001***	3.00%
Condition by Gender Interaction	2.29	2	0.32	0.22%
<b>Word Count</b>				
	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	12.57	2	0.002 **	1.00%
Gender	20.51	1	< .0001***	2.00%
Condition by Gender Interaction	1.02	2	0.6	0.10%
<b>Motivation</b>				
	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	0.47	2	0.79	0.04%
Gender	0.62	1	0.43	0.06%
Condition by Gender Interaction	0.16	2	0.92	0.01%
<b>Sense of Belonging</b>				
	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	3.82	2	0.15	0.42%
Gender	47.44	1	< .0001***	4.00%
Condition by Gender Interaction	0.29	2	0.86	0.03%
<b>Intent to Pursue Employment in the Organization</b>				
	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	7.1	2	0.03*	0.72%
Gender	51.62	1	< .0001***	5.00%
Condition by Gender Interaction	0.93	2	0.63	0.08%
<b>Perceived Organizational Support</b>				
	Test statistic	df	p - value	$\eta^2$ (generalized)
Condition	4.46	2	0.107	0.51%
Gender	20.18	1	< .0001***	2.00%
Condition by Gender Interaction	1.66	2	0.44	0.15%

Note. ( $N = 1056$ ) \*  $p < .1$ , \*\*  $p < .01$ , \*\*\* $p < .001$ .

Gender was coded as 1 = male; 2 = female; Condition was coded as 1 = "she", 2 = "he", 3 = "you". Effect sizes ( $\eta^2$ ) were calculated via ANOVA.

**Table 7**

*Model Summary with Mean Score for Each Gender by Gender on Outcomes*

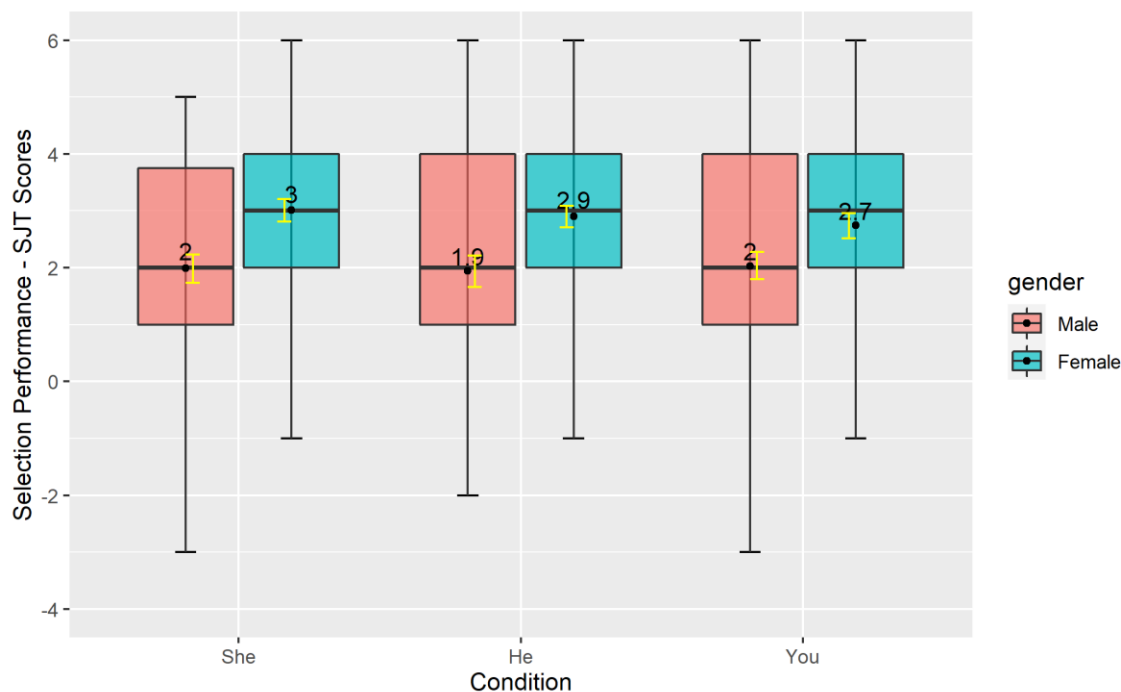
Condition	Gender	N	Means	Variances	Lower 90% CI	Upper 90% CI
<b>Situational Judgment Test Scores</b>						
She	Female	181	3.01	3.00	2.80	3.22
He	Female	184	2.90	2.48	2.71	3.09
You	Female	184	2.74	3.17	2.53	2.96
You	Male	161	2.03	3.99	1.77	2.29
She	Male	166	1.99	4.15	1.73	2.25
He	Male	149	1.95	4.70	1.65	2.24
<b>Time to Respond</b>						
She	Male	172	444.30	33915.81	421.08	467.53
You	Male	169	443.09	40464.39	417.50	468.69
He	Male	157	423.30	35889.61	398.28	448.31
He	Female	190	389.12	31052.07	367.98	410.25
She	Female	181	374.71	23935.87	355.70	393.72
You	Female	187	371.64	31326.08	350.25	393.04
<b>Word Count</b>						
You	Female	187	68.14	1041.97	64.24	72.04
She	Female	181	61.26	949.30	57.47	65.05
He	Female	190	58.72	884.97	55.15	62.28
You	Male	169	57.27	977.11	53.29	61.24
She	Male	172	55.08	856.25	51.39	58.77
He	Male	157	50.25	866.30	46.36	54.14
<b>Applicant Motivation</b>						
You	Female	187	4.75	0.22	4.69	4.81
He	Female	190	4.74	0.26	4.68	4.81
You	Male	168	4.74	0.22	4.68	4.80
She	Female	180	4.73	0.22	4.68	4.79
She	Male	171	4.71	0.25	4.65	4.77
He	Male	156	4.71	0.17	4.65	4.76
<b>Expected Sense of Belonging</b>						
You	Male	167	3.98	0.35	3.90	4.05
She	Male	171	3.95	0.42	3.87	4.04
He	Male	155	3.88	0.40	3.80	3.97
She	Female	181	3.68	0.69	3.58	3.79
You	Female	186	3.65	0.62	3.55	3.75
He	Female	189	3.56	0.63	3.47	3.66
<b>Intent to Pursue Employment in the Organization</b>						
You	Male	169	4.21	0.35	4.13	4.28
She	Male	168	4.09	0.45	4.00	4.17
He	Male	155	4.05	0.59	3.94	4.15
You	Female	186	3.83	0.66	3.73	3.93
She	Female	181	3.81	0.77	3.70	3.92

He	Female	190	3.68	0.78	3.57	3.78
<b>Perceived Organizational Support</b>						
She	Male	170	3.81	0.41	3.73	3.89
You	Male	168	3.74	0.44	3.66	3.83
He	Male	157	3.71	0.52	3.62	3.81
You	Female	187	3.62	0.48	3.54	3.71
She	Female	181	3.59	0.61	3.49	3.68
He	Female	190	3.46	0.60	3.37	3.56

Note. (N = 1056) This table was sorted by mean scores.

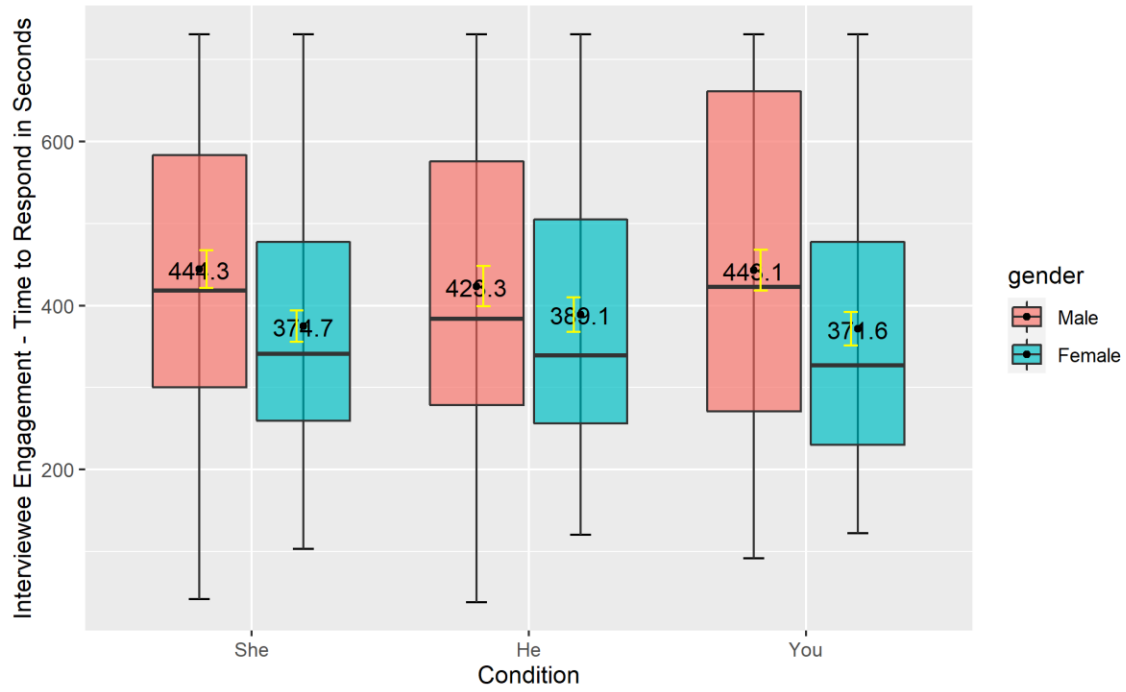
**Figure 3**

*Result on Selection Performance Across Condition and Gender*



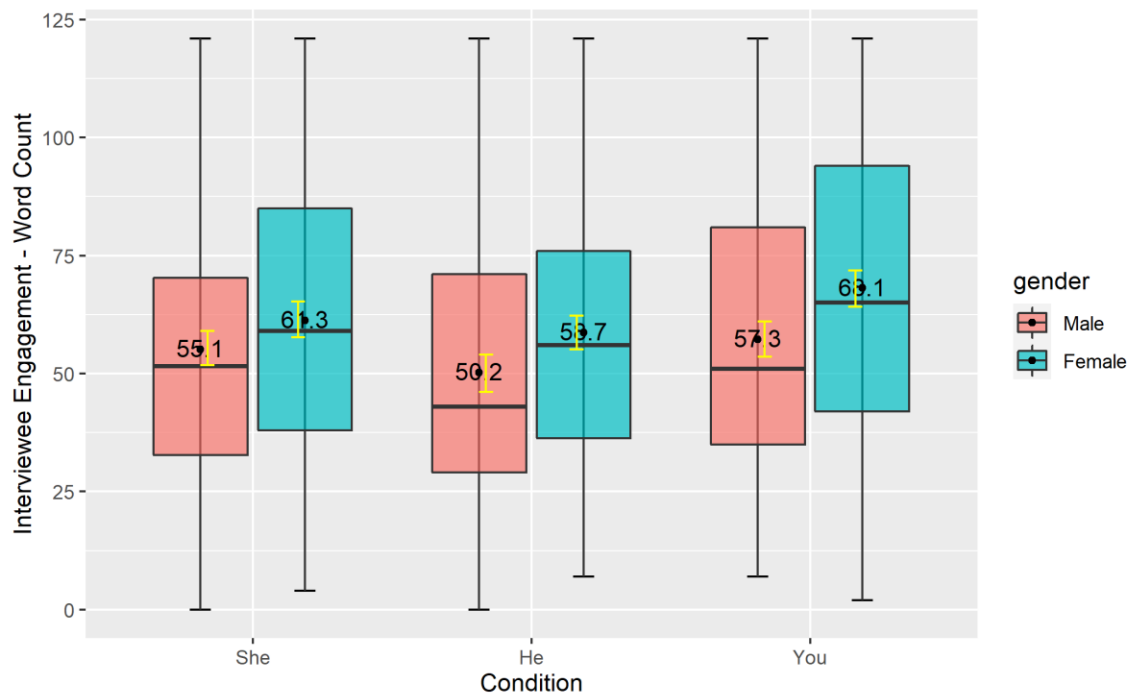
**Figure 4**

*Result on Interviewee Engagement – Time to Respond Across Condition and Gender*



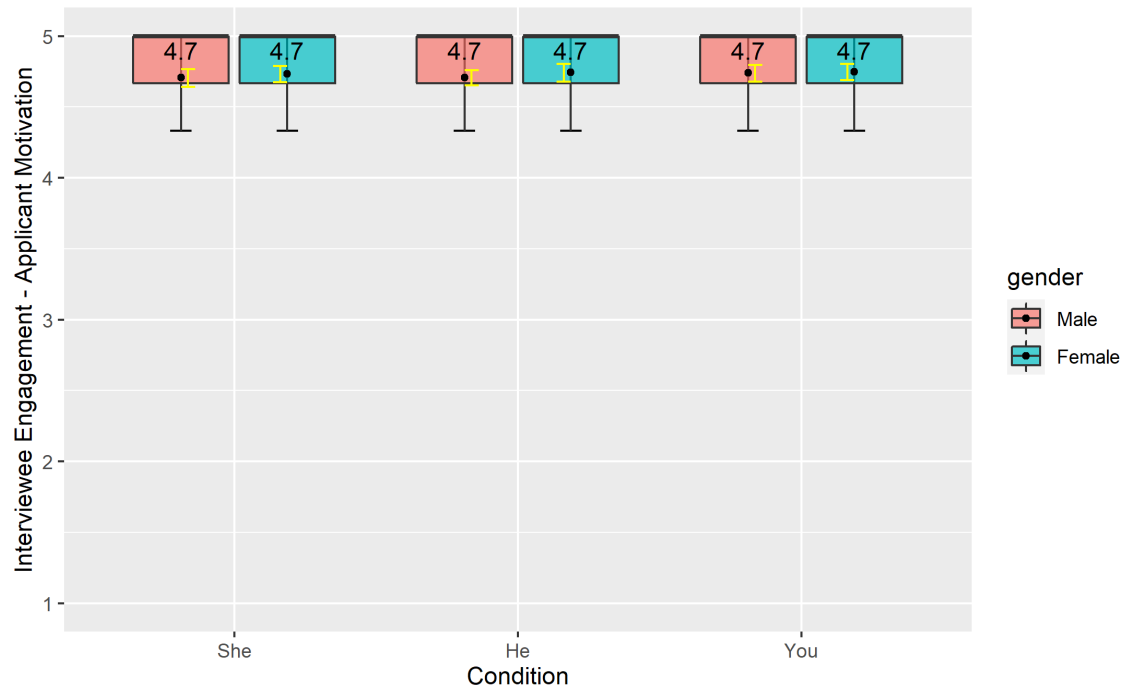
**Figure 5**

*Result on Interviewee Engagement – Word Count Across Condition and Gender*



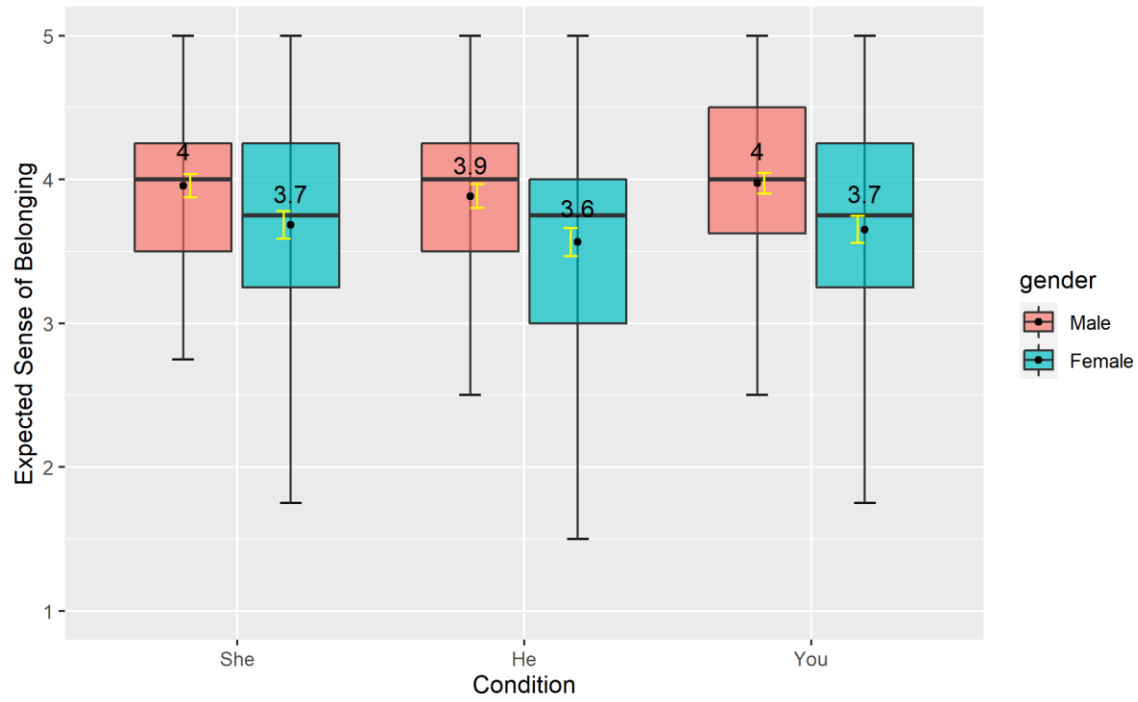
**Figure 6**

*Result on Interviewee Engagement – Applicant Motivation Across Condition and Gender*

**Figure 7**

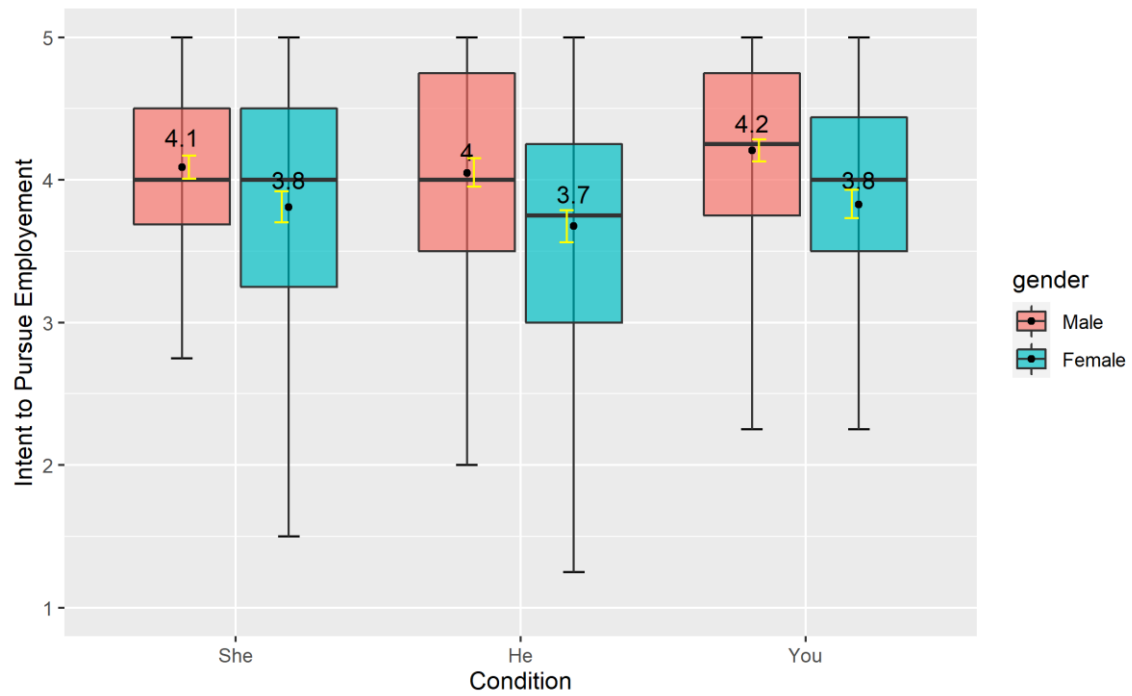
*Result on Expected Sense of Belonging Across Condition and Gender*





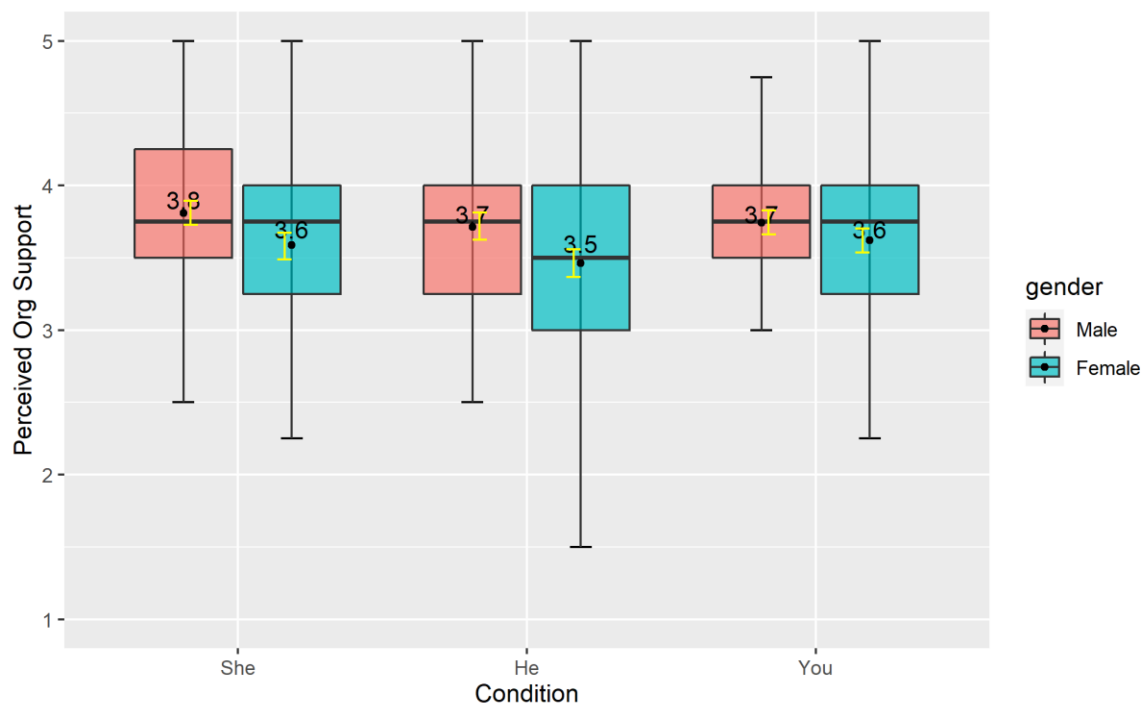
**Figure 8**

*Result on Intent to Pursue Employment in the Organization Across Condition and Gender*



**Figure 9**

*Result on Perceived Organizational Support Across Condition and Gender*



### **Main Effects**

Interestingly, several main effects were shown to be significant, by both of the predictor variables: condition and gender. Specifically, the nudge condition affected participants' word count ( $WTS = 12.57$ ,  $p = .002$ ,  $\eta^2 = 1\%$ ) with the Gender-Neutral pronouns "you" ( $M = 63$ ) showing the highest word count followed by Female pronouns ( $M = 58$ ), and Male pronouns ( $M = 55$ ). Participants in the "you" condition used significantly more words than those in the "he" condition, as well as those in the "she" condition, although the difference between conditions "you" and "she" was not statistically significant. Similarly, participants in the "you" condition reported significantly higher score when it comes to intent to pursue employment, compared to those in the "he" condition, as well as those in the "she" condition, but the difference between conditions "you" and "she" was not statistically significant (see Table 8 for the mean score of

each condition). This result suggests that the Gender-Neutral pronoun “you” commonly used in current interview processes may elicit more thoroughness in answers and interviewees may be more engaged. Participants’ intent to pursue employment in the organization was also significant ( $WTS = 7.1, p = .03, \eta^2 = 0.72\%$ ), with the Gender-Neutral condition “you” ( $M = 4.0$ ) showing the highest intent followed by Female condition ( $M = 3.9$ ), and Male condition ( $M = 3.8$ ). This finding similarly indicates that people, in general, are more psychologically engaged when asked to picture themselves in an interview example situation.

Gender significantly predicted all the outcomes except for applicant motivation, one of the three measures for interview engagement (see Table 8 and Figures 3 – 8 for the mean score of each gender). Women scored significantly higher in SJT questions, consistent with extant evidence (Whetzel et al., 2008), potentially indicating that women tend to do well on contextual knowledge (Bess, 2001). Men spent longer time answering these questions but wrote less words than women, which could be resulting from women’s higher verbal ability (Herlitz et al., 1997; Park et al., 2008). Men scored higher on the psychological constructs (i.e., expected sense of belonging, intent to pursue employment in the organization and perceived organizational support) which could be an indicator that men continued to be more attracted to a male-dominated profession (IT) despite the gender pronoun nudges. Thus, women performed better on SJT but did not feel like they belonged within the organization indicating that organizations could be losing qualified candidates because they are less attracted to the organization.

**Table 8**

*Main Effects by Condition*

	Word Count	Intent to Pursue Employment
	<i>M</i>	<i>M</i>
She (1)	58.25	3.94
He (2)	54.88	3.84
You (3)	62.98	4.01

**Table 9***Main Effects by Gender*

	SJT Score	Time to Respond	Word Count	Sense of Belonging	Intent to Pursue	Perceived Org Support
Men	2	437.3	54.3	3.9	4.1	3.8
Women	2.9	378.6	62.7	3.6	3.8	3.6

*Post-Hoc Analyses*

Two post-hoc analyses were conducted to further explore the data. First, I filtered out only the participants who identified their primary industry/area of study to be Information Technology and ran the same analyses ( $N = 124$ ). Their demographics can be found in [Appendix E](#). Result revealed a significant interaction between pronoun condition and gender on perceived organizational support. To be precise, female participants in the “he” condition reported statistically significantly lower perceived organizational support than those in the “you” condition, as well as male participants in all three conditions. This finding supports the hypothesis that women do not see themselves being supported when male pronoun nudges are explicitly used. This points to a future research direction to only include participants who are already in and will enter the IT field to see if it yields a similar pattern in results.

Additionally, because successful nudges tend to be a product of mental shortcuts, decision making following nudges should be more unconscious, and “manipulation check” in this study should be understood as being able to recognize or recall the condition. Therefore, to evaluate if there is a relationship between gender and the status of being able to recall or not on the conditions, a chi-square analysis was conducted. A statistically significant relationship was found that  $X^2 (df = 1, N = 1056) = 13.2, p < .01$ . Out of those who failed the “manipulation check” ( $N = 273$ ), 57% are men and 43% are women. ANOVA (Wald-Test Statistics) revealed that there was a statistically significant interaction between pronoun condition and gender on

candidates' intent to pursue employment, but this time female participants in the “you” condition reported significantly lower intent to pursue employment compared to men in “you” condition, and men in the “she” condition. Main effects by gender yielded the same pattern as that of the whole sample.

## **CHAPTER IV**

### **Discussion**

#### **Summary**

The purpose of this study was to investigate if gender pronouns used in selection interviews can increase the fairness of interviews by nudging female job candidates to picture a central female in the situational interviews and situational judgment tests. The use of female pronouns was predicted to increase female participant attraction to the job and performance in the simulated interviews. Results did not support the hypotheses. An interaction was not observed between pronoun conditions and participants' gender. While previous research provided evidence that the mere presence of females helps increase women's performance (Inzlicht et al., 2000) and experience (Dasgupta et al., 2015; Murphy et al., 2007), one can speculate that there may be an inferential leap between actually seeing the female gender composition in the group than using pronouns to activate the mental model of having females in the organization. In other words, nudging with pronouns may be too subtle for female participants to change their thoughts and behaviors especially in a short period of time.

In order to successfully nudge for desired behaviors, information and choice options usually tend to be presented in a carefully designed manner that one option (the desired one) should clearly be easier than the others. This study proposed that by seeing female pronouns, female candidates would develop the “automaticity” (Bargh & Williams, 2006) that deactivates

the stereotypical male-dominant software engineer stigma. With these environment cues to signal an image of a more gender balanced and inclusive organization, female candidates would easily develop more positive feelings (expected sense of belonging, intent to pursue employment, perceived organizational support). However, the result indicated that it wasn't that easy! These cues were not salient enough to make the option of regarding the organization as more positive become the easy option. It might be the case that nudges are least effective at overcoming systemic preferences because these preferences are so salient and deeply rooted in our minds, but paradoxically, they are also places where greatest social impacts can be made. Therefore, alternative interventions should be considered to combat these biases. From the perspectives of the dual processing, the pre-existing System 1 processing of gender stereotypical mental images of certain professions (e.g., a software engineer in IT) may be too strong to be disrupted by subtle interventions such as seeing gender pronouns in interview questions. Using System 2 to deliberately redesign environmental cues in order to elicit automatic responses from System 1 seems like it requires more than simply changing the gender pronouns in interviews.

Although prior work revealed that women's motivation and sense of belonging were dampened with the use of gender-exclusive pronoun ("he") in mock interviews (Stout & Dasgupta, 2011), the current study did not involve active interviewers. Examining the extent to which the role of the gender of active interviewers plays in the interviews, future studies may have a female job incumbent conduct the interview and assess whether it improves female candidates' performance and perceptions.

On the other hand, results did show main effects by both the pronoun condition and participant gender. Specifically, main effects by the pronoun conditions were significant with the Gender-Neutral condition (e.g., "you") yielding the highest scores for participants' word count of

the situational interview questions, and their intent to pursue employment in the organization, This result suggests that the current practice of asking interview candidates to place themselves in the situation (“You are facing this circumstance...”) may be more likely to increase the length of their response and desire to subsequently pursue the organization.

Main effects by gender were significant on expected sense of belonging, intent to pursue employment in the organization and perceived organizational support, with men reporting higher scores on these constructs compared to women. Even though no main effects were hypothesized, the result provided interesting further evidence that men may, in general, feel more attracted to IT organizations and women less attracted, congruent with their large representation currently exist in the technology workforce, and nudging them in interviews is not enough to overcome this previously established strong mental model. That is, the lack of more desired outcome associated with using female pronouns indicated that this pronoun use may not be strong enough to bring out the counter-stereotypical gender prototypes as expected in one’s mind and thus, calling for future research on other potential interventions to promote gender diversity.

## **Implications**

### ***Theoretical Implication***

As discussed earlier, there may have been an inferential leap between experiencing the real gender composition and the mental representation activated from the pronouns. This study can serve as a starting point for further investigation on what other types of nudges may work. For example, nudges may need to be more explicit and combined with visual cues to trigger desired behaviors. On the other hand, in this study, when the scenario questions used the pronoun “you”, participants across conditions tended to write more words in Situational Interview Questions, as a potential indication of being more psychologically immersed with the questions

and subsequently reported higher intent to pursue employment with the organization. This provides evidence supporting previous research on perspective-taking that individuals do not always mentally simulate the perspective of the agents in the scenarios and linguistic cues can result in different cognitive representation (Bergen & Chang, 2005). When self-referential pronouns (including first person pronoun “*I*” and second person pronoun “*you*”) are used, readers assumed the perspective of the agent while third-person pronoun (“*he*”) triggered external perspective (Brunyé et al., 2009; Sato & Bergen, 2010). Therefore, longer responses in the “*you*” condition, as reflected by word counts, could be indicative of participants assuming the role and exert greater effort when answering the questions.

### ***Practical Implications***

The Situational Interview and Situational Judgment Test are examples of structured interviews, which are highly valid selection batteries. Based on the result of the current study, when organizations adopt these tools, it is recommended that they use gender neutral (“*you*”) pronouns in all of the questions asked since main effects by gender were observed on various outcomes. The use of similar pronouns can minimize the differences in people’s mental models that different pronouns may elicit. This would ensure the questions serve as a more reliable measure to assess the true individual differences on the outcomes of organizational interest. This research suggests that, whenever possible, organizations should use “*you*” in scenario questions to psychologically place people in the situation as it could exert more engagement in the interviews and desire to join the organization, as well as overcoming the gender binary which is recognized as increasingly important (Dvorsky & Hughes, 2008; Hyde et al., 2018). Future theory should explore other mechanisms to increase the attraction to and support of non-majority populations to enter and thrive in organizations where they are under-represented, organizations



should keep exploring potential interventions to increase the representation of minorities, and more importantly, retain more talents. Stereotypes on gender are most likely learned from the environment, and therefore, can be unlearned (Marx & Ko, 2019). Organizations should continue to adopt strategies to increase diversity such as decreasing bias in selection systems (Kuncel & Dahlke, 2020; Self et al., 2015) and other talent management processes (Fine et al., 2020).

### **Limitations**

The study used random assignment to minimize threats to internal validity and a large sample size with power to detect small interaction effects to decrease statistical conclusion validity threats (Shadish et al., 2002). However, other threats limit the study and suggest potential future research directions.

#### ***Generalizability to Other Units and Settings***

The first limitation is a threat to external validity and is related to the ability to generalize the result to other units and settings. Since this was a simulated interview, participants were not likely to have been behaving in the same manner (e.g., as psychologically engaged or put forth the level of effort) they would have done in a real job interview. From the perspective of cognitive decision making, what participants did in these hypothetical scenarios may not match their actual behaviors in reality. In other words, the experience was psychologically immersive but not to the extent it would have been if people were actually applying for a job (e.g., hot-cold empathy gaps: Loewenstein, 2005), although those in condition “you” were likely to be more immersed and more engaged. And real job applicants would tend to react differently on outcomes of interest (e.g., they reported higher motivation to do well on the selection tests than job incumbents, Arvey et al., 1990). Furthermore, this experiment was conducted with participants on *Prolific*. Although previous studies have suggested that such participant pools

have several advantages and can be a great source for recruitment, the composition of these participants being sampled in the study (only 12% participants working in IT) is not fully representative of the actual target group of interest in the study (i.e., job candidates in Tech).

### ***Statistical Conclusion Validity Threats***

Most outcome variables in this study used a 5-point Likert scale. When the answers provided by participants fall into a small range (e.g., many answered 4 or 5), there is less variance, thus, less covariance between the rated scales and other variables (such as between the predictor and outcome), potentially leading to a Type II error in finding the interaction. Additionally, significant results found might be due to family-wise error and some would drop to non-significance if Bonferroni correction has been used. Therefore, results may be interpreted tentatively and would require future studies to replicate.

### ***Experimenter Expectancies***

The way applicant motivation, one the sub-measures on interviewee engagement, was measured may have yielded some construct validity issue. Specifically, participants may have interpreted the questions (e.g., I tried to do the very best I could on these questions.) to be asking about their motivation toward performing well in the study, as opposed to motivation toward getting the job on a real interview. Furthermore, as a tendency to demonstrate they are providing quality data to meet experimenter's expectancies being conveyed through these questions (Shadish et al., 2012), participants may have provided more desirable responses (i.e., more homogeneous high scores) on the Likert Scales, not only causing range restriction in the results, but also dampened the construct validity.

### ***Potential Confound***

Those who were randomly assigned to the “You” condition tended to write more words in situational interview questions and reported higher intent to pursue employment with the organization. In addition to the potential effect on the gender-neutral manipulation, it could also be due to the fact that these participants experience more subjective emotions, as opposed to a third-person perspective (e.g., he, she), when being engaged in these questions.

### ***Extraneous Variance in the Experimental Settings***

A design of random assignment of participants to the three conditions helped control for potential alternative predictors. However, the conditions under which participants completed the survey may have been under different situations. A wide variance of conditions in the experimental settings for each individual may have inflated errors, making detection of an effect difficult. However, this variance likely mirrors actual situations where SJTs and SIs are given at varying locations, varying times of day, and under varying conditions. Future studies could control for these factors if resources allow, such as making sure respondents’ attention is entirely on the survey (Shadish et al., 2012) or continue to look for effects that are powerful enough to transcend the varying conditions.

### **Conclusions and Future Research**

Organizations, especially those with a predominantly masculine culture, are not all effective when it comes to attracting qualified women (Germain et al., 2012). How to increase the equitable representation of women in such professions (Hall et al., 2018) remains an important issue. It is my hope that this study will inspire future interventions that will increase representation in addition to drawing attention to the nudge literature and how it may be extended and deployed in the organization to promote diversity and increase the

underrepresentation of minority groups. This is not an easy task as nudge requires careful consideration to have a strong enough manipulation to elicit the desired behaviors, while at the same time, not overwhelming the recipients.

For example, if resources allow, data can be collected before the intervention as a baseline, and then after the intervention to gauge the change in perceptions, especially of women who expressed interest in pursuing a career in IT according to their baseline data. Collecting and controlling for participants' field of study and years of experience might also help strengthen the internal validity and make causal inference as doing so can reduce noise for the impacts of nudges to be more detectable (Shadish et al., 2012). Future research could also present different job options to candidates using different pronouns with other organizational information being identical, and then measure and compare candidates' decision-making processes, which may extend the current study both theoretically and practically.

Communicating a diversity policy to job seekers is only one component of diversity (Williams & Bauer, 1994). Even if female participants in this current study reacted more positively towards the organization, it would only have been the very first step toward the resolution of building a diverse workforce, which requires way more steps besides getting them into the organization. Women continue to face challenges and barriers that affect their retention in the field (Davies et al., 2002) after they enter an organization that is traditionally male-dominated (Germain et al., 2012). Strategies in this manner should be explored, such as exposing women to female experts to help retain women in the field by preventing them from underperforming or experiencing stereotype threats (Drury et al., 2011). In addition, the study is only contextualized in IT field, future research can look into whether the same response patterns would be elicited in female-dominant fields such as education or nursing and that no moderation

exists between gender and pronoun condition but using second-person pronoun “you” as protagonists in interviews solicit the same effect across multiple organizational outcomes.

Last, but not least, diversity has multiple dimensions. Gender balance and gender diversity is only one part. Research in the future should be broadened to investigate whether nudge can help support different racial groups as well. It is our job, as I-O psychologists and practitioners, to continue exploring and assessing accessible interventions to lead organizations to the onward of a diverse workforce.

## References

- Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. (2005). Effect size and power in assessing moderating effects of categorical variables using multiple regression: A 30-year review. *Journal of Applied Psychology, 90*(1), 94-107. <https://doi.org/10.1037/0021-9010.90.1.94>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020](https://doi.org/10.1016/0749-5978(91)90020)
- Argyris, C. (1958). Some problems in conceptualizing organizational climate: A case study of a bank. *Administrative Science Quarterly, 2*, 501-520.
- Aronow, P. M., Baron, J., & Pinson, L. (2019). A note on dropping experimental subjects who fail a manipulation check. *Political Analysis, 27*(4), 572-589. <https://doi.org/10.1017/pan.2019.5>
- Aronson, E., Ellsworth, P., Carlsmith, J. M., & Gonzales, M. (1990). *Methods of research in social psychology* (2<sup>nd</sup> ed.). New York: McGraw-Hill.
- Arvey, R. D., Strickland, W., Drauden, G., & Martin, C. (1990). Motivational components of test taking. *Personnel Psychology, 43*(4), 695–716. <https://doi.org/10.1111/j.1744-6570.1990.tb00679.x>
- Baayen, R. H., Piepenbrock, R., & Bullickers, L. (1995). *The CELEX Lexical Database [CD ROM]*. Philadelphia: Linguistic Data Consortium, University of Pennsylvania.
- Baltes-Löhr, C. (2018). What are we speaking about when we speak about gender? Gender as a Continuum. *Cultural and Religious Studies, 6*(1), 2328-2177. <https://doi.org/10.17265/2328-2177/2018.01.001>

- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship." *Academy of Management Journal*, 26(4), 587–595. <https://doi.org/10.2307/255908>
- Baranik, L. E., Roling, E. A., & Eby, L. T. (2010). Why does mentoring work? The role of perceived organizational support. *Journal of Vocational Behavior*, 76(3), 366-373.
- Bargh, J. A., & Williams, E. L. (2006). The automaticity of social life. *Current Directions in Psychological Science*, 15(1), 1–4. <https://doi.org/10.1111/j.0963-7214.2006.00395.x>
- Barlow, R., 2014. BU research: A riddle reveals depth of gender bias. BU Today. <https://www.bu.edu/articles/2014/bu-research-riddle-reveals-the-depth-of-gender-bias/>
- Barton, A., & Grüne-Yanoff, T. (2015). From libertarian paternalism to nudging—And beyond. *Review of Philosophy and Psychology*, 6(3), 341–359. <https://doi.org/10.1007/s13164-015-0268-x>
- Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83(4), 817-827. <https://doi.org/10.1037/0022-3514.83.4.817>
- Beck, J. E. (2004). Using response times to model student disengagement. In J. C. Lester, R. M., Vicari, & F. Paraguacu (Eds.), *Proceedings of the Workshop on Social and Emotional Intelligence in Learning Environment, 7th International Conference on Intelligent Tutoring Systems (pp. 13-20)*. Maceio, Brazil: Springer-Verlag Berlin Heidelberg.

- Becker, T. E. (2005). Development and validation of a situational judgment test of employee integrity. *International Journal of Selection and Assessment*, 13(3), 225-232.  
<https://doi.org/10.1111/j.1468-2389.2005.00319.x>
- Behrend, T. S., Sharek, D. J., Meade, A. W., & Wiebe, E. N. (2011). The viability of crowdsourcing for survey research. *Behavior Research Methods*, 43(3), 800-813.  
<https://doi.org/10.3758/s13428-011-0081-0>
- Bem, S. L., & Bem, D. L. (1973). Does sex-biased job advertising “aid and abet” sex discrimination? *Journal of Applied Social Psychology*, 3(1), 6-18. <https://doi.org/10.1111/j.1559-1816.1973.tb01290.x>
- Benartzi, S., Beshears, J., Milkman, K. L., Sunstein, C. R., Thaler, R. H., Shankar, M., Tucker-Ray, W., Congdon, W. J., & Galing, S. (2017). Should governments invest more in nudging? *Psychological Science*, 28(8), 1041-1055.  
<http://doi.org/10.1177/0956797617702501>
- Bergen B., & Chang N. (2005). Embodied construction grammar in simulation-based language understanding. In Östman J.-O., Fried M. (Eds.), *Construction grammars: Cognitive grounding and theoretical extensions* (pp. 147–190). Amsterdam: Benjamins.
- Bess, T. L. (2001). *Exploring the dimensionality of situational judgment: Task and contextual knowledge* (Doctoral dissertation, University Libraries, Virginia Polytechnic Institute and State University).
- Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behaviors. *The Academy of Management Review*, 11(4), 710–725. <https://doi.org/10.2307/258391>



- Brown, M., Grossenbacher, M., Martin-Raugh, M., Kochert, J., & Prewett, M. (2020, April 15). Can you crowdsource expertise? Comparing expert and crowd-based scoring keys for three situational judgment tests. PsyArXiv 2020. <https://doi.org/10.31234/osf.io/4tpdw>
- Brunyé, T. T., Ditman, T., Mahoney, C. R., Augustyn, J. S., & Taylor, H. A. (2009). When you and I share perspectives: Pronouns modulate perspective taking during narrative comprehension. *Psychological Science*, 20(1), 27–32. <https://doi.org/10.1111/j.1467-9280.2008.02249.x>
- Buchanan, T. (2000). Potential of the Internet for personality research. In M. H. Birnbaum (Ed.), *Psychological experiments on the Internet* (pp. 121–140). Academic Press. <https://doi.org/10.1016/B978-012099980-4/50006-X>
- Caldwell, D. F., Chatman, J. A., & O'Reilly, C. A. (1990). Building organizational commitment: A multifirm study. *Journal of Occupational Psychology*, 63(3), 245–261. <https://doi.org/10.1111/j.2044-8325.1990.tb00525.x>
- Campbell, J. P., & Pritchard, R. D. (1976). Motivation theory in industrial and organizational psychology. In Dunette M. D. (Ed.), *Handbook of industrial and organizational psychology* (p. 63-130). Chicago: Rand-McNally.
- Campos, M. I. D., & Rueda, F. J. M. (2020). Authentic leadership: development and initial validation of a situational judgment test. *Revista Psicologia Organizações e Trabalho*, 20(2), 1047-1056. <https://doi.org/10.17652/rpot/2020.2.18100>
- Carreiras, M., Garnham, A., Oakhill, J., & Cain, K. (1996). The use of stereotypical gender information in constructing a mental model: Evidence from English and Spanish. *The Quarterly Journal of Experimental Psychology Section A*, 49(3), 639-663. <https://doi.org/10.1080/713755647>

- Casper, W. J., & Buffardi, L. C. (2004). Work-life benefits and job pursuit intentions: The role of anticipated organizational support. *Journal of Vocational Behavior*, 65(3), 391-410.  
<https://doi.org/10.1016/j.jvb.2003.09.003>
- Champely, S., Ekstrom, C., Gill, J., Weibelzahl, S., Anandkumar, A., Ford, C., Volcic, R., & De Rosario, H. (2020). Package 'pwr': Basic functions for power analysis [Computer software manual]. <http://cran.r-project.org/web/packages/pwr>. (R package version 1.3-0)
- Chang, E. H., Milkman, K. L., Gromet, D. M., Rebele, R. W., Massey, C., Duckworth, A. L., & Grant, A. M. (2019). The mixed effects of online diversity training. *Proceedings of the National Academy of Sciences*, 116(16), 7778-7783.  
<https://doi.org/10.1073/pnas.1816076116>
- Chatman, J. A., & O'Reilly, C. A. (2004). Asymmetric Reactions to Work Group Sex Diversity among Men and Women. *Academy of Management Journal*, 47(2), 193–208. <https://doi.org/10.2307/20159572>
- Cheryan, S., Plaut, V. C., Davies, P. G., & Steele, C. M. (2009). Ambient belonging: How stereotypical cues impact gender participation in computer science. *Journal of Personality and Social Psychology*, 97(6), 1045-1060. <http://doi.org/10.1037/a0016239>
- Cheryan, S., Siy, J. O., Vichayapai, M., Drury, B. J., & Kim, S. (2011b). Do female and male role models who embody STEM stereotypes hinder women's anticipated success in STEM? *Social Psychological and Personality Science*, 2(6), 656–664.  
<http://doi.org/10.1177/1948550611405218>.
- Chi, M. T. H. (1991). Memory development. In M. W. Eysenck, A. W. Ellis, E. B. Hunt, & P. N. Johnson-Laird (Eds.), *The Blackwell dictionary of cognitive psychology* (pp. 218-222). Cambridge, MA: Basil Blackwell.

- Christian, M. S., Edwards, B. D., & Bradley, J. C. (2010). Situational judgment tests: Constructs assessed and a meta-analysis of their criterion-related validities. *Personnel Psychology*, 63(1), 83–117. <https://doi.org/10.1111/j.1744-6570.2009.01163.x>
- Chung, C., & Pennebaker, J. W. (2007). The psychological functions of function words. In K. Fiedler (Ed.) *Social Communication*, 1, 343–359. New York: Psychology Press.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Hillsdale, NJ: Lawrence Erlbaum.
- Cortina, J. M., & Luchman, J. N. (2012). Personnel selection and employee performance. In N. W. Schmitt, S. Highhouse, & I. B. Weiner (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. 143–183). John Wiley & Sons, Inc. <http://doi.org/10.1002/9781118133880.hop212007>
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900. <https://doi.org/10.1177/0149206305279602>
- Dasberg, H. (1982). Belonging and loneliness in relation to mental breakdown in battle. *Series in Clinical & Community Psychology: Stress & Anxiety*, 8, 143–150.
- Dasgupta, N., Scircle, M. M., & Hunsinger, M. (2015). Female peers in small work groups enhance women’s motivation, verbal participation, and career aspirations in engineering. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 112(16), 4988 – 4993. <http://dx.doi.org/10.1073/pnas.1422822112>

- Deaux, K., & Major, B. (1987). Putting gender into context: An interactive model of gender-related behavior. *Psychological Review*, *94*(3), 369–389. <https://doi.org/10.1037/0033-295X.94.3.369>
- Debs, L., & Kota, B. R. (2021, July). Gender Differences in Construction Management Students' Sense of Belonging. *In 2021 ASEE Virtual Annual Conference Content Access*. Virtual Meeting. <https://peer.asee.org/37220>
- Devine, P. G., Forscher, P. S., Cox, W. T. L., Kaatz, A., Sheridan, J., & Carnes, M. (2017). A gender bias habit-breaking intervention led to increased hiring of female faculty in STEM departments. *Journal of Experimental Social Psychology*, *73*, 211–215. <https://doi.org/10.1016/j.jesp.2017.07.002>.
- Dixon, W. J. (1960). Simplified estimation from censored normal samples. *The Annals of Mathematical Statistics*, 385-391. <https://doi.org/10.1214/AOMS/1177705900>
- Dover, T. L., Kaiser, C. R., & Major, B. (2019). Mixed signals: The unintended effects of diversity initiatives. *Social Issues and Policy Review*, *14*(1), 152-181. <https://doi.org/10.1111/sipr.12059>
- Dover, T. L., Kaiser, C. R., & Major, B. (2019). Mixed signals: The unintended effects of diversity initiatives. *Social Issues and Policy Review*, *14*(1), 152–181. <https://doi.org/10.1111/sipr.12059>
- Doyle, J. K., & Ford, D. N. (1998). Mental models concepts for system dynamics research. *System Dynamics Review*, *14*(1), 3-29. [https://doi.org/10.1002/\(SICI\)1099-1727\(199821\)14:1<3::AID-SDR140>3.0.CO;2-K](https://doi.org/10.1002/(SICI)1099-1727(199821)14:1<3::AID-SDR140>3.0.CO;2-K)

- Drury, B. J., Siy, J. O., & Cheryan, S. (2011). When do female role models benefit women? The importance of differentiating recruitment from retention in STEM. *Psychological Inquiry*, 22(4), 265-269. <http://doi.org/10.1080/1047840X.2011.620935>
- Dvorsky, G., and Hughes, J. (2008). Postgenderism: beyond the gender binary. *Institute for Ethics and Emerging Technologies*, 20, 44–57.
- Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82(5), 812–820. <https://doi.org/10.1037/0021-9010.82.5.812>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi-org.ezproxy.spu.edu/10.1037/0021-9010.71.3.500>
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87(3), 565–573. <https://doi.org/10.1037/0021-9>
- Emerson, K. T. U., & Murphy, M. C. (2014). Identity threat at work: How social identity threat and situational cues contribute to racial and ethnic disparities in the workplace. *Cultural Diversity and Ethnic Minority Psychology*, 20(4), 508–520. <https://doi-org.ezproxy.spu.edu/10.1037/a0035403>
- Field, A., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. SAGE Publications.
- Fine, C., & Sojo, V., & Lawford-Smith, H. (2020). Why does workplace gender diversity matter? Justice, organizational benefits, and policy. *Social Issues and Policy Review*, 14(1), 36-72. <http://doi.org/10.1111/sipr.12064>

- Flood, M., Dragiewicz, M., & Pease, B. (2020). Resistance and backlash to gender equality. *Australian Journal of Social Issues*, 1–16. <https://doi.org/10.1002/ajs4.137>
- Friedrich, S., Konietschke, F., & Pauly, M. (2017). GFD: An R Package for the analysis of general factorial Designs. *Journal of Statistical Software, Code Snippets*, 79(1), 1–18. <https://doi.org/10.18637/jss.v079.c01>
- Garnham, A., Gabriel, U., Sarrasin, O., Gygax, P., & Oakhill, J. (2012). Gender representation in different languages and grammatical marking on pronouns: When beauticians, musicians, and mechanics remain men. *Discourse Processes*, 49(6), 481-500. <http://doi.org/10.1080/0163853X.2012.688184>
- Germain, M. L., Herzog, M. J. R., & Hamilton, P. R. (2012). Women employed in male-dominated industries: Lessons learned from female aircraft pilots, pilots-in-training and mixed-gender flight instructors. *Human Resource Development International*, 15(4), 435-453. <https://doi.org/10.1080/13678868.2012.707528>
- Godenzi, A. (1999). Style or substance: Men's response to feminist challenge. *Men and Masculinities*, 1(4), 385-392. <https://doi.org/10.1177/1097184X99001004004>
- Gollwitzer, P. M. (1999). Implementation intentions. *American Psychologist*, 54(7), 493-503. <https://doi.org/10.1037/0003-066X.54.7.493>
- González-González, C. S., García-Holgado, A., Martínez-Estévez, M., Gil, M., Martín-Fernandez, A., Marcos, A., Aranda, C., & Gershon, T. S. (2018, April). Gender and engineering: Developing actions to encourage women in tech. In *2018 IEEE global engineering education conference (EDUCON)* (pp. 2082-2087). IEEE. <https://doi.org/10.1109/EDUCON.2018.8363496>

- Gouldner, A.W. (1960) The Norm of Reciprocity: A Preliminary Statement. *American Sociological Review*, 25, 161-178.  
<https://doi.org/10.2307/2092623>
- Grim, A. M. (2010). *Use of situational judgment test to measure individual adaptability in 35 goal orientation & performance adaptation applied settings* [Master's thesis]. George Mason University. Retrieved from <http://hdl.handle.net/1920/5793>
- Hagerty, B. M., Lynch-Sauer, J. L., Patusky, K., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of Psychiatric Nursing*, 6(3), 172–177. [https://doi.org/10.1016/0883-9417\(92\)90028-h](https://doi.org/10.1016/0883-9417(92)90028-h)
- Hall, W., Schmader, T., Aday, A., Inness, M., & Croft, E. (2018). Climate control: The relationship between social identity threat and cues to an identity-safe culture. *Journal of Personality and Social Psychology*, 115(3), 446-467.  
<https://doi.org/10.1037/pspi0000137>
- Hanges, P. J., Aiken, J., & Chen, X. (2006). Diversity, organizational climate, and organizational culture: The role they play in influencing organizational effectiveness. *In Proceedings of the Library Assessment Conference Building Effective, Sustainable, Practical Assessment*, September 25–27, 2006, Charlottesville, VA (pp. 359-368).
- Hansen, P. (2016). The Definition of Nudge and Libertarian Paternalism: Does the Hand Fit the Glove? *European Journal of Risk Regulation*, 7(1), 155-174.  
<https://doi.org/10.1017/S1867299X00005468>
- Hausknecht, J. P., Day, D. V., & Thomas, S. C. (2004). Applicant reactions to selection procedures: An updated model and meta-analysis. *Personnel Psychology*, 57(3), 639-683.  
<https://doi.org/10.1111/j.1744-6570.2004.00003.x>

- Herlitz, A., Nilsson, L. G., & Bäckman, L. (1997). Gender differences in episodic memory. *Memory & Cognition*, 25(6), 801-811. <https://doi.org/10.3758/bf03211324>
- Heukelom, F., & Sent, E. M. (2017). Behavioral economics: from advising organizations to nudging individuals. *Journal of Behavioral Economics for Policy*, 1(1):5-10.
- Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement*, 63(6), 986-1001. <https://doi.org/10.1177/0013164403258403>
- Highhouse, S., Stierwalt, S. L., Bachiochi, P., Elder, A. E., & Fisher, G. (1999). Effects of advertised human resource management practices on attraction of African American applicants. *Personnel Psychology*, 52(2), 425-442. <https://doi.org/10.1111/j.1744-6570.1999.tb00167.x>
- Highhouse, S., Thornbury, E. E., & Little, I. S. (2007). Social-identity functions of attraction to organizations. *Organizational Behavior and Human Decision Processes*, 103(1), 134–146. <https://doi.org/10.1016/j.obhdp.2006.01.001>
- Hill, C., Corbett, C., & St Rose, A. (2010). *Why so few? Women in science, technology, engineering, and mathematics*. American Association of University Women. 1111 Sixteenth Street NW, Washington, DC 20036. Retrieved from: <https://eric.ed.gov/?id=ED509653>
- Homans, G. C. 1958. Social behavior as exchange. *American Journal of Sociology*, 63(6), 597-606.
- Hyde, J. S., Bigler, R. S., Joel, D., Tate, C. C., & van Anders, S. M. (2019). The future of sex and gender in psychology: Five challenges to the gender binary. *American Psychologist*, 74(2), 171-193. <https://doi.org/10.1037/amp0000307>



- Hutchison, S. (1997). A path model of perceived organizational support. *Journal of Social Behavior & Personality*, *12*(1), 159-174.
- Huynh, A., & Chen, H. L. (2020). Exploring how innovation self-efficacy measures relate to engineering internship motivations and outcomes. *ASEE's Virtual Conference*. Paper ID #29854. <https://doi.org/10.18260/1-2--34641>
- Ibarra, H. (1992). Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, *37*(3), 422–447. <https://doi.org/10.2307/2393451>
- Inzlicht, M., & Ben-Zeev, T. (2000). A threatening intellectual environment: Why females are susceptible to experiencing problem-solving deficits in the presence of males. *Psychological Science*, *11*(5), 365–371. <https://doi.org/10.1111/1467-9280.00272>
- Johnson, E. J., & Goldstein, D. (2003). Do defaults save lives? *Science*, *302*(5649), 1338-1339. <https://doi.org/10.1126/science.1091721>
- Kahneman (2012). *Thinking fast and slow*. New York: Farrar, Straus and Giroux.
- Kossek, E. E., & Zonia, S. C. (1993). Assessing diversity climate: A field study of reactions to employer efforts to promote diversity. *Journal of Organizational Behavior*, *14*(1), 61–81. <https://doi.org/10.1002/job.4030140107>
- Kricheli-Katz, T., & Regev, T. (2021). The effect of language on performance: do gendered languages fail women in maths? *NPJ Science of Learning*, *6*(1), 1-7. <https://doi.org/10.1038/s41539-021-00087-7>
- Kroese, F. M., Marchiori, D. R., & De Ridder, D. T. (2016). Nudging healthy food choices: a field experiment at the train station. *Journal of Public Health*, *38*(2), e133-e137. <https://doi.org/10.1093/pubmed/fdv096>

- Kuncel, N. R., & Dahlke, J. A. (2020). Decoy effects improve diversity hiring. *Personnel Assessment and Decisions*, 6(2), 31-37. <https://doi.org/10.25035/pad.2020.02.005>
- Latham, G. P., Saari, L. M., Pursell, E. D., & Campion, M. A. (1980). The situational interview. *Journal of Applied Psychology*, 65(4), 422–427. <https://doi.org/10.1037/0021-9010.65.4.422>
- Leshed, G., Hancock, J. T., Cosley, D., McLeod, P. L., & Gay, G. (2007). Feedback for guiding reflection on teamwork practices. In *Proceedings of the 2007 international ACM conference on supporting group work* (pp. 217-220). New York: Association for Computing Machinery Press.
- Leys, C., Ley, C., Klein, O., Bernard, P. & Licata, L. (2013). Detecting outliers: Do not use standard deviation around the mean, use absolute deviation around the median. *Journal of Experimental Social Psychology*. 49(4), 764-766. <https://doi.org/10.1016/j.jesp.2013.03.013>
- Lievens, F., Peeters, H., & Schollaert, E. (2008). Situational judgment tests: A review of recent research. *Personnel Review*, 37(4), 426–441. <https://doi.org/10.1108/00483480810877598>
- Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198-1202. <http://doi.org/10.1080/01621459.1988.10478722>
- Lockwood, P., & Kunda, Z. (1997). Superstars and me: Predicting the impact of role models on the self. *Journal of Personality and Social Psychology*, 73(1), 91-103. <https://doi.org/10.1037/0022-3514.73.1.91>

- Loewenstein, G. (2005). Hot-cold empathy gaps and medical decision making. *Health Psychology, 24*(4, Suppl), S49–S56. <https://doi.org/10.1037/0278-6133.24.4.S49>
- Macan, T. H., Avedon, M. J., Paese, M., & Smith, D. E. (1994). The effects of applicants' reactions to cognitive ability tests and an assessment center. *Personnel Psychology, 47*(4), 715–738. <https://doi.org/10.1111/j.1744-6570.1994.tb01573.x>
- Madrian, B. C., & Shea, D. F. (2001). The power of suggestion: Inertia in 401 (k) participation and savings behavior. *The Quarterly Journal of Economics, 116*(4), 1149–1187. <https://doi.org/10.1162/003355301753265543>
- Marchiori, D. R., Adriaanse, M. A., & De Ridder, D. T. D. (2016). Unresolved questions in nudging research: Putting the psychology back in nudging. *Social and Personality Psychology Compass, 11*(1), e12297. <http://doi.org/10.1111/spc3.12297>
- Marx, D., Ko, S. J. (2019). Stereotypes and prejudice. In *Oxford Research Encyclopedia of Psychology*. 00(00), 1-25. <http://doi.org/10.1093/acrefore/9780190236557.013.307>
- Marx, D. M., & Roman, J. S. (2002). Female role models: Protecting women's math test performance. *Personality and Social Psychology Bulletin, 28*(9), 1183–1193. <https://doi.org/10.1177/01461672022812004>
- Marx, D. M., Stapel, D. A., & Muller, D. (2005). We can do it: The interplay of construal orientation and social comparisons under threat. *Journal of Personality and Social Psychology, 88*(3), 432–446. <http://doi.org/10.1037/0022-3514.88.3.432>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370-396. <https://doi.org/10.1037/h0054346>

- McDaniel, M. A., Hartman, N. S., Whetzel, D. L., & Grubb, W. L. III. (2007). Situational judgment tests, response instructions, and validity: A meta-analysis. *Personnel Psychology, 60*(1), 63–91. <https://doi.org/10.1111/j.1744-6570.2007.00065.x>
- McDaniel, M. A., Morgeson, F. P., Finnegan, E. B., Campion, M. A., & Braverman, E. P. (2001). Use of situational judgment tests to predict job performance: A clarification of the literature. *Journal of Applied Psychology, 86*(4), 730-740. <https://doi.org/10.1037/0021-9010.86.4.730>
- McDaniel, M. A., Whetzel, D. L., Schmidt, F. L., & Maurer, S. D. (1994). The validity of employment interviews: A comprehensive review and meta-analysis. *Journal of Applied Psychology, 79*(4), 599–616. <https://doi.org/10.1037/0021-9010.79.4.599>
- McKinsey&Company (2013). *Gender diversity in top management: Moving corporate culture, moving boundaries.*
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods, 17*(3), 437–455. <https://doi.org/10.1037/a0028085>
- Meyerson, D. E., & Kolb, D. M. (2000). Moving out of the ‘Armchair’: Developing a framework to bridge the gap between feminist theory and practice. In: Andresen S., Koreuber M., Lüdke D. (eds) *Gender und Diversity: Albtraum oder Traumpaar?* VS Verlag für Sozialwissenschaften. [https://doi.org/10.1007/978-3-531-91387-2\\_13](https://doi.org/10.1007/978-3-531-91387-2_13)
- Miller, T., & del Carmen Triana, M. (2009). Demographic diversity in the boardroom: Mediators of the board diversity–firm performance relationship. *Journal of Management Studies, 46*(5), 755-786. <https://doi.org/10.1111/j.1467-6486.2009.00839.x>

- Morgenroth, T., & Ryan, M. K. (2020). The effect of gender trouble: An integrative theoretical framework of the perpetuation and disruption of the gender/sex binary. *Perspectives on Psychological Science, 16*(6), 1-30. <https://doi.org/10.1177/1745691620902442>
- Motowidlo, S. J., & Beier, M. E. (2010). Differentiating specific job knowledge from implicit trait policies in procedural knowledge measured by a situational judgment test. *Journal of Applied Psychology, 95*(2), 321-333. <https://doi.org/10.1037/a0017975>
- Mthree (2021). Diversity in Tech: 2021 US report. Retrieved from <https://www.mthree.com/diversity-in-tech-2021-us-report/>
- Mumford, T. V., Van Iddekinge, C. H. V., Morgeson, F. P., & Campion, M. A. (2008). The team role test: Development and validation of a team role knowledge situational judgment test. *Journal of Applied Psychology, 93*(2), 250-267. <http://doi.org/10.1037/0021-9010.93.2.250>
- Murdock-Perriera, L. A., Boucher, K. L., Carter, E. R., & Murphy, M. C. (2019). Places of belonging: Person-and place-focused interventions to support belonging in college. In *Higher education: Handbook of theory and research* (pp. 291-323). Springer, Cham.
- Murphy, M. C., & Dweck, C. S. (2010). A culture of genius: How an organization's lay theory shapes people's cognition, affect, and behavior. *Personality and Social Psychology Bulletin, 36*(3), 283–296. <https://doi.org/10.1177/0146167209347380>
- Murphy, M. C., Steele, C. M., & Gross, J. J. (2007). Signaling threat: How situational cues affect women in math, science, and engineering settings. *Psychological Science, 18*(10), 879–885. <https://doi.org/10.1111/j.1467-9280.2007.01995.x>

- Murphy, M. C., & Taylor, V. J. (2012). The role of situational cues in signaling and maintaining stereotype threat. In M. Inzlicht & T. Schmader (Eds.), *Stereotype threat: Theory, process, and application* (pp. 17–33). Oxford University Press.
- Nye, L. G., & Witt, L. A. (1993). Dimensionality and construct validity of the Perceptions of Organizational Politics Scale (POPS). *Educational and Psychological Measurement*, 53(3), 821–829. <https://doi.org/10.1177/0013164493053003026>
- Olinsky, A., Chen, S., & Harlow, L. (2003). The comparative efficacy of imputation methods for missing data in structural equation modeling. *European Journal of Operational Research*, 151(1), 53-79. [https://doi.org/10.1016/S0377-2217\(02\)00578-7](https://doi.org/10.1016/S0377-2217(02)00578-7)
- O’Meara, K., Griffin, K. A., Kuvaeva, A., Nyunt, G., & Robinson, T. (2017). Sense of belonging and its contributing factors in graduate education. *International Journal of Doctoral Studies*, 12(12), 251-279. <https://doi.org/10.28945/3903>
- Ozcelik, E., Cagiltay, N. E., & Ozcelik, N. S. (2013). The effect of uncertainty on learning in game-like environments. *Computers & Education*, 67, 12-20. <https://doi.org/10.1016/j.compedu.2013.02.009>
- Palan, S., Schitter, C. (2018). Prolific.ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, 17, 22-27. <https://doi.org/10.1016/j.jbef.2017.12.004>.
- Parent, M. C. (2013). Handling item-level missing data: Simpler is just as good. *The Counseling Psychologist*, 41(4), 568–600. <https://doi.org/10.1177/0011000012445176>
- Park, G., Lubinski, D., & Benbow, C. P. (2008). Ability differences among people who have commensurate degrees matter for scientific creativity. *Psychological Science*, 19(10), 957–961. <https://doi.org/10.1111/j.1467-9280.2008.02182.x>

- Rheingans, P., D'Eramo, E., Diaz-Espinoza, C., & Ireland, D. (2018). A model for increasing gender diversity in Technology. In *Proceedings of the 49th ACM Technical Symposium on Computer Science Education* (pp. 459-464). <http://doi.org/10.1145/3159450.3159533>
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology, 87*(4), 698–714. <https://doi.org/10.1037/0021-9010.87.4.698>
- Rhoades, L., Eisenberger, R., & Armeli, S. (2001). Affective commitment to the organization: The contribution of perceived organizational support. *Journal of Applied Psychology, 86*(5), 825–836. <https://doi.org/10.1037/0021-9010.86.5.825>
- Rochon, E., Saffran, E. M., Berndt, R. S., & Schwartz, M. F. (2000). Quantitative analysis of aphasic sentence production: Further development and new data. *Brain and Language, 72*(3), 193–218. <https://doi.org/10.1006/brln.1999.2285>
- Rubin, D.L., Greene, K.L. (1991) Effects of biological and psychological gender, age cohort, and interviewer gender on attitudes toward gender-inclusive/exclusive language. *Sex Roles, 24*, 391–412 (1991). <https://doi-org.ezproxy.spu.edu/10.1007/BF00289330>
- Rynes, S. L., & Miller, H. E. (1983). Recruiter and job influences on candidates for employment. *Journal of Applied Psychology, 68*(1), 147–154. <https://doi.org/10.1037/0021-9010.68.1.147>
- Sato, M., & Bergen, B. K. (2013). The case of the missing pronouns: Does mentally simulated perspective play a functional role in the comprehension of person? *Cognition, 127*(3), 361–374. <https://doi.org/10.1016/j.cognition.2013.02.004>

- Schmitt, N., & Chan, D. (1999). The status of research on applicant reactions to selection tests. *International Journal of Management Reviews*, 1(1), 45–62. <http://doi.org/10.1111/1468-2370.00004>
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40(3), 437–453. <https://doi.org/10.1111/j.1744-6570.1987.tb00609.x>
- Schneider, B., Goldstein, H. W., & Smith, D. B. (1995). The ASA framework: An update. *Personnel Psychology*, 48(4), 747–773. <https://doi.org/10.1111/j.1744-6570.1995.tb01780.x>
- Szczesny, S., Moser, F., & Wood, W. (2015). Beyond sexist beliefs: How do people decide to use gender-inclusive language? *Personality and Social Psychology Bulletin*, 41(7), 943–954. <https://doi.org/10.1177/0146167215585727>
- Self, W. T., Mitchell, G., Mellers, B. A., Tetlock, P. E., & Hildreth, J. A. D. (2015). Balancing fairness and efficiency: The impact of identity-blind and identity-conscious accountability on applicant screening. *PLoS ONE*, 10(12), Article e0145208. <https://doi.org/10.1371/journal.pone.0145208>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Stanovich, K. E., & West, R. F. (2000). Individual differences in reasoning: Implications for the rationality debate? *Behavioral and Brain Sciences*, 23(5), 645–726. <https://doi.org/10.1017/s0140525x00003435>
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52(6), 613–629. <https://doi.org/10.1037/0003-066X.52.6.613>



- Stiglitz, J. E. 2000. The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics*, 115(4), 1441-1478.  
<https://doi.org/10.1162/003355300555015>
- Stout, J. G., & Dasgupta, N. (2011). When he doesn't mean you: Gender-exclusive language as ostracism. *Personality and Social Psychology Bulletin*, 37(6), 757–769. <https://doi.org/10.1177/0146167211406434>
- Stout, J. G., Dasgupta, N., Hunsinger, M., & McManus, M. A. (2011). STEMing the tide: Using ingroup experts to inoculate women's self-concept in science, technology, engineering, and mathematics (STEM). *Journal of Personality and Social Psychology*, 100(2), 255–270. <https://doi.org/10.1037/a0021385>
- Strenta, A. C., Elliott, R., Adair, R., Matier, M., & Scott, J. (1994). Choosing and leaving science in highly selective institutions. *Research in Higher Education*, 35(5), 513-547.  
<https://doi.org/10.1007/BF02497086>
- Suazo, M. M., Martínez, P. G., & Sandoval, R. (2009). Creating psychological and legal contracts through human resource practices: A signaling theory perspective. *Human Resource Management Review*, 19(2), 154–166. <https://doi.org/10.1016/j.hrmr.2008.11.002>
- Takahashi, L. (2019). Designing gender inclusion: The gender-based digital divide and how design can change it. [Master's thesis]. Rhine-Waal University. Retrieved from <https://www.researchgate.net/publication/331374388>
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, 29(1), 24-54. <https://doi.org/10.1177/0261927X09351676>

- Teng, Y., Brannick, M. T., & Borman, W. C. (2020). Capturing resilience in context: Development and validation of a situational judgment test of resilience. *Human Performance, 33*(2-3), 74-103. <https://doi.org/10.1080/08959285.2019.1709069>
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
- Thomas, K. M., & Wise, P. G. (1999). Organizational attractiveness and individual differences: Are diverse applicants attracted by different factors? *Journal of Business and Psychology, 13*(3), 375–390. <https://doi.org/10.1023/A:1022978400698>
- Tsui, A. S., Egan, T. D., & O'Reilly, C. A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly, 37*(4), 549–579. <https://doi.org/10.2307/2393472>
- van den Brink, M., Benschop, Y., & Jansen, W. (2010). Transparency in academic recruitment: A problematic tool for gender equality? *Organization Studies, 31*(11), 1459-1483. <https://doi.org/10.1177/0170840610380812>
- Van Gestel, L. C., Kroese, F. M., & De Ridder, D. T. D. (2018). Nudging at the checkout counter—A longitudinal study of the effect of a food repositioning nudge on healthy food choice. *Psychology & Health, 33*(6), 800–809. <https://doi.org/10.1080/08870446.2017.1416116>
- Walton, G. M., & Cohen, G. L. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology, 92*(1), 82–96. <https://doi.org/10.1037/0022-3514.92.1.82>

- Webster, E. S., Paton, L. W., Crampton, P., & Tiffin, P. A. (2020). Situational judgement test validity for selection: a systematic review and meta-analysis. *Medical Education, 54*(10), 888-892. <https://doi.org/10.1111/medu.14201>
- Weekley, J. A., Ployhart, R. E., & Holtz, B. C. (2006). On the development of situational judgment tests: Issues in item development, scaling, and scoring. In J. A. Weekley & R. E. Ployhart (Eds.), *Situational Judgment Tests: Theory, measurement, and application* (pp. 1-10). New Jersey: Lawrence Erlbaum Associates.
- Wharton, A. S., & Baron, J. N. (1987). So happy together? The impact of gender segregation on men at work. *American Sociological Review, 52*(5), 574–587. <https://doi.org/10.2307/2095595>
- Whetzel, D. L., McDaniel, M. A., & Nguyen, N. T. (2008). Subgroup differences in Situational judgment test performance: A meta-analysis. *Human Performance, 21*(3), 291-309. <https://doi.org/10.1080/08959280802137820>
- Williams, M. L., & Bauer, T. N. (1994). The effect of a managing diversity policy on organizational attractiveness. *Group and Organization Management, 19*(3), 295–308. <https://doi.org/10.1177/1059601194193005>
- Winter-Collins, A., & McDaniel, A. M. (2000). Sense of belonging and new graduate job satisfaction. *Journal for Nurses in Professional Development, 16*(3), 103-111. <https://doi.org/10.1097/00124645-200005000-00002>

## Appendix A Demographic Survey

Please enter your Prolific ID here \_\_\_\_\_

What is your age? \_\_\_\_\_

What is your educational level?

- Less than high school
- High school graduate or equivalent
- Associate degree
- College degree
- Advanced degree (graduate or professional)

To which gender identity do you most identify?

- Male
- Female
- Prefer to self-describe \_\_\_\_\_

What is your race?

- White or Caucasian
- Black or African American
- Native American or American Indian
- Asian or Asian American
- Pacific Islander
- Biracial or multiracial
- Other, please explain \_\_\_\_\_

What is your ethnicity?

- Non-Hispanic
- Hispanic

What is your sexual orientation?

- Heterosexual or straight
- Gay or lesbian
- Bisexual or pansexual
- Prefer to self-describe \_\_\_\_\_

What best describes your employment status over the last three months? (check all that apply)

- Working full-time
- Working part-time
- Unemployed and looking for work
- A homemaker or stay-at-home parent
- Student
- Retired
- Other

What is the primary industry of your organization or your area of study?

- Aerospace
- Banking/Finance/Accounting
- Business Services/Consultant
- Construction/Architecture/Engineering
- Education

- Federal Government (including military)
- Information Technology/Software
- Insurance/Real Estate/Legal
- Manufacturing/Process Industries
- Marketing/Advertising/Entertainment
- Medical/Dental/Healthcare
- Online Retailer
- Research/Development Lab
- State/Local Government
- Transportation/Utilities
- Wholesale/Retail/Distribution
- Not Working
- Other/Not Listed \_\_\_\_\_

## **Appendix B Hypothetical Job Description**

Imagine that you have just graduated from college with a degree in computer science and are applying for a job. You came across this job description below.

### ***Job Description: Software Engineer***

*RainbowWire is looking for Software Engineers.*

*The average tenure for people in this position is 4 years, and like many software engineer roles, 75% of the people currently in the role are male. Current demographics include various ethnicity groups.*

*The team will work closely with other functions in the company. As part of the engineering team, you will write production code and solve problems by collaborating with others. You will help extend our business and make an impact on everyone that uses our platform. We want engineers to help us build services, APIs, and large-scale infrastructure. Our mission is to bring the community closer by connecting people together to share their stories with each other. As a leader in the industry, RainbowWire specializes in building the platform for the best communication that people can have.*

### ***Your responsibilities include:***

- *Consult with customers or other departments on project status, proposals, or technical issues, such as software system design or maintenance*
- *Determine system performance standards*
- *Develop or direct software system testing or validation procedures, programming, or documentation*

### ***We prefer that you have experience with:***

- *Analytical or scientific software*
- *Data mining software*
- *Database user interface and query software*
- *Graphical user interface development software*

### ***It's important to us that you are someone with:***

- *Integrity and authenticity*
- *Outstanding leadership skills*
- *A true team player with the ability to work collaboratively*
- *Adaptability to handle ambiguous or undefined problems in the agile environment*

### ***Accommodations***

*If you require assistance due to a disability applying for open positions, please submit a request via our Accommodations Request Form.*

*RainbowWire is an Equal Employment Opportunity and Affirmative Action Employer. We understand that gender disparity exists in our field, but we are implementing strategies to support women.*

Now...

*You think this aligns with your interest and skill sets, so you applied for it, as well as a few other similar positions. Now you are in the final round of the interview for this company RainbowWire, please read their interview questions with the scenarios and then answer the following questions.*

## Appendix C SIs and SJTs With Corresponding Scores

### The “She/Her” version:

#### Scenarios for SI:

- 1) Ms. Smith is the manager of a software development company. Two team leaders, who report directly to her, got into a conflict. It started to negatively impact the teams’ performance on their tasks, because these two leaders are responsible for sectors of which results are immediately linked to one another. She, the manager, talked about the case in a meeting with her superior and her peers. They found a possibility to transfer one of the team leaders to another sector, in which there was an available position, but this team leader would have to face many changes. If you were Ms. Smith, what would you do? (Campos & Rueda, 2020)
  
- 2) Ms. Johnson is on the same team with Dan, who’s also her friend. She often hangs out with Dan on the weekends or after work. Dan is not a good team member. He often comes into work late, leaves early, and fails to do good work. As Dan’s friend, Ms. Johnson ignores his faults at work and lets her supervisor worry about it. But now she has been promoted and will be in charge of the team. On her first day in charge, she sees Dan come to work late. What should she do? (Grim, 2010)

#### Scenarios for SJT:

- 1) Ms. Young has started working with a new client. The client has asked for her input to help assign client team members to the project. There are 8 qualified candidates, and the client has offered to provide her with whatever she needs to formulate her input. If you were her, what would you be most likely and least likely to request? (Chang et al., 2019)
  - e. Anonymized work history and a sense of strengths and growth areas for each candidate (Least likely-1; Most likely+1)
  - f. Resumes and a brief written statement of each candidate’s interest in the project (Least likely-0; Most likely-0)
  - g. A 15-minute individual interview with each of the candidates (Least likely-0; Most likely-0)
  - h. Their judgment on who would be easiest to work with since all 8 are qualified (Least likely+1; Most likely-1)
  
- 2) Imagine you are Ms. Brown being asked by her manager to write a proposal for a project. After getting the details, she spent a considerable amount of time researching and writing after hours. She gave the report to her manager on Monday, but it came back with edits everywhere, and it was clear that her manager changed the direction of the proposal without telling her. To make matters worse, the manager expects the new proposal in two days. If you were Ms. Brown, what would you most likely do? What would you least likely do? (Teng et al., 2020)
  - e. Immediately get to work on the new direction, expecting to work late (Most likely +1; Least likely: -1)
  - f. Pray for guidance in how to proceed (Least likely +1; Most likely-1)



- g. Enlist the aid of one of your peers to help with part of the proposal (Least likely-0; Most likely-0)
  - h. Tell yourself that you are really good at this and that you will be able to do a good job (Least likely-0; Most likely-0)
- 3) Imagine you are Ms. Green, an engineer that has been asked to work with a group of three other engineers to design a new product. Each engineer has created their own design, and they are meeting together to discuss what to do. Ms. Green has seen the other designs and believes hers is the best. The other engineers seem to agree, but two of them want to change the design. She thinks the changes reduce the quality of the product. If you were her, of the following, which would you be most likely to do? Which would you be least likely to do? (Becker, 2005)
- e. Work with the others to produce a design that everyone is fairly satisfied with. (Most likely +1; Least likely -1)
  - f. Let the others make the changes as they see fit, as long as they don't drastically alter the basic plan. (Most likely -0; Least likely -0)
  - g. Bring in your boss to help resolve the disagreement. (Most likely -1; Least likely +1)
  - h. Explain why you think the original design is better and refuse to change your mind unless better ideas are offered. (Most likely -0; Least likely -0)

### **The “He/Him/His” version:**

#### Scenarios for SI:

1. Mr. Smith is the manager of a software development company. Two team leaders, who report directly to him, got into a conflict. It started to negatively impact the teams' performance on their tasks, because these two leaders are responsible for sectors of which results are immediately linked to one another. He, the manager, talked about the case in a meeting with his superior and his peers. They found a possibility to transfer one of the team leaders to another sector, in which there was an available position, but this team leader would have to face many changes. If you were Mr. Smith, what would you do? (Campos & Rueda, 2020)
2. Mr. Johnson is on the same team with Dan, who's also his friend. He often hangs out with Dan on the weekends or after work. Dan is not a good team member. He often comes into work late, leaves early, and fails to do good work. As Dan's friend, Mr. Johnson ignores his faults at work and lets his supervisor worry about it. But now he has been promoted and will be in charge of the team. On his first day in charge, he sees Dan come to work late. What should he do? (Grim, 2010)

#### Scenarios for SJT:

- 1) Mr. Young has started working with a new client. The client has asked for his input to help assign client team members to the project. There are 8 qualified candidates, and the client has

offered to provide him with whatever he needs to formulate his input. If you were him, what would you be most likely and least likely to request?

- a. Anonymized work history and a sense of strengths and growth areas for each candidate (Least likely-1; Most likely+1)
- b. Resumes and a brief written statement of each candidate's interest in the project (Least likely-0; Most likely-0)
- c. A 15-minute individual interview with each of the candidates (Least likely-0; Most likely-0)
- d. Their judgment on who would be easiest to work with since all 8 are qualified (Least likely+1; Most likely-1)

2) Imagine you are Mr. Brown being asked by his manager to write a proposal for a project. After getting the details, he spent a considerable amount of time researching and writing after hours. He gave the report to his manager on Monday, but it came back with edits everywhere, and it was clear that his manager changed the direction of the proposal without telling him. To make matters worse, the manager expects the new proposal in two days. If you were Mr. Brown, what would you most likely do? What would you least likely do?

- a. Immediately get to work on the new direction, expecting to work late (Most likely +1; Least likely: -1)
- b. Pray for guidance in how to proceed (Least likely +1; Most likely-1)
- c. Enlist the aid of one of your peers to help with part of the proposal (Least likely-0; Most likely-0)
- d. Tell yourself that you are really good at this and that you will be able to do a good job (Least likely-0; Most likely-0)

3) Imagine you are Mr. Green, an engineer has been asked to work with a group of three other engineers to design a new product. Each engineer has created their own design, and they are meeting together to discuss what to do. Mr. Green has seen the other designs and believes his is the best. The other engineers seem to agree, but two of them want to change the design. He thinks the changes reduce the quality of the product. If you were him, of the following, which would you be most likely to do? Which would you be least likely to do?

- a. Work with the others to produce a design that everyone is fairly satisfied with. (Most likely +1; Least likely -1)
- b. Let the others make the changes as they see fit, as long as they don't drastically alter the basic plan. (Most likely -0; Least likely -0)
- c. Bring in your boss to help resolve the disagreement. (Most likely -1; Least likely +1)
- d. Explain why you think the original design is better and refuse to change your mind unless better ideas are offered. (Most likely -0; Least likely -0)

## The “You” version

### Scenarios for SI:

1. You are the manager of a software development company. Two team leaders, who report directly to you, got into a conflict. It started to negatively impact the teams’ performance on their tasks, because these two leaders are responsible for sectors of which results are immediately linked to one another. You, the manager, talked about the case in a meeting with your superior and your peers. They found a possibility to transfer one of the team leaders to another sector, in which there was an available position, but this team leader would have to face many changes. What would you do? (Campos & Rueda, 2020)
2. You are on the same team with Dan, who’s also your friend. You often hang out with Dan on the weekends or after work. Dan is not a good team member. He often comes into work late, leaves early, and fails to do good work. As Dan’s friend, you ignore his faults at work and let your supervisor worry about it. But now you have been promoted and will be in charge of the team. On your first day in charge, you see Dan come to work late. What should you do? (Grim, 2010)

### Scenarios for SJT:

1) You have started working with a new client. The client has asked for your input to help assign client team members to the project. There are 8 qualified candidates, and the client has offered to provide you with whatever you need to formulate your input. What would you be most likely and least likely to request?

- a. Anonymized work history and a sense of strengths and growth areas for each candidate (Least likely-1; Most likely+1)
- b. Resumes and a brief written statement of each candidate’s interest in the project (Least likely-0; Most likely-0)
- c. A 15-minute individual interview with each of the candidates (Least likely-0; Most likely-0)
- d. Their judgment on who would be easiest to work with since all 8 are qualified (Least likely+1; Most likely-1)

2) Imagine you are an engineer being asked by your manager to write a proposal for a project. After getting the details, you spent a considerable amount of time researching and writing after hours. You gave the report to your manager on Monday, but it came back with edits everywhere, and it was clear that your manager changed the direction of the proposal without telling you. To make matters worse, the manager expects the new proposal in two days. What would you most likely do? What would you least likely do?

- a. Immediately get to work on the new direction, expecting to work late (Most likely +1; Least likely: -1)
- b. Pray for guidance in how to proceed (Least likely +1; Most likely-1)

- c. Enlist the aid of one of your peers to help with part of the proposal (Least likely-0; Most likely-0)
- d. Tell yourself that you are really good at this and that you will be able to do a good job (Least likely-0; Most likely-0)

3) Imagine you are an engineer that has been asked to work with a group of three other engineers to design a new product. Each engineer has created their own design, and they are meeting together to discuss what to do. You have seen the other designs and believe yours is the best. The other engineers seem to agree, but two of them want to change the design. You think the changes reduce the quality of the product. Of the following, which would you be most likely to do? Which would you be least likely to do?

- a. Work with the others to produce a design that everyone is fairly satisfied with. (Most likely +1; Least likely -1)
- b. Let the others make the changes as they see fit, as long as they don't drastically alter the basic plan. (Most likely -0; Least likely -0)
- c. Bring in your boss to help resolve the disagreement. (Most likely -1; Least likely +1)
- d. Explain why you think the original design is better and refuse to change your mind unless better ideas are offered. (Most likely -0; Least likely -0)

### Appendix D Measures

Psychological Construct	#	Questions
Applicant Motivation	3	1) I tried to do the very best I could on these questions. 2) While answering these questions, I concentrated and tried to do well. 3) I was extremely motivated to do well on these questions.
Expected Sense of Belonging	4	1) I anticipate feeling that I belonged as a member of the organization. 2) I anticipate feeling comfortable during organization meetings and activities. 3) I anticipate feeling accepted during organization meetings and activities. 4) I anticipate that I might stick out like a sore thumb during company meetings and activities (reverse).
Intent to Pursue Employment in the Company	4	1) I would accept a job offer from this company. 2) I would make this company one of my first choices as an employer. 3) I would exert a great deal of effort to work for this company. 4) I would recommend this company to a friend looking for a job.
Perceived Organizational Support	4	1) Help will be available from the organization when I have a problem 2) The organization will show very little concern for me (reverse). 3) The organization will care about my opinions. 4) The organization will be willing to help me when I need a special favor.

## Appendix E Demographics for IT Group

### *Demographics for IT Group*

<b>Gender</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>	<b>Count</b>	<b>%</b>
Male				91	73.4%
Female				33	26.6%
<b>Age</b>	33.75	7.92	18-64		
<b>Education</b>					
Less than high school				0	0.0%
High school graduate or equivalent				11	8.9%
Associate degree				9	7.3%
College degree				46	37.1%
Advanced degree (graduate or professional)				58	46.8%
NA				0	0.0%
<b>Race</b>					
White or Caucasian				97	78.2%
Black or African American				19	15.3%
Native American or American Indian				2	1.6%
Asian or Asian American				2	1.6%
Pacific Islander				0	0.0%
Biracial or multiracial				1	0.8%
Other				2	1.6%
NA				1	0.8%