Effects of Preferential Selection and Discrimination on Women’s Felt Competence and Performance on a Leadership Task

by

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ABSTRACT

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When organizations implement hiring policies that may use preferential selection (PS), it is important to consider beneficiaries’ reactions towards such policies. Two laboratory studies examined whether strengths of PS programs affected women’s reactions towards these programs differently. Undergraduate women performed a diagnostic leadership task and were led to believe they were selected to participate because (a) they were among the most qualified (merit-based selection), (b) they were among the most qualified but gender was also a factor in selection (weak PS), or (c) they met a minimum qualification standard and gender was a factor in selection (strong PS). Results indicate that participants in the strong PS condition, but not participants in the weak PS condition, experienced more adverse reactions and worsened performance, compared with participants in the merit-only selection condition. Thus, it appears that women’s adverse reactions towards PS are mitigated if their competence is clearly outlined.
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Effects of Preferential Selection and Discrimination on Women’s Felt Competence and Performance on a Leadership Task

Although women have made great advancements in the workplace, they are still largely underrepresented in fields such as science, technology, engineering, and mathematics, as well as in leadership and upper management positions in all fields. For instance, within Fortune 500 companies, women make up only 16.6% of board members and only 4.2% of CEOs (Catalyst, 2013).

One means to dismantle gender discrimination in the workplace involves implementing programs such as employment equity, affirmative action, or diversity initiatives, which are designed to lead to a greater proportion of female employees being hired (Leck & Saunders, 1992; Kravitz, 2008; O'Donnell et al., 2006; Szafran, 2002). However, it can also be argued that such programs result in adverse outcomes for those whom the programs are designed to help (e.g., Heilman, Simon, & Repper, 1987). In the case of preferential selection, in which along with merit-based criteria (i.e., intelligence, ability, training, and experience), group membership is weighed in the selection decision, it may be the case that people discount the qualifications of program beneficiaries—creating a “stigma of incompetence” (Heilman, Block, & Lucas, 1992).

It has been demonstrated that both beneficiaries (e.g., women, Blacks) and non-beneficiaries (i.e., White men) tend to stigmatize people hired under preferential selection as less competent than those hired under merit-only conditions (Heilman et al., 1992). Furthermore, work performance can suffer for those preferentially selected versus those meritoriously selected (Turner & Pratkanis, 1993; 1994). Thus, preferential selection may actually be harmful for its intended beneficiaries by resulting in less psychological well-being and performance outputs from them.
However, to conclude that preferential selection is harmful for its intended beneficiaries is perhaps premature. Previous research on this issue, while carefully conducted, may have suffered from external validity issues because operationalizations of preferential selection were unrealistically strong (e.g., merit of beneficiaries was ignored). In addition, there are both internal and construct validity concerns as the indicators of performance used did not tap into leadership competence or work-relevant tasks. Thus, the goal of the current research was to investigate the adverse effects of preferential selection among women performing a leadership task. The task used in my research is a type of leadership task that is often used to evaluate prospective managers at Assessment Centers, and it involves analyzing a business case and writing a report. To maximize external validity, the preferential selection programs used in my experimental manipulations, while using gender in the selection criteria, also emphasized participants’ merit. These manipulations maximized external validity because in Canada it is illegal to hire on the basis of group membership without regard to qualifications (Employment Equity Act, 1995); therefore, including manipulations that give no weight to merit is unrealistic.

I conducted two studies investigating beneficiaries’ responses to preferential selection, which is a selection procedure wherein, along with merit-based criteria, an individual’s group membership is weighted in the selection decision. The first study utilized a strong preferential selection program, wherein participants were told gender was a factor in selection and that they met a minimum qualification standard. The second study utilized a weak preferential selection program, wherein participants were told that gender was a factor in selection and that they were among the most qualified. In both studies, responses to preferential selection were compared with responses to being selected solely based on merit, wherein gender was never mentioned and participants were told that they were among the most qualified. In the two studies, I examined
the effects of strong or weak preferential selection programs (vs. selection based solely on merit) for beneficiaries on doubts about their own competence, perceptions of fairness of the selection procedures, their investment in the task, and their actual performance.

Furthermore, I aimed to explore the proposed mechanism whereby, compared with solely merit-based selection, preferential selection leads to a greater stigma of incompetence and worsened performance among beneficiaries. Previous research has drawn from the discounting principle of attribution theory (Kelley, 1972), which states that people discount the qualifications (i.e., merits) of program beneficiaries when group status is considered in the decision-making process. This is because group status provides a plausible and salient alternative explanation for a beneficiary’s selection, other than merit, leading to attributional ambiguity (Major, Feinstein, Crocker, 1994). Specifically, given that merit is typically seen as being important for selection decisions, the perception that merit did not play a large role may introduce assumptions that the beneficiary is incompetent. Therefore, if beneficiaries perform worse under preferential selection (vs. solely merit-based selection) due to feelings of incompetence, then such self-perceptions should mediate performance decrements. Thus, I tested how beneficiaries’ doubts about their qualifications mediated the effects of preferential selection (vs. solely merit-based selection) on task performance.

Furthermore, if preferential selection leads to a discounting of qualifications due to attributional ambiguity (Kelley, 1972; Major et al., 1994), then a manipulation that reinforces beneficiaries’ qualifications should mitigate the stigma of incompetence. Thus, I tested whether framing preferential selection as being necessary to counteract existing bias in the assessment of qualifications mitigates the adverse effects of preferential selection (vs. solely merit-based selection) on the stigma of incompetence and on task performance. I suspected that framing
preferential selection as being necessary to counteract existing bias should have mitigated the adverse effects of preferential selection because beneficiaries were told that the selection test favoured men. This should have reinforced beneficiaries’ qualifications and reduced any feelings of incompetence.

**Types of Preferential Selection**

Preferential selection policies vary in the extent that target-group members (e.g., women, ethnic minorities) are treated differently than non-target group members (i.e., White men; see Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006). Such policies are considered stronger to the extent that a greater emphasis is placed on beneficiaries’ group membership, and less emphasis is placed on their qualifications when making decisions for selection or promotion. A strong program could give preference to a target group member, over a relatively more qualified non-target group member. Given that ambiguity is perceived as indicating that qualifications were less important in the selection decision, selection policies are also considered stronger when there is more ambiguity regarding the relative weight or importance of beneficiaries’ group membership versus their qualifications (Harrison et al., 2006; Kravitz, 2008). Thus, many people judge stronger forms of preferential selection as being merit-violating (i.e., violating the merit principle; Bobocel, Son Hing, Davey, Stanley, & Zanna, 1998). In contrast, a weaker preferential selection program, which places more emphasis on a beneficiary’s merit, or is more clear regarding a beneficiaries’ qualifications, may not clearly violate the merit principle.

The merit principle is a distributive justice principle whereby outcomes should go to the most deserving (Adams, 1965). When making selection or promotion decisions, the merit principle typically refers to evaluating relevant qualifications such as intelligence, ability, training, and experience while ignoring irrelevant factors (e.g., gender, ethnicity; Son Hing,
Bobocel, Zanna, 2002; Son Hing et al., 2011). Individuals prefer preferential selection policies that are perceived as less merit-violating. Therefore, individuals should prefer weaker preferential selection policies as they are seen as less merit-violating (Bobocel et al., 1998; Harrison et al., 2006).

**Typical Preferential Selection Study**

In a typical study looking at the effects of preferential selection, the methodology developed by Heilman, Simon, and Repper (1987) is often used. In this paradigm, male and female undergraduate students complete an assessment test and then are placed with a confederate of the opposite sex to complete a task involving leadership. The participant is always selected to be the leader of the group, and is told that this decision is based either solely on merit (i.e., based on his or her performance on the assessment test) or solely on gender (i.e., although the participant did not do well on the selection test he or she is still selected regardless of his or her score). Selecting women to be leaders solely due to their gender is meant to represent strong preferential selection, although this operationalization has been criticized for reflecting an extreme form of preferential selection that is illegal in the workplace (Son Hing & Hamilton 2007; Taylor, 1994). Upon completion of the task, a questionnaire is administered. In many studies the outcome measures include self-evaluations of competence on the task, leadership ability, task selection, task performance, stress and well-being, and perceived fairness of the selection procedure.

**Others’ Perceptions of Beneficiaries**

Heilman, Block, and Lucas (1992, Study 2) found that European American men who were employed in various occupations (e.g., financial, insurance, health, etc.) perceived a recent non-typical hire (i.e., a woman close to or at their level in the organization) in their workplace to
be less competent when preferential selection was thought to have occurred (vs. not occurred) in the hiring process. In several other studies using university populations, participants evaluated preferentially selected female candidates more negatively (Dietz-Uhler & Murrell, 1998) and as less qualified (Summers, 1991) than meritoriously selected females. In addition, non-beneficiaries expect less from beneficiaries in terms of performance (Heilman, Battle, Keller, & Lee, 1998; Heilman & Welle, 2006) and recommend smaller salaries for them (Heilman, Block, & Stathatos, 1997). Finally, if demographics are cited as a factor in selection, without explicit mention of beneficiaries’ qualifications, then non-beneficiaries are likely to react as though qualifications were not important in the selection process (Heilman et al., 1997). Thus, perceptions of beneficiaries are poor especially when no explicit mention of their qualifications is made.

**Beneficiaries’ Perceptions of Themselves**

Women who have benefited from a preferential selection program may wonder if they were selected due to preferential selection or their own merit. This attributional ambiguity (see Major et al., 1994) may result in adverse psychological implications. Without explicit information regarding their qualifications, beneficiaries are also likely to discount their abilities and experience adverse effects from preferential selection programs (Heilman et al., 1998). This is particularly problematic when the conditions of their selection are ambiguous (Brutus & Ryan 1998; Heilman & Alcott, 2001). Specifically, if a beneficiary is aware of the fact that she was preferentially selected, but she does not know the relative importance of her qualifications, she will be more likely to fixate on the conspicuous preferential selection information. This is often manifested in reduced feelings of competence, reduced perceptions of fairness, lower feelings of task importance and motivation, and decreased task performance, which I discuss below.
**Competence.** Women selected solely on the basis of gender perceived their leadership ability more negatively and expressed a lower desire to persist in a leadership position compared with women who were selected solely on the basis of merit (Heilman et al., 1987; Heilman, Lucas, & Kaplow, 1990; Heilman, Rivero, & Brett, 1991). Further, studies have revealed that when preferentially selected, the more clear it is that merit was a criterion in the selection decision, the less beneficiaries have suffered from a stigma of incompetence (e.g., Heilman et al., 1990).

**Perceptions of fairness.** Aside from the stigma of incompetence, another area of concern is beneficiaries’ perceptions of fairness of preferential selection. Due to viewing preferential selection as merit-violating, both beneficiaries and non-beneficiaries commonly view organizational procedures as less fair when preferential selection procedures are used, compared with when they are not used (Heilman et al., 1987; Heilman, McCullough & Gilbert, 1996). Perceiving preferential selection programs as unfair and thus merit-violating can lead to opposition to such programs (Bobocel et al., 1998; Heilman et al., 1996). However, if beneficiaries viewed a preferential selection program as merit-upholding then opposition to preferential selection has been shown to be reduced (Kravtiz & Klineberg, 2000; Kravitz et al., 2000; Son Hing et al., 2002).

**Task importance and motivation.** Research has indicated that when women are preferentially selected, they are less likely to take on challenging or high profile roles (such as those involving leadership) and they also experience diminished motivation to remain in the role they were selected for, compared with women who are selected meritoriously (Heilman et al., 1987; Heilman et al., 1991; Heilman & Alcott, 2001). It has been proposed that beneficiaries may reduce their effort and investment in tasks, as an effort to self-protect against failure (Turner
& Pratkanis, 1993). Thus, research has shown that task investment and motivation are adversely affected by preferential selection, compared with merit-based selection.

**Task performance.** In addition to the adverse effects of preferential selection on individuals’ perceptions of their own performance, studies have shown that beneficiaries’ actual performance can suffer as well (Turner & Pratkanis, 1993; 1994). For instance, Brown et al. (2000) investigated performance on analytical subtests of the GRE and found that participants, who were told they were selected based on gender, performed worse than participants who were told they were selected based on gender and merit. In other studies conducted, some of the tasks performed consisted of instructing another person to create geometric shapes (e.g., Heilman et al., 1987) and brainstorming uses for objects such as towels and ashtrays (Turner & Pratkanis, 1993). However, research on task performance is sparse and often uses a task that does not adequately assess leadership ability. Consequently, how beneficiaries would perform on a leadership task when preferentially selected is currently unknown.

Furthermore, it is currently unknown what factors drive beneficiaries’ worsened performance under preferential selection. It has been theorized that the stigma of incompetence is the reason for performance decrements (e.g., Heilman et al., 1987; Major et al., 1994). Yet worsened performance could be due to stereotype threat. Stereotype threat arises in difficult test-taking situations, and it is an anxiety that derives from a fear of confirming a negative stereotype about one’s group’s lack of abilities in a particular domain. This anxiety is distracting, compromises working memory (Schmader, 2010), and reduces test performance (Steele & Aronson, 1995). It has been shown that stereotype threat occurs when the following conditions are met: (a) the task is relevant to the stereotype about the person’s group, (b) the task is challenging, (c) people are performing within a domain they identify with, and (d) the stereotype
is likely to be reinforced in the context they complete the task in (Block, Koch, Liberman, Merriweather, & Roberson, 2011; Oswald & Harvey, 2000).

In many preferential selection paradigms, the conditions of stereotype threat are met; therefore, it may be stereotype threat, and not the stigma of incompetence, that is responsible for decreased performance (Brown et al., 2000). Unfortunately, little attention has been given to the relation between preferential selection and stereotype threat. So it is unknown if stereotype threat is the reason for beneficiaries’ performance decrements. Therefore, although research has found that preferential selection may adversely impact beneficiaries’ task performance, the mechanism by which this occurs is still unknown.

**Merit-Upholding Effects of Discrimination**

Preferential selection is designed to ameliorate current and historical discrimination against target-groups (Employment Equity Act, 1995). However, when an individual does not believe that discrimination still exists, it is unlikely that they will see the positive benefits of preferential selection programs and will likely view it as violating the merit principle (e.g., Bell, Harrison, & McLaughlin, 2001). Along the same lines, when an individual has personally experienced discrimination or believes that discrimination against a target group still occurs, they view preferential selection less negatively (Harrison et al., 2006) because they believe it is merit-restoring and thus upholds the merit-principle (Bobocel et al., 1998).

Son Hing et al. (2002) found that even among participants who endorsed the merit principle, those who perceived higher levels of workplace discrimination experienced lower opposition to preferential selection policies. In addition, Son Hing et al. (2011) found that, when reacting to strong preferential selection programs, an individual’s preference for the merit principle interacts with that individual’s beliefs about discrimination in organizational practices.
Specifically, when participants thought there was discrimination in hiring evaluations, the more strongly an individual preferred the merit principle the more they supported programs involving differential and preferential selection. In contrast, among participants who did not believe there was discrimination in evaluations, those with a stronger preference for the merit principle were less opposed to programs involving differential and preferential selection than those with a weaker preference for the merit principle. Thus, an individual’s beliefs about discrimination affect his or her reactions to preferential selection programs. Specifically, those who believe more discrimination exists favour preferential selection programs.

**Limitations of Previous Research**

An important goal of the current research was to increase the realism of study procedures compared with those used in past literature. Experimental tasks have often been dissimilar to tasks that would be required of employees or upper level managers in an organizational setting. An example of this is Heilman et al.’s (1998) one-way communication task, wherein a woman preferentially selected for a leadership role, verbally instructs a partner to draft specific geometric shapes. The leader’s precision, correct pacing of instructions, and general ability to one-way communicate were said to be the evaluative factors. However, there is no evidence that these tasks actually measure leadership ability or workplace performance.

Many prior studies do not reflect preferential selection procedures used in actual business settings. In most studies, participants were told directly that they have been preferentially selected and that they either did not meet the standards or they met an unrealistically low standard (e.g., Heilman et al., 1987). However, it is extremely unlikely that employers would explicitly inform a new employee that they were preferentially selected for the job despite being
highly unqualified for it. Further, businesses are unlikely to hire employees who do not possess the requisite qualifications for the position or who meet an unrealistically low standard.

There have only been a few studies using preferential selection policies that do provide participants with some indications of their merit (i.e., the policies are weaker in strength; e.g., Heilman et al., 1990; Heilman et al., 1998; Major et al., 1994; see also Turner & Pratkanis, 1994 for a review). In one of these few studies, Heilman et al. (1990) implemented a strong condition by informing participants that they had achieved 9 out of 20 on the selection test and that they had scored lower than their partner. In the weak condition, they were told that they had achieved 17 out of 20 on the selection test and that they had scored higher than their partner.

Further, in another study with conditions more similar to the current research, Heilman et al. (1998) used a strong preferential selection condition wherein female participants were given ambiguous information regarding their ability based on their scores on an ostensive leadership test. They also used a weak preferential selection condition, wherein female participants received positive feedback regarding their ability, which led participants to believe that there were only negligible differences between their scores on the selection test and their male counterpart’s scores. Results indicated that beneficiaries of the strong program experienced more adverse effects, compared with beneficiaries of the weak program and the merit program. Whereas participants in the weak program did not experience more adverse effects, compared with those in the solely merit-based selection condition.

However, the results of Heilman et al.’s (1998) study must be interpreted with caution as the strong and weak forms of preferential selection used in the study represent more extreme forms than would likely be used in a real business setting. Thus, these programs would have minimal impact on selection rates of target-group members in real organizations. Therefore, in
studies that do select women based on both their merit and gender the qualification standards are either too high, with women only being selected if they performed better or equivalently to a man (Heilman et al. 1990; Heilman et al., 1998), or their qualifications are made completely ambiguous (Major et al., 1994). Thus, the key question is, under conditions of realistic preferential selection, do the adverse effects found in previous studies still occur?

In addition, few studies have included measures of actual performance on a leadership task, with most studies only including measures of doubts about competence. However, it is important to measure both doubts about competence as well as actual performance in order to better understand the adverse effects caused by preferential selection programs.

The Current Research

Using two studies, the current research investigated women’s reactions to being beneficiaries of preferential selection programs. Female participants completed a leadership task and some participants were led to believe that they were preferentially selected while others were led to believe that they had been meritoriously selected. In addition, half of the participants were informed that the selection test was biased against women and favoured men, while the other half of participants were not given any information regarding discrimination.

This research attempted to address the limitations in the previous research by using realistic conditions of preferential selection. This was done by using a strong and weak preferential selection program that used realistic qualification standards that, unlike programs in previous research, were not unrealistically high, low, or ambiguous. Therefore, in comparison to previous research, the strong and weak policies used would have a bigger impact in terms of more women being hired in organizations.

I further addressed prior limitations by having participants complete a task assessing
leadership abilities (i.e., proposing solutions to a business case study) and only selecting women to participate if they had a desire for a business career. This was done for two reasons: First, a person who has strong desires to succeed at a task may exhibit more emotionally charged reactions to challenging, personally relevant tasks, compared with a person with little or no desire in the task. Second, it has been shown that in order for stereotype threat to affect someone’s performance on a task, the task must be in a domain that the individual identifies with (Block et al., 2011; Oswald & Harvey, 2000). Finally, unlike most previous research wherein only participants’ felt incompetence was measured, in the current study both participants’ felt incompetence and actual performance competence were measured.

This research examined four common adverse effects of preferential selection programs (vs. solely merit-based selection) experienced by beneficiaries: increased feelings of incompetence, decreased perceptions of fairness of the selection procedure, decreased investment in the task, and poorer performance scores. Two dimensions of performance on the task, analytic and assertive performance, were investigated. In addition, this research examined the effects of preferential selection when women were told discrimination had influenced the selection procedure.

Women were selected to participate in a realistic business task via three different preferential selection policies (i.e., solely merit-based selection, weak preferential selection, and strong preferential selection) wherein ambiguity surrounding participants’ qualifications was used to convey program strength to participants. Ambiguity was used to convey program strength as it has been found that if women are given ambiguous information regarding the importance of their qualifications in the selection procedure, then this information is often interpreted by women as indicating that their qualifications were irrelevant in the selection
procedure (Brutus & Ryan, 1998; Heilman & Alcott, 2001). Study 1 compared solely merit-based selection and strong preferential selection and Study 2 compared solely merit-based selection and weak preferential selection. In both studies, discrimination was manipulated to investigate whether a beneficiary can overcome the negative effects of preferential selection when it is seen as being implemented to counteract previous discrimination.

**Study 1**

The study examined the effects of a strong preferential selection program, wherein women were informed that they met the selection criteria, but their exact qualifications remained ambiguous, versus a solely merit-based selection program, wherein women were clearly told they were qualified. Half of the women were also informed that the selection test used to select participants was biased against women and favoured men, whereas the other half were not. The effects examined were women’s doubts about their competence, their perceptions of fairness, their investment in the task, and their analytic and assertive performance. The study utilized a 2 (Selection condition: solely merit-based selection vs. strong preferential selection) × 2 (Discrimination condition: no discrimination vs. discrimination) factorial design.

**Hypotheses**

**Hypothesis 1.** Given previous research documenting the adverse effects of preferential selection procedures on beneficiaries who have been given either no feedback or negative feedback regarding their abilities, when completing a one-way communication task (e.g., Heilman et al., 1997; Heilman et al., 1992; Heilman & Alcott, 2001; Turner & Pratkanis, 1993), I posited that there should be a main effect of selection condition. Specifically, women in the strong preferential selection condition should experience more feelings of doubt about their competence, view the selection procedure as less fair, place less importance on the task, and have
lower performance scores on the task, compared with women in the solely merit-based selection condition.

**Hypothesis 2.** There should be a main effect of discrimination condition for perceived fairness such that women in the discrimination condition should perceive less fairness in the selection procedure compared with women in the no discrimination condition. This is because of justice concerns, as women in the discrimination condition were told that the selection test used to select participants is biased against women and favours men, whereas women in the no discrimination condition were told that the selection test is equally fair to men and women.

**Hypothesis 3.** The discrimination condition should moderate the effects of selection condition on doubts about competence, perceived fairness, importance placed on task, and analytic and assertive performance scores. Specifically, I expected that among participants in the solely merit-based selection condition, those in the no discrimination condition should not experience more adverse effects, compared with those in the discrimination condition. This is because there should be low levels of adverse effects for all participants. In contrast, among those in the strong preferential selection condition, those in the no discrimination condition should experience more adverse effects, compared with those in the discrimination condition. This is because among participants in the strong preferential selection condition, participants’ perceptions of informational justice should be higher in the discrimination condition (vs. the no discrimination condition) because participants are given an explanation for why preferential selection is being implemented (i.e., to correct for bias against women; Bies & Moag, 1986; Colquitt, 2001). Further, among participants in the strong preferential selection condition, participants’ perceptions of distributive justice should also be higher in the discrimination condition (vs. the no discrimination condition) as beneficiaries can be seen as more deserving
given that their test scores were depressed (Adams, 1965; Deutsch, 1975).

**Hypothesis 4.** Based on previous research implicating the stigma of incompetence as the driver of beneficiaries’ worsened performance (Heilman et al., 1992; Major et al., 1994), I hypothesized that doubts about competence should mediate the effects of preferential selection (vs. solely merit-based selection) on task performance, as preferential selection should lead to a greater stigma of incompetence and thus worsened performance among beneficiaries.

In particular, selection condition should be significantly related to performance scores, with strong preferential selection leading to lower performance scores than solely merit-based selection. Selection condition should also be significantly related to doubts about competence, with strong preferential selection leading to higher doubts about competence, compared with solely merit-based selection. Further, doubts about competence should be significantly negatively related to performance scores, with higher doubts about competence leading to lower performance scores, even when controlling for selection condition. Finally, the relation between selection condition and performance should be mitigated when controlling for participants’ doubts about their competence. See Figure 1 for proposed mediation model. Therefore, it is proposed that at least part of the reason preferential selection leads to poor performance for beneficiaries is because it creates doubts for them about their competence because they attribute their selection to gender rather than competence, and these doubts lead to decreases in performance.

**Independent Manipulation Check for Study 1**

To investigate the success of the materials used in Study 1, I tested whether participants responded to the selection and discrimination condition manipulations in the predicted manner. A 2 (Selection condition: solely merit-based selection vs. strong preferential selection) × 2
Method.

Participants. Thirty-six female students in an introductory psychology class were selected from the participant pool and were randomly assigned to one of four conditions: (a) solely merit-based selection and no discrimination \( (n = 9) \); (b) strong preferential selection and no discrimination \( (n = 10) \); (c) solely merit-based selection and discrimination \( (n = 10) \); and, (d) strong preferential selection and discrimination \( (n = 7) \). They were reimbursed with one credit toward their grade.

Procedure. The experimenter asked participants to pretend they were selected for a study on leadership and to answer questions about how they were selected. Participants read the same information sheet used in Study 1, depending on condition (see example information sheet in Appendix A; also see Study 1 procedure). Specifically, the information sheet included information regarding the cover story, selection condition, discrimination condition, and a brief overview of the tasks required of participants in Study 1. Once participants finished reading the information sheet, instead of completing the entire experiment like the participants in Study 1 would, they simply completed a questionnaire.

To assess the selection condition manipulation, participants rated “Women are selected to

\[1\] Participants in Study 1 also completed manipulation checks; however, the selection condition manipulation check was unsuccessful due to unclear wording. Using clear wording regarding women’s performance on the selection test may have caused participants to become suspicious. The original wording was “Women are selected to participate in the BLAC based solely on their performance on the Leadership Questionnaire used in mass testing” and the wording for this independent manipulation check was “Women are selected to participate in the BLAC, in part, based on their gender”. The discrimination condition manipulation check was successful in Study 1 but was also included in this independent manipulation check.
participate in the BLAC, in part, based on their gender:” 1 (strongly disagree) to 7 (strongly agree). To assess the discrimination condition manipulation, participants rated “The Leadership questionnaire used in mass testing:” 1 (favours men), 4 (is equally fair to men and women), 7 (favours women).

**Results and discussion.**

*Selection condition manipulation check.* An independent samples $t$-test was performed to determine if participants correctly interpreted the selection condition manipulation. Results indicated that participants in the strong preferential selection condition ($M = 5.71, SD = 1.49$), more strongly agreed than participants in the solely merit-based selection condition ($M = 3.42, SD = 2.14$), that women were selected based on their gender, $t(34) = 3.67, p = .001, \eta^2 = 0.28.$

*Discrimination condition manipulation check.* An independent samples $t$-test was performed to determine if participants’ perceived that the Leadership Questionnaire favoured men over women. Results indicated that those in the discrimination condition ($M = 1.76, SD = 1.03$) reported that the selection test was biased against women more than those in the no discrimination condition ($M = 3.63, SD = 1.16$), $t(34) = 5.06, p < .001, \eta^2 = 0.43.$

As the independent manipulation checks were successful, these manipulations were used for the main study.

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$^2$ The results of an exploratory ANOVA revealed that there was no main effect of discrimination condition, and discrimination condition did not moderate the effects of selection condition on participants’ perceptions of how women were selected, $p \geq .30$.

$^3$ The results of an exploratory ANOVA revealed that there was no main effect of selection condition, and selection condition did not moderate the effects of discrimination condition on perceptions of whether the questionnaire favoured men over women, $p \geq .18$. 
Study 1 Method

Participants

The study was completed by 134 women, ranging in age from 17 to 45 years ($M = 18.87, SD = 2.48$), in return for course credit. They were selected from a pool of 3,731 introductory psychology students using an online questionnaire. Participants were randomly assigned to one of four conditions: (a) solely merit-based selection and no discrimination ($n = 34$); (b) strong preferential selection and no discrimination ($n = 32$); (c) solely merit-based selection and discrimination ($n = 33$); and, (d) strong preferential selection and discrimination ($n = 35$).

Procedure

**Phase 1.** All introductory psychology students completed an online Mass Testing survey. This survey included a 14-item Leadership Questionnaire (see Appendix B) that served as the alleged selection test, and another questionnaire (see Appendix C) that included two screening questions assessing potential participants’ desire to have a business career (e.g., “How important is it to you to become a business leader some day?”), $r(134) = .19, p < .05$. Questions were answered using a five-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). It was important to select participants who would feel that the study was personally relevant; thus, only those who responded with moderate to high interest in a business career were selected (i.e., participants who scored an average of at least 3 or above on the screening questions).

**Phase 2.** Those who were selected in Phase 1 were recruited via an e-mail (see Appendix D) that informed them they had been selected to participate in this study based on their

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4The questionnaire contained three screening questions; however, due to low reliability, the first screening question was not included.
performance on the Leadership Questionnaire included in the online Mass Testing survey.

**Phase 3.** Participants arrived to a laboratory room labeled “Business Leadership Assessment Study” where up to five participants completed the study at a time. Upon arrival to the study, participants received consent forms (see Appendix E). Next, a female experimenter, who followed a script (see Appendix F) told participants the cover story, which led participants to believe they were selected to participate in the Business Leadership Assessment Centre (BLAC), which is used to select students into a prestigious Master’s of Leadership program. Ostensibly, the researcher was testing the validity of the BLAC to assess leadership ability and to do so she needed participants with prospective leadership abilities. She also informed them that they were interested in how motivation affects performance on the BLAC. Participants were told they were randomly assigned to the high motivation condition and told they could win $100, $85, and $65 for the first, second, and third best performances on the task, respectively.

Participants then received an information sheet that contained all of the information regarding the selection and discrimination conditions and varied according to condition (see Appendices G – J). To illustrate, participants in the solely merit-based selection condition read:

In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only those who were among the top scorers on the Leadership Questionnaire used in Mass Testing have been selected for this project.

Participants in the strong preferential selection condition read:

In our study, we have attempted to select students who demonstrated that they have the skill and ability needed to perform well as business leaders. However, we have been
running this study for a while now and have found that we have a larger number of men than women qualifying for the study. In fact, we have finished testing the most qualified women. So, we have adopted a policy of asking all women—such as yourself—to sign up, as long as they have achieved at least a minimum score on the Leadership Questionnaire used in Mass Testing.

Thus, participants in this condition received ambiguous information regarding their qualifications.

The information sheets also reflected levels of discrimination. Specifically, participants in the no discrimination condition were told that the Leadership Questionnaire “fairly assesses prospective leadership abilities”. Whereas, the information sheet provided participants in the discrimination condition with the following additional information:

The Leadership Questionnaire used in Mass Testing is actually biased against women and favours men. In reality, there is no gender difference in leadership potential. However, men tend to score higher than women on the test because the items used to assess leadership potential focus on typical male strengths while ignoring typical female strengths.

The information sheet also emphasized that the assessment center methodology (i.e., the BLAC) was a fair and objective measure in terms of gender, race, and age.

The information sheet also included brief descriptions about the two performance tasks. In the first performance task, participants were asked to play the role of a senior executive in a fictitious organization. Their goal was to solve a problem that the organization was facing by reading case study materials and writing a persuasive recommendation report for the organization’s CEO. They had 35 minutes to complete this exercise. In the second performance
task, participants were asked to play the role of a manager in a fictitious organization. Here, they were required to prioritize and respond to various administrative duties. They had 15 minutes to complete this exercise. Although participants read about the second performance task, they did not actually complete it. I included this exercise to make the assessment exercise appear more valid and challenging to participants.

After reading the study information, which included only the brief outlines of the exercises, participants filled out a form that assessed their feelings of incompetence, perceptions of fairness, and personal investment in the study (see Appendix K).

Then participants received the case analysis task. Background information, financial data, proposed solutions, opinions from the board of directors and employees, and information regarding competing companies were provided (see Appendix L). Participants were to analyze the information provided to them and use it to list key issues related to seven categories in a report (see Appendix M). Finally, participants were to use the issues that they raised in this report to guide them in writing a comprehensive recommendation to the CEO of the organization. The instructions explained that the CEO would decide whether to use participants’ recommendations. Therefore, participants were told to be persuasive in their recommendations.5 Participants then completed the case study analysis.6

Next, participants did not actually complete the in-basket exercise but instead responded

5 Participants responded to another questionnaire assessing participants’ feelings of incompetence (see Appendix N). However, results from this questionnaire are beyond the scope of this thesis.

6 After completing the case study analysis and before beginning what participants thought would be the second task, participants responded to another questionnaire assessing their feelings of incompetence (see Appendix O). However, results from this questionnaire are beyond the scope of this thesis.
to a suspicion probe (see Appendix P). The probe consisted of two open-ended questions that asked what participants believed the study was all about, and whether they thought it was about anything other than what it was purported to be.

The experimenter then informed participants about the misrepresentation of the study, both orally and in written form (see Appendix Q). Specifically, the experimenter informed participants that their performance would not be shared with the Leadership Center, but instead would be used in my research on preferential selection. Participants were also informed about the experimental conditions and the hypotheses regarding the study and were given a chance to ask questions. Finally, they were told there would still be a draw of five prizes of $50 each. As participants were deceived, they received a new post-debriefing consent form (see Appendix R).

Measures

Doubts about competence. To assess participants’ doubts about their competence, participants answered the question “I am somewhat unsure if I am qualified to participate in the BLAC” using the scale 1 (strongly disagree) to 7 (strongly agree).

Perceived fairness. Two questions assessed participants’ perceptions of fairness of the selection procedures (e.g., “The way people were selected for the BLAC is just”). Responses ranged from 1 (strongly disagree) to 7 (strongly agree). Items were aggregated by averaging the two ratings for an overall measure of perceived fairness for each participant, $r(134) = .53, p < .01$.

Importance placed on task. Three questions assessed participants’ personal investment in the task (e.g., “It’s important to me to perform well on the BLAC”). Responses ranged from 1 (strongly disagree) to 7 (strongly agree). Items were aggregated by averaging across the three ratings for an overall measure of importance placed on task for each participant ($\alpha = .75$).
**Analytic and assertive performance.** Performance was evaluated using behaviourally-anchored rating scales for analytic and assertive performance. Behaviourally-anchored rating scales are appraisal tools that link specific behavioural examples with a numerical rating and are thought to be more beneficial than other scales at rating an individual’s performance (Schwab, 1975).

Two trained raters evaluated participants’ performances on the case study—interrater reliability was $\alpha = .78$ for analytic performance and $\alpha = .84$ for assertive performance. Raters were given instructions on how to rate performance (see Appendix S). They were told to check off the key issues that were recognized using the coding scheme (see Appendix T). In the coding scheme letters match up with scores of 1, 3, or 5, and an overall code between 1 (*poor*) – 5 (*excellent*) is independently assigned to each participant based on where the majority of scores are situated on each aspect of performance. After rating participants’ performances individually, rater’s scores for the analytic and assertive components were aggregated to form one analytic and assertive score for each participant.

For analytic performance scores, some of the rated aspects of performance included whether each participant identified important implications (e.g., a score of 5 = *Identifies both major and subtle implications of issues*), had an in-depth understanding of the issue (e.g., a score of 3 = *Has a good understanding of the issues but may be confused at times*), and their proposal was factually accurate (e.g., a score of 1 = *Makes a number of factual errors*), feasible (e.g., a score of 5 = *Proposed recommendation is feasible and practical*) and likely to be effective (e.g., a score of 3 = *Proposed recommendation may be effective*)..

For assertive performance scores, some of the rated aspects of performance included whether each participant was able to be persuasive (e.g., a score of 5 = *Is persuasive with*...
recommendation), command and sustain the attention of the reader (e.g., a score of 3 = Is somewhat able to command the attention of the evaluator) and provide clear rationales for all decisions (e.g., a score of 1 = Has no clear rationale for recommendation).

Study 1 Results

Preliminary Results

The intercorrelations between the dependent variables are presented for the solely merit-based condition in Table 1, and the strong preferential selection condition in Table 2. In Tables 1 and 2 there are strong positive correlations between analytic and assertive performance scores. Due to this, performance scores have been aggregated to create a mean performance measure. Aside from performance scores, the intercorrelations in Table 1 and Table 2 suggest that each dependent variable is independent of the other dependent variables.

In the solely merit-based condition (Table 1), there is a weak negative correlation between doubts about competence and importance placed on task. Therefore, as women’s doubts about their competence increase, the importance they place on the task decreases. There were no other significant correlations.

In the strong preferential selection condition (Table 2), there is a weak positive correlation between perceived fairness and importance placed on task. Indicating that as women’s perceptions of fairness of the selection procedure increase, the importance they place on the task also increases. There were no other significant correlations.

Main Results

To examine the hypotheses, 2 (Discrimination condition: no discrimination vs. discrimination) × 2 (Selection condition: solely merit-based selection vs. strong preferential selection) ANOVAs were used to examine the effects of the selection condition and
Discrimination condition on the dependent variables.

**Doubts about competence.** In line with Hypothesis 1, participants in the strong preferential selection condition reported more feelings of doubt about their competence, compared with participants in the solely merit-based selection condition, $F(1, 130) = 5.50, p = .021, \eta^2 = .04$. See Table 3 for means and standard deviations. This indicates that using a realistic preferential selection procedure, which is ambiguous regarding how qualified a woman is for the task, leads women to experience the stigma of incompetence when completing a real business task. No main effect was found for discrimination condition, $F(1, 130) = 1.54, p = .217$. See Table 4 for the means and standard deviations. Contrary to Hypothesis 3, the discrimination condition did not moderate the effects of selection condition on doubts about competence, $F(1, 130) = 0.87, p = .352$.

**Perceived fairness.** Recall that in Hypothesis 1, participants in the strong preferential selection condition should perceive the selection procedure as less fair than those in the solely merit-based selection condition. The findings indicate no support for this hypothesis, as perceptions of fairness did not differ between conditions, $F(1, 130) = 0.13, p = .719$. See Table 3 for means and standard deviations. In support of Hypothesis 2, participants in the discrimination condition perceived less fairness in the selection procedure than participants in the no discrimination condition, $F(1, 130) = 7.06, p = .009, \eta^2 = .05$. See Table 4 for the means and standard deviations. Therefore, women who were told that the selection test was biased against women and favoured men rated the selection procedure as less fair compared with women who were not told the selection test was biased. Hypothesis 3 was not supported as the discrimination condition did not moderate the effects of selection condition on perceived fairness, $F(1, 130) = 0.02, p = .893$. 
Importance placed on task. As expected in Hypothesis 1, participants in the strong preferential selection condition placed less importance on the task than participants in the solely merit-based selection condition, $F(1, 130) = 15.31, p < .001, \eta^2 = .11$. See Table 3 for means and standard deviations. Therefore, women selected via a realistic preferential selection procedure, which is ambiguous regarding how qualified a woman is for the task, placed less importance on the realistic business task, compared with women selected based solely on their merit. There was no main effect of discrimination condition, $F(1, 130) = 0.48, p = .492$. See Table 4 for the means and standard deviations. Hypothesis 3 was not supported as the discrimination condition did not moderate the effects of selection condition on importance placed on the task, $F(1, 130) = 0.42, p = .519$.

Mean performance. As predicted in Hypothesis 1, participants in the strong preferential selection condition had lower performance scores than participants in the solely merit-based selection condition, $F(1, 127) = 9.92, p = .002, \eta^2 = .07$. See Table 3 for means and standard deviations. This indicates that women performed worse on the realistic business task when they were selected using a realistic preferential selection program, which is ambiguous regarding how qualified a woman is for the task, compared with women selected on merit alone. The main effect for discrimination condition was not significant, $F(1, 127) = 0.00, p = .949$. See Table 4 for the means and standard deviations. Hypothesis 3 was not supported as the discrimination condition did not moderate the effects of selection condition on mean performance scores, $F(1, 127) = 1.15, p = .286$.

Doubts about competence as a mediator of selection condition on mean performance. Hypothesis 4 was unsupported as not all of the assumptions for mediation were met; specifically, doubts about competence and mean performance were not significantly
correlated (see Table 5 for the correlations). Therefore, it seems the relationship between selection condition and mean performance is not mediated by the stigma of incompetence. Indicating that perhaps the stigma of incompetence is not the mechanism through which preferential selection affects beneficiaries’ performance.

Summary

In summary, the results of Study 1 provide partial support for Hypothesis 1, as participants who were chosen preferentially had higher doubts regarding their competence, they placed lower importance on the leadership task, and they performed worse, compared with participants who were chosen solely due to their merit. However, ratings of fairness for the selection procedure did not differ between participants chosen preferentially and those chosen solely based on their merit, with participants in both conditions rating the procedure as moderately fair. This result will be discussed further in the General Discussion section.

In support of Hypothesis 2, women who were told that the selection test was biased against women and favoured men perceived the selection procedure as less fair than women who were not told this information.

Lack of support was found for Hypothesis 3. Perceptions of discrimination did not moderate the adverse effects of preferential selection, as participants in the preferential selection condition, who were told about the discrimination, did not experience diminished adverse effects of preferential selection. It seems that in the discrimination condition, preferential selection policies were not perceived by participants as being merit-restoring. What may have accounted for this is that the preferential selection program used, although outlining participants’ qualifications, may not have been effective in alleviating the adverse effects associated with preferential selection. In other words, informing participants that they have met a “minimum
qualification standard” may not have been enough to make women feel competent. Thus, regardless of the bias against women in the selection test, the use of preferential selection (i.e., giving favour to women) in the study’s selection procedure may have been seen as going too far. That is, participants may have still viewed their selection as violating the merit principle (Adams, 1965) because clear unambiguous information regarding their qualifications was not given to them.

Therefore, due to the wording suggesting that the participant met a “minimum qualification standard,” participants may have viewed their selection as not being based on merit but instead being mostly due to their gender. Thus, the preferential selection program used may not have been the correct strength to counteract the bias that was presented to participants. Recall the findings that utilizing a weaker form of preferential selection, which clearly outlined a candidate’s qualifications, reduced non-beneficiaries’ adverse reactions to preferential selection when perceptions of discrimination against women were high (Son Hing et al., 2002; 2011). Given this, I propose that if women are given clear information regarding their merit and told that only those who have met a “requisite standard” (vs. a “minimum qualification standard”) are selected, then the adverse effects of preferential selection should be negligible. Further, giving favour to women in the selection procedure should be seen as correcting for bias in the test that gave favour to men and should be viewed as less merit-violating. I will investigate this in the next study.

Finally, there was no support for Hypothesis 4. Participants selected using a strong preferential selection program did perform worse than participants selected solely based on their merit; however, this was not mediated by the stigma of incompetence. This result runs counter to previous research that has implicated the stigma of incompetence as a driver of beneficiaries’
worsened performance (Heilman et al., 1992; Major et al., 1994) and is further discussed in the General Discussion.

In Study 2, I examined the effects of a preferential selection program that is weaker in strength than the program used in Study 1. Specifically, in Study 2, I tested whether a weak preferential selection program causes beneficiaries to have increased doubts about their competence, decreased perceptions of fairness, place less importance on the task, and have decreased performance on the task, compared with women selected solely based on their merit. I also examined whether these relations are moderated by informing women that there was bias in the selection condition.

**Study 2**

The second study examined the effects of a weak preferential selection program, wherein women were given clear information regarding their qualifications but were also told that gender was a factor in their selection, versus a solely merit-based selection program, wherein women were clearly told they were qualified. Half of the women were also informed that the selection test used to select participants was biased against women and favoured men, whereas the other half were not. The effects examined were women’s doubts about their competence, their perceptions of fairness, their investment in the task, and their analytic and assertive performance. The study utilized a 2 (Selection condition: solely merit-based selection vs. weak preferential selection) × 2 (Discrimination condition: no discrimination vs. discrimination) factorial design.

**Hypotheses**

*Hypothesis 1.* I expected a main effect of selection condition such that women in the weak preferential selection condition should experience more feelings of doubt about their competence, view the selection procedure as less fair, place less importance on the task, and have
lower task performance, compared with women in the solely merit-based selection condition. This is because the weak preferential selection condition should call into question a participant’s competence as it implies that gender has a special weight in their selection.

In the current study, I used a weaker preferential selection program than the program used in Study 1 by informing participants that they are qualified based on their score on a qualifying test. Research has found that women selected using weaker forms of preferential selection (in which participants are given positive information about their task ability) react to a one-way communication task similarly to women selected based solely on their merit (e.g., Heilman et al., 1990; Heilman et al., 1998; Major et al., 1994; see also Turner & Pratkanis, 1994 for a review). However, contrary to previous research, I expected there may be some adverse reactions to the preferential selection program as the preferential selection program used in this study was stronger than the weak preferential selection programs used in previous research and the task used was a real business leadership task. Thus, in comparison with merit-based selection, I expected that preferential selection may introduce doubts regarding merit (i.e., could violate the merit principle if beneficiaries view their selection as being based on gender, not merit), and that, coupled with a more challenging and more realistic task, than the task used in previous research, may result in more adverse effects for beneficiaries.

Hypothesis 2. There should be a main effect of discrimination condition for perceived fairness such that women in the discrimination condition should perceive less fairness in the selection procedure, compared with women in the no discrimination condition. I expected this because of justice concerns, as women in the discrimination condition were told that the selection test used to select participants is biased against women and favours men, whereas women in the no discrimination condition were told that the selection test was equally fair to
men and women. This prediction is also in line with the significant results of Study 1.

**Hypothesis 3.** The discrimination condition should moderate the effects of selection condition on doubts about competence, perceived fairness, importance placed on task, and analytic and assertive performance scores. Specifically, I expected that among participants in the solely merit-based selection condition, those in the no discrimination condition should not experience more adverse effects, compared to those in the discrimination condition. This is because there should be low levels of adverse effects for all participants. In contrast, among those in the weak preferential selection condition, those in the no discrimination condition should experience more adverse effects, compared with those in the discrimination condition. This is because among participants in the weak preferential selection condition, participants’ perceptions of informational justice should be higher in the discrimination condition (vs. the no discrimination condition) because participants are given an explanation for why preferential selection is being implemented (i.e., to correct bias against women; Bies & Moag, 1986; Colquitt, 2001). Further, among participants in the weak preferential selection condition, participants’ perceptions of distributive justice should also be higher in the discrimination condition (vs. the no discrimination condition) as beneficiaries can be seen as more deserving given that their test scores were depressed (Adams, 1965; Deutsch, 1975).

**Hypothesis 4.** Based on previous research implicating the stigma of incompetence as a driver of beneficiaries’ worsened performance (Heilman et al., 1992; Major et al., 1994), I hypothesized that doubts about competence should mediate the effects of preferential selection (vs. solely merit-based selection) on task performance, as preferential selection should lead to a greater stigma of incompetence and thus worsened performance among beneficiaries.

In particular, selection condition should be significantly related to performance scores,
with weak preferential selection leading to lower performance scores than solely merit-based selection. Selection condition should also be significantly related to doubts about competence, with weak preferential selection leading to higher doubts about competence, compared with solely merit-based selection. Further, doubts about competence should be significantly negatively related to performance scores, with higher doubts about competence leading to lower performance scores, even when controlling for selection condition. Finally, the relationship between selection condition and performance should be mitigated when controlling for participants’ doubts about their competence. See Figure 1 for proposed mediation model. Thus, at least part of the reason preferential selection leads to poor performance for beneficiaries is because it creates doubts for them about their competence because they attribute their selection to gender rather than competence.

Independent Manipulation Check for Study 2

To investigate the success of the materials used in Study 2, I tested whether participants responded to the selection condition and discrimination condition manipulations in the predicted manner. A 2 (Selection condition: solely merit-based selection vs. weak preferential selection) × 2 (Discrimination condition: no discrimination vs. discrimination) factorial design was used.\(^7\)

\(^7\) Participants in Study 2 also completed manipulation checks; however, the selection condition manipulation check was unsuccessful due to unclear wording. Using clear wording regarding women’s performance on the selection test may have caused participants to become suspicious. The original wording was “Women are selected to participate in the BLAC based solely on their performance on the Leadership Questionnaire used in mass testing” and the wording for this independent manipulation check was “Women are selected to participate in the BLAC, in part, based on their gender”. The discrimination condition manipulation check was successful in Study 2 but was also included in this independent manipulation check.
Method.

Participants. Forty female university students, who were approached at various places around the University of Guelph campus, were randomly assigned to one of four groups: (a) solely merit-based selection and no discrimination ($n = 10$); (b) weak preferential selection and no discrimination ($n = 10$); (c) solely merit-based selection and discrimination ($n = 10$); and, (d) weak preferential selection and discrimination ($n = 10$). Participants were given $5 for their participation.

Procedure. The experimenter asked participants to pretend they were selected for a study on leadership. Participants read the same information sheet used in Study 2, depending on condition (see Study 2 procedure). Then, to assess the selection condition manipulation, participants rated “Women are selected to participate in the BLAC, in part, based on their gender:” 1 (strongly disagree) to 7 (strongly agree). To assess the discrimination condition manipulation, participants rated “The Leadership questionnaire used in mass testing:” 1 (favours men), 4 (is equally fair to men and women), 7 (favours women).

Results and discussion.

Selection condition manipulation check. An independent samples $t$-test was performed to determine if participants correctly interpreted the selection condition manipulation. Results indicated that participants in the weak preferential selection condition ($M = 5.35, SD = 1.60$), more strongly agreed than participants in the solely merit-based selection condition, ($M = 2.00, SD = 1.34$) that women were selected based on their gender, $t(38) = 7.19, \ p < .001, \ \eta^2 = 0.58$.\(^8\)

\[^8\] The results of an exploratory ANOVA revealed that there was no main effect of discrimination condition, $p = .32$. Discrimination condition moderated the effects of selection
Discrimination condition manipulation check. An independent samples t-test was performed to determine participants’ perceptions of discrimination on the basis of whether the Leadership Questionnaire favoured men over women. Results indicated that those in the discrimination condition (\(M = 1.30, SD = 0.47\)) reported that the selection test was biased against women more than those in the no discrimination condition (\(M = 3.75, SD = 0.55\)), \(t(38) = 15.14, p < .001, \eta^2 = 0.86.\)\(^9\)

As the independent manipulation checks were successful, these manipulations were used for the main study.

Study 2 Method

Participants

The study was completed by 120 women, ranging in age from 17 to 26 years (\(M = 18.73, SD = 1.51\)), in return for course credit. They were selected from a pool of 2,676 introductory psychology students using an online questionnaire. Two participants’ data were removed due to suspicions regarding the nature of the study. Specifically, the participants guessed what the study was about. Therefore, there were 118 participants in the study. Participants were randomly

condition on participants’ responses to how women were selected, \(F(1, 36) = 4.54, p = .040, \eta^2 = .11.\) Specifically, among participants in the solely merit-based selection condition there was a simple main effect of discrimination condition, \(F(1, 36) = 4.93, p = .033, \eta^2 = .12,\) as participants in the discrimination condition (\(M = 2.70, SD = 1.49\)) more strongly agreed than participants in the no discrimination condition (\(M = 1.30, SD = 0.68\)) that women were selected based on their gender. Whereas in the weak preferential selection condition, there was no significant difference between participants in the no discrimination condition and the discrimination condition, \(F(1, 36) = 0.63, p = .433, \eta^2 = .02.\)

\(^9\) The results of an exploratory ANOVA revealed that there was no significant main effect of selection condition and selection condition did not moderate the effects of discrimination condition on participants’ perceptions of whether the questionnaire favoured men over women, \(p \geq .77.\)
assigned to one of four conditions: (a) solely merit-based selection and no discrimination ($n = 29$); (b) weak preferential selection and no discrimination ($n = 30$); (c) solely merit-based selection and discrimination ($n = 29$); and, (d) weak preferential selection and discrimination ($n = 30$).

**Procedure**

The procedure for Study 2 followed the same procedure used in Study 1 (i.e., the procedure followed the same three phases). Participants were again screened based on their responses to two qualifying questions assessing potential participants’ desire to have a business career (e.g., “How important is it to you to become a business leader some day?”), $r(118) = .45$, $p < .01$. The difference between the two experiments was that in the second experiment weak preferential selection, rather than strong preferential selection, was used.\(^{10}\)

Participants were given information sheets that varied according to condition (see Appendices U – X). Participants in the solely merit-based selection condition in this study read the same information as participants in the solely merit-based selection condition in Study 1:

In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only those who were among the top scorers on the Leadership Questionnaire used in Mass Testing have been selected for this project.

Participants in the weak preferential selection condition read the above information, plus the

\(^{10}\) The experimenter was different between Study 1 and Study 2 and the number of participants per session ranged between one and four in Study 2, rather than one and five in Study 1.
We have been running this study for a while now and we have found that we have a larger number of men than women qualifying for our study. So now, rather than simply selecting only the top scorers among our potential participants, we are selecting our top men as well as all women who met our requisite standards.

Participants in the weak preferential selection condition were additionally provided with a visual illustration of how they were selected using a scatterplot of hypothetical scores (see Appendix Y). The scatterplot depicted that males were selected by choosing the top scorers first, and then by proceeding down the scores until enough males were selected. The illustration highlighted that for females, the “requisite standard” was a score of 70% on the Leadership Questionnaire. To emphasize the cut-off score, a red line separated the bottom 70% of the chart from the top 30%. Moreover, it was emphasized that all females who scored above the line were selected.

The illustration provided a means of assuring participants that they were among a pool of highly qualified candidates. This unambiguous information regarding their qualifications may also lead participants to infer that their qualifications, not just their group-membership, were weighted in their selection (Brutus & Ryan, 1998). Further, this illustration of the minimum cut-off score for participants in the weak preferential selection condition is a key difference from the strong preferential selection condition used in Study 1. As participants’ qualifications were somewhat ambiguous in Study 1, that preferential selection condition is characterized as a stronger form of preferential selection than the weak preferential selection condition used in Study 2.

Like in Study 1, the information sheets also reflected levels of discrimination. Specifically, participants in the no discrimination condition were told that the Leadership
Questionnaire “fairly assesses prospective leadership abilities”. Whereas, in the discrimination condition, the information sheet provided participants with the following additional information:

The Leadership Questionnaire used in Mass Testing is actually biased against women and favours men. In reality, there is no gender difference in leadership potential. However, men tend to score higher than women on the test because the items used to assess leadership potential focus on typical male strengths while ignoring typical female strengths.

As well, like in Study 1, the study materials also emphasized that the assessment center methodology (i.e., the BLAC) was a fair and objective measure in terms of gender, race, and age. Finally, the information sheet also included brief descriptions about the two performance tasks.

**Measures**

Doubts about competence, perceived fairness ($r(118) = .65, p < .01$), importance placed on task ($\alpha = .66$), and both analytic and assertive performance scores, were measured the same way as in Study 1. The two raters who measured analytic and assertive performance scores were also the same as in Study 1. Reliability between the raters in this study was $\alpha = .71$ for analytic performance and $\alpha = .80$ for assertive performance.

**Study 2 Results and Discussion**

**Preliminary Results**

The intercorrelations between the dependent variables are presented for the solely merit-based condition (Table 6) and the weak preferential selection condition (Table 7). In Tables 6 and 7 there are strong positive correlations between analytic and assertive performance scores. Due to this, performance scores have been aggregated to create a mean performance measure.

In the solely merit-based selection condition (Table 6), there are weak negative
correlations between doubts about competence and performance (i.e., analytic, assertive, and mean performance scores). Indicating that as women’s doubts about their competence increase their performance decreases. There were no other significant correlations. In the weak preferential selection condition (Table 7), there were no other significant correlations. Therefore, aside from the performance measures, the remaining intercorrelations in Table 6 and Table 7 suggest that each dependent variable is independent of the other dependent variables.

**Main Results**

To examine the hypotheses, 2 (Discrimination condition: no discrimination vs. discrimination) × 2 (Selection condition: solely merit-based selection vs. weak preferential selection) ANOVAs were used to examine the effects of selection condition and discrimination condition on the dependent variables.

**Doubts about competence.** Contrary to Hypothesis 1, those in the weak preferential selection condition did not have more doubts about their competence, compared with those in the solely merit-based selection condition, \( F(1, 114) = 0.25, p = .616 \). See Table 8 for the means and standard deviations. There was also no main effect for discrimination condition, \( F(1, 114) = 0.22, p = .640 \). See Table 9 for the means and standard deviations. Contrary to Hypothesis 3, the discrimination condition did not moderate the effects of selection condition on doubts about competence, \( F(1, 114) = 1.85, p = .177 \).

**Perceived fairness.** As predicted in Hypothesis 1, those in the weak preferential selection condition perceived the selection procedure to be less fair than those in the solely merit-based selection condition, \( F(1, 114) = 8.43, p = .004, \eta^2 = .07 \). See Table 8 for means and standard deviations. Therefore, although women in the weak preferential selection condition were provided with clear information regarding their merit, they still perceived less fairness in the
selection procedure used, compared with women selected solely based on their merit. As predicted in Hypothesis 2, participants in the discrimination condition perceived the selection procedure to be less fair than those in the no discrimination condition, $F(1, 114) = 5.70, p = .019, \eta^2 = .05$. See Table 9 for the means and standard deviations. This indicates that women who were told that the selection test was biased against women and favoured men rated the selection procedure as less fair, compared with women who were not told the selection test was biased. Contrary to Hypothesis 3, discrimination condition did not moderate the effects of selection condition on perceived fairness, $F(1, 114) = 1.26, p = .263$.

**Importance placed on task.** Recall that, according to Hypothesis 1, participants in the weak preferential selection condition should place lower importance on the task compared with participants in the solely merit-based selection condition. This was not found, $F(1, 114) = 0.78, p = .378$. See Table 8 for means and standard deviations. As well, the main effect for discrimination condition was not significant, $F(1, 114) = 0.47, p = .497$. See Table 9 for the means and standard deviations. Contrary to Hypothesis 3, the discrimination condition did not moderate the effects of selection condition on importance placed on task, $F(1, 114) = 1.68, p = .197$.

**Mean performance.** Hypothesis 1 states that those in the weak preferential selection condition should have lower performance scores than those in the solely merit-based selection condition. This hypothesis was not supported, $F(1, 112) = 0.11, p = .741$. See Table 8 for means and standard deviations. The main effect for discrimination condition was also not significant, $F(1, 112) = 0.31, p = .578$. See Table 9 for the means and standard deviations. Contrary to Hypothesis 3, the discrimination condition did not moderate the effects of selection condition on mean performance scores, $F(1, 112) = 0.09, p = .769$. 
Doubts about competence as a mediator of selection condition on mean performance. Hypothesis 4 was not supported as not all of the assumptions for mediation were met; specifically, doubts about competence and selection condition were not significantly correlated (see Table 10 for correlations). Selection condition and mean performance were also not significantly correlated. Therefore, from these results, it seems that the relationship between selection condition and mean performance is not mediated by the stigma of incompetence.

Summary

From the results presented, it is apparent there is only very weak support for Hypothesis 1. In comparison with participants selected solely based on merit, participants selected using a weak preferential selection program did not experience more feelings of incompetence, reduce the importance they placed on the task, or perform worse on the leadership task. This indicates that as participants are given clear information regarding their qualifications, their reactions to the preferential selection program became equivalent to the reactions of participants selected solely based on their merit. This result is in line with previous research showing that, when completing a one-way communication task, those selected using a weaker preferential selection program react similarly to those selected solely based on their merit (Heilman, et al., 1998; Major et al., 1994). Therefore, when completing a real business task, which provides more realistic conditions to test the effects of preferential selection, the result that weak preferential selection leads women to behave similarly to those who are selected meritoriously is still found.

However, in contrast to the notion that weaker preferential selection programs are less detrimental to women, participants selected preferentially perceived the selection procedure used as less fair, compared with participants selected solely based on their merit. This result is discussed further in the General Discussion section.
In support of Hypothesis 2, women who were told that the selection test was biased against women and favoured men perceived the selection condition as less fair than women who were not told this information. This result replicates the significant findings in Study 1.

Contrary to Hypothesis 3, those in the discrimination condition did not experience mitigated adverse effects of preferential selection, as there were no significant interactions between selection condition and discrimination condition for any of the dependent variables.

Hypothesis 4 was unsupported as the stigma of incompetence did not mediate the effect of selection condition on participants’ performance. This further provides evidence that the purported relationship between the stigma of incompetence and beneficiaries’ performance decrements is unfounded. This is discussed in further detail in the General Discussion section.

Although the results outlined have supported the notion that stronger preferential selection programs are more detrimental to beneficiaries than weaker programs, the study designs have precluded a comparison between the strong and weak programs. The next section of the paper combines the data from Study 1 and Study 2 to allow supplementary analyses that directly compare the strong and weak preferential selection programs.

**Exploratory Analyses Combining Study 1 and 2**

To explore the differences between strong preferential selection and weak preferential selection I have conducted supplementary analyses that compare the preferential selection conditions from Study 1 and 2.

**Doubts about competence.** An independent samples $t$-test was used to compare the strong and weak preferential selection conditions. Results indicated that participants’ doubts about their competence in the strong preferential selection condition ($M = 3.54, SD = 1.71$), were not significantly different from those in the weak preferential selection condition ($M = 2.98, SD$
Therefore, when completing a leadership task, those who were selected preferentially, but given ambiguous information regarding their merit, had similar levels of doubt regarding their competence to those who were selected preferentially, but given clear information regarding their qualifications. This runs contrary to results from previous research and will be discussed in further detail in the General Discussion section.

**Perceived fairness.** An independent samples t-test was used to compare the strong and weak preferential selection conditions. Results indicated that participants’ perceptions of fairness in the strong preferential selection condition ($M = 5.34, SD = 1.31$), were not significantly different from those in the weak preferential selection condition ($M = 5.38, SD = 1.44$), $t(125) = 0.20, p = .846, \eta^2 = 0.00$. This result for perceptions of fairness differs from previous research on preferential selection, which has found that stronger forms of preferential selection result in beneficiaries perceiving the selection procedure as less fair, compared with weaker forms of preferential selection and solely merit based selection (Heilman et al., 1990; Heilman et al., 1998). This discrepancy will be further addressed in the General Discussion section.

**Importance placed on task.** An independent samples t-test was used to compare the strong and weak preferential selection conditions. Results indicated that participants in the strong preferential selection condition ($M = 4.81, SD = 1.11$), placed less importance on the task than participants in the weak preferential selection condition ($M = 5.34, SD = 0.86$), $t(125) = 3.01, p = .003, \eta^2 = 0.07$. Therefore, those who were selected preferentially, but given ambiguous information regarding their qualifications, placed less importance on the task than did women who were also selected preferentially, but given clear information regarding their qualifications.

**Mean performance.** An independent samples t-test was used to compare the strong and weak preferential selection conditions. Results indicated that participants’ performance scores in
the strong preferential selection condition \((M = 3.15, SD = 1.18)\), were not significantly different from participants’ scores in the weak preferential selection condition \((M = 3.23, SD = .90)\), \(t(122) = 0.43, p = .670, \eta^2 = 0.00\). Therefore, when completing a leadership task, those who were selected preferentially, but given clear information regarding their merit, had mean performance scores similar to the scores of those who were selected preferentially, but given ambiguous information regarding their qualifications. This runs contrary to results from previous research and will be discussed in further detail in the General Discussion section.

**General Discussion**

The starting point for this research was the view that preferential selection programs are inherently harmful for beneficiaries; however, my results indicate that preferential selection is not as harmful for beneficiaries as past research has suggested. To arrive at this conclusion, in contrast to previous research, I increased the generalizability of the study by using a real leadership assessment technique, and by using preferential selection manipulations of realistic strength that would have a larger impact on selection rates in real organizations.

From these results, and consistent with previous studies, those who were preferentially selected under a strong program experienced adverse effects that are associated with preferential selection (i.e., increased doubts about their competence, decreased task investment, and worsened task performance), compared with meritoriously selected participants. However, participants selected under a weak program did not experience significant differences in their self-perceptions and performance, compared with meritoriously selected participants. Further, participants in the strong program also placed less importance on the task than participants in the weak program did. Thus, the weak preferential selection program was less detrimental to women than the strong preferential selection program. This conclusion is consistent with previous
research, indicating that as the prescriptiveness of preferential programs increases (i.e., moving from weaker to stronger programs) adverse reactions increase (Harrison et al., 2006; Heilman et al., 1987; Heilman et al., 1990; Kravitz, 1995; Kravtiz & Platania, 1993; Major et al., 1994) as these programs are seen as being more merit-violating (Bobocel et al., 1998).

Contrary to previous studies, participants in the strong program did not perceive the selection procedure to be less fair, compared with those selected solely based on their merit. In addition, participants in the strong program did not experience more doubts about their competence or perceive the selection procedure as less fair, or perform worse on the leadership task, compared with participants in the weak program. These results may not have mirrored the results of other studies (e.g., Heilman et al., 1990; 1998) because the manipulations used were not as strong.

For instance, Heilman et al. (1990) implemented a strong condition by informing participants that they had achieved 9 out of 20 on the selection test. In the weak condition they were told that they achieved 17 out of 20 on the selection test. Further, in Heilman et al.’s (1998) study in the strong condition, participants were not given clear indications that the minimum score required on the selection test was high, or if their scores strongly factored into their selection. In the weak condition, participants were told that their scores were only negligibly different from their male partner’s scores. Finally, for the solely merit-based condition, participants were told that they were superior to their male partner. Thus, the differences between the strong condition and both the weak and solely merit-based conditions are much larger in these previous studies than the differences between these conditions in my study, as each participant in my study was assured of their qualifications and that their qualifications factored into their selection. Consequently, the same differences between the weak and strong programs
would not be found in my study. Therefore, the different results can be taken as further indicating that if women are given clear information regarding their qualifications the adverse effects that arise from being preferentially selected are mitigated.

Informing women of discrimination in the selection procedure did not moderate the effects of the selection condition on any of the dependent variables. It seems that preferential selection policies were not perceived by participants as being merit-upholding in the discrimination conditions. The idea that perceptions of discrimination would moderate beneficiaries’ reactions to preferential selection is not unfounded. Previous research has found that non-beneficiaries’ perceptions that discrimination exists moderates their evaluations of preferential selection programs, with evaluations being more positive when discrimination is perceived as high (vs. low; Son Hing et al., 2002; Son Hing et al., 2011).

A possible explanation for this lack of moderation is that women did not react to the discrimination manipulation as intended. In Harrison et al.’s (2006) meta-analysis, they concluded that justifying a preferential selection program can increase support for the program, but only when preferential selection was seen as remedying past discrimination against a target group or if it was argued that preferential selection was needed to create diversity. However, when preferential selection is seen as being enacted to rectify a numerical underrepresentation of the target group, instead of rectifying past discrimination or promoting diversity, there was decreased support for the programs. Therefore, the discrimination conditions may not have affected the results in the intended way as participants may have fixated on being selected because “we have a larger number of men than women qualifying for the study.”

However, participants were also informed that the selection test used was biased against women and favoured typical male strengths over typical female strengths. This likely was
enough information for women in the study to view their selection as rectifying past discrimination in the selection procedure. This is evidenced in that perceived fairness of the selection procedure was rated significantly lower by participants in the discrimination condition, compared with participants in the no discrimination condition. Further, the manipulation checks indicate that participants were responding to the discrimination manipulation as intended.

The most parsimonious explanation for the lack of moderation may be that beneficiaries in the current study are being more critical of themselves than non-beneficiaries have been in previous research. In line with this, previous research has shown that women are quite critical of their performance in leadership roles. For instance, female beneficiaries tend to be harder on themselves than male beneficiaries with women giving themselves lower performance ratings and experiencing more negative affect (e.g., Heilman et al., 1987). Further, in a study led by the Institution of Leadership and Management (2013), female managers had considerably less career confidence and experienced significantly more self-doubt than male managers experienced. Consequently, because women are so critical of themselves, the discrimination manipulation used may not have been powerful enough to combat the adverse effects of a strong preferential selection program.

**Theoretical Implications**

In previous research, women in preferential selection conditions have been found to perform worse than women in merit-only selection conditions (e.g., Heilman et al., 1987). However, it is unknown whether these performance decrements are the result of the stigma of incompetence or possibly the result of stereotype threat. In the current study, I included a measure of the stigma of incompetence and beneficiaries in the strong condition experienced a greater stigma of incompetence, compared with participants in both the weak condition and the
solely merit-based condition. Correspondingly, women in the strong condition had significantly lower performance scores than women in the solely merit-based condition; whereas, women in the weak condition did not have lower performance scores, compared with women in the solely merit-based condition. This provides some support for the argument that performance decrements in beneficiaries are the result of the stigma of incompetence.

However, if the stigma of incompetence was the driver of the performance decrements experienced by women, then there should be negative correlations between the doubts about competence measure and mean performance for the strong preferential selection condition (see Table 2) and the weak preferential selection condition (see Table 7). These results were not observed, which is surprising as there was good range in the data with no signs of floor or ceiling effects when looking at the means of the variables. In fact, only a weak negative correlation between doubts about competence and mean performance for the solely merit-based condition was obtained in Study 2 (see Table 6). Furthermore, exploratory mediation analyses found that the stigma of incompetence did not mediate the relationship between selection condition and mean performance on the business task. Thus, the current study provides no evidence that performance decrements associated with strong preferential selection are due to a stigma of incompetence.

What may account for the lack of correlations is that an unconscious mechanism is responsible for beneficiaries’ worsened performance. Specifically, all participants in my study were told that they would be completing a difficult task. However, women in the preferential selection conditions were given information that should introduce more threat, and thus more doubts about their competence. Therefore, these women may have tried to ignore the threat, rather than acknowledge that they felt threatened and concede that they were doubtful about their
competence. It may be the case that subconscious or implicit feelings of incompetence or threat mediate the adverse effects of preferential selection on performance, which my feelings of incompetence measure did not tap as self-reports are unable to properly tap implicit processes (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Karpinski & Hilton, 2001). Thus, the stigma of incompetence measure used may not adequately tap beneficiaries’ task reactions.

In a series of studies in which different manipulations of threats to participants’ competence were made, the researchers found that participants denied any doubts about their competence as a form of coping with threat (von Hippel et al., 2005). Therefore, denial may have prevented any correlation between doubts about competence and performance from emerging in the preferential selection conditions. This is in line with the results found and further indicates that the adverse effects of preferential selection are not mediated by the stigma of incompetence but, rather, are caused by a subconscious mechanism.

This subconscious mechanism may be stereotype threat. Stereotype threat occurs when the following conditions are met: (a) the task is relevant to the stereotype about the person’s group, (b) the task is challenging, (c) people are performing within a domain they identify with, and (d) the stereotype is likely to be reinforced in the context they complete the task in (Block et al., 2011; Oswald & Harvey, 2000). The preferential selection conditions in this study meet all of the conditions required for stereotype threat to occur and thus may have affected beneficiaries.

Further, to explain the results of the current research, women in the strong condition may have experienced stereotype threat (Oswald & Harvey, 2000; Steele & Aronson, 1995), whereas stereotype threat for women in the weak condition may have been neutralized because of the clear and unambiguous information they received regarding their performance on the selection test. These results are consistent with the literature using self-affirmation as an intervention for
stereotype threat. Self-affirmations are thought to protect against stereotype threat because thinking about affirming information allows individuals to react to the stereotyped domain with less defensive biases.

Previous research has shown that in comparison to individuals who do not self-affirm before a difficult test-taking situation, individuals who self-affirm have experienced reduced stereotype threat when they write about positive traits/abilities (Martens, Johns, Greenberg, Schimel, 2006), rank order traits/abilities they feel describe themselves (Shapiro, Williams & Hambarchyan, 2013), or when primed subliminally by unscrambling positive trait/ability words (Sherman et al. 2009). Thus, when participants think about their competence in other domains before completing a difficult task these thoughts provide a buffer that prevents stereotype threat. Reinforcing participants’ competence by providing them with clear information regarding their qualifications in the domain in which they are stereotyped should also provide a buffer against stereotype threat. This self-affirmation would explain the presence of decreased performance scores for those in the strong condition and the lack of decreased scores in the weak condition.

Therefore, this research has cast doubt on the notion that decreases in beneficiaries’ performance are the result of the stigma of incompetence and has instead provided support that preferential selection may induce stereotype threat which induces the decrements in beneficiaries’ task performance.

**Practical Implications**

As predicted, participants in the discrimination conditions perceived the selection procedure to be less fair than participants in the no discrimination conditions. This result is meaningful because it reveals that informing women of bias in one procedure (initial assessment) leads women to perceive bias in other related procedures (selection). Specifically, women in the
discrimination conditions were informed that the leadership questionnaire used in mass testing was biased and favoured men (see Appendices I, J, W, and X); however, these women reported less fairness in regards to the BLAC selection procedure as a whole, which may or may not have included preferential selection. This is interesting as it may explain some opposition from beneficiaries to preferential selection programs in real organizations. For instance, if a hiree has been informed of bias, or suspects that bias influences the selection procedure at that organization, then that likely increases opposition to the organization’s hiring policy. Therefore, this research has shown that a prudent organization can increase support for their hiring policy by reducing any perceptions of bias that may arise.

This research has also shown that preferential selection does not always result in adverse effects for women. Providing women with clear indications of their qualifications does matter, with greater clarity leading women to respond more positively to preferential selection. Therefore, through increasing the generalizability of the study procedure by using a realistic leadership task and realistic preferential selection program strengths, I have found that organizations can use preferential selection as a tool in the promotion and advancement of women in the workforce with minimal adverse effects.

**Limitations and Future Directions**

A few limitations need to be taken into consideration. For instance, the personal consequences for those who participated in the study were minimal. If there were more personal consequences, then there may be stronger effects, with those who have more personal consequences reacting more adversely in response to preferential selection. However, even if there were more personal consequences, the same pattern of results should be found. Specifically, even though the effects of the preferential selection programs may be more
powerful if there are more personal consequences, those in the strong condition should still experience more adverse effects than those in the weak program as the strong program is more ambiguous regarding qualifications.

An additional limitation is that in the merit condition, nothing was said about women failing to qualify for the study. This introduces a confound because women in the preferential selection conditions may be reacting to the information that women were not qualifying rather than the preferential selection manipulation. This could have affected participants’ feelings of incompetence and performance scores. However, there were no differences between the weak preferential selection condition and the solely merit-based condition in terms of feelings of incompetence and performance scores, therefore it is unlikely that the information that women were not qualifying for the study is responsible for the obtained results. To correct for this confound, two merit conditions could be used. In one merit condition women would be told that other women are not qualifying for the study and in the second merit condition, women would be told nothing (this is similar to current merit-based selection condition).

A further limitation is that two things differ between the weak and strong preferential selection conditions: the weight placed on merit and the ambiguity in participants’ level of qualifications. Specifically, it could be interpreted that merit has more weight and there is less ambiguity regarding merit in the weak condition in comparison with the strong condition. Thus, because of these differences, I do not know whether the effects I found are based on the weight placed on merit, the ambiguity in participants’ level of qualifications, or both. Therefore, further research should be conducted to disambiguate weight of merit in selection from ambiguity in qualifications to better understand the effects of preferential selection on beneficiaries.

Previous research has theorized that beneficiaries’ worsened performance is due to the
stigma of incompetence (e.g., Heilman et al., 1987; Major et al., 1994); however, my results do not support this and instead I have proposed that stereotype threat may be the driver of worsened performance on a leadership task. In previous research, it has always been indicated to participants that the leadership task is diagnostic of their abilities; however, including a condition in which the leadership task is not diagnostic of a participant’s abilities would allow researchers to better understand what causes beneficiaries worsened performance. That is, if participants performed worse in the diagnostic condition, but not in the non-diagnostic condition, then it could be argued that stereotype threat is the driver of beneficiaries’ performance decrements. This is because stereotype threat is not induced when individuals are informed that a test is not diagnostic of abilities (Steele & Aronson, 1995). Further research examining stereotype threat and preferential selection may be key to implementing future successful preferential selection programs in organizations.

Finally, the current study focused on preferential selection programs that are aimed at increasing the underrepresentation of women in order to increase their numbers. Further research focusing on preferential selection that is aimed at increasing the number of women in an effort to utilize diversity to improve organizational performance should be conducted. These types of programs are becoming increasingly popular in the workforce as a method to provide a competitive advantage to an organization (Kelly & Dobbin, 1998). There may be differences in how beneficiaries react to programs aimed at utilizing diversity (vs. programs aimed at increasing the number of women). Beneficiaries may react differently as programs utilizing diversity imply that a beneficiary’s merit is important because their selection is seen as improving organizational effectiveness and performance instead of conforming to employment regulations (Gilbert & Stead, 1999; Kidder et al., 2004; cf. Heilman & Welle, 2006).
Conclusion

This research was critical, as previous research has resulted in a questioning of the use of preferential selection policies in real organizations due to findings showing harmful effects on beneficiaries. However, in previous studies attempting to implement realistic forms of preferential selection, the qualification standards are either too high, with women only being selected if they performed better or equivalently to a man (Heilman et al. 1990; Heilman et al., 1998), or their qualifications are made completely ambiguous (Major et al., 1994) or inferior to others (Heilman et al., 1998). These restrictive conditions would have only a minimal impact on selection rates in real organizations. Therefore, one of the most important questions this research addressed was under conditions of realistic preferential selection, which are likely to have a large impact on selection rates in real organizations, would the adverse effects of preferential selection still occur? The answer is a qualified no. This research has shown that as a participant’s qualifications become less ambiguous the adverse effects decrease; thus, clearly defining a participant’s qualifications is imperative to reduce any adverse effects a beneficiary may experience and to produce successful preferential selection programs. Ultimately, the conclusion that preferential selection is inherently harmful for beneficiaries is not supported.
### Table 1

**Study 1 Intercorrelations between Dependent Variables for Solely Merit-Based Condition**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doubts about competence&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived fairness&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Importance placed on task&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.30&lt;sup&gt;*&lt;/sup&gt;</td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Analytic performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.02</td>
<td>-0.03</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Assertive performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.01</td>
<td>0.03</td>
<td>0.18</td>
<td>0.87&lt;sup&gt;**&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mean performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.18</td>
<td>0.96&lt;sup&gt;**&lt;/sup&gt;</td>
<td>0.97&lt;sup&gt;**&lt;/sup&gt;</td>
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</tr>
</tbody>
</table>

*Note.* <sup>a</sup>n = 67. <sup>b</sup>n = 65. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.

**p < .01, * p < .05
### Table 2

**Study 1 Intercorrelations between Dependent Variables for Strong Preferential Selection Condition**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doubts about competence&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived fairness&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Importance placed on task&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.08</td>
<td>.26*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Analytic performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.06</td>
<td>.03</td>
<td>.10</td>
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<td></td>
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<tr>
<td>5. Assertive performance&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>.05</td>
<td>.07</td>
<td>.93*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mean performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.05</td>
<td>.04</td>
<td>.08</td>
<td>.98*</td>
<td>.99*</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* <sup>a</sup>n = 67. <sup>b</sup>n = 66. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.

**p < .01, * p < .05**
Table 3

Study 1 Descriptive Statistics for Selection Conditions

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Solely merit-based selection</th>
<th>Strong preferential selection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Doubts about competence†</td>
<td>2.87a</td>
<td>1.54</td>
</tr>
<tr>
<td>Perceived fairness†</td>
<td>5.43a</td>
<td>1.28</td>
</tr>
<tr>
<td>Importance placed on task†</td>
<td>5.49a</td>
<td>0.90</td>
</tr>
<tr>
<td>Mean performance‡</td>
<td>3.75a</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Note. †n = 134. ‡n = 131. Across rows, means not sharing a common superscript differ at p < .05. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.
Table 4

*Study 1 Descriptive Statistics for Discrimination Conditions*

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>No discrimination</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Doubts about competence†</td>
<td>3.02a</td>
<td>1.57</td>
</tr>
<tr>
<td>Perceived fairness†</td>
<td>5.68a</td>
<td>1.16</td>
</tr>
<tr>
<td>Importance placed on task‡</td>
<td>5.10a</td>
<td>1.08</td>
</tr>
<tr>
<td>Mean performance‡</td>
<td>3.45a</td>
<td>1.16</td>
</tr>
</tbody>
</table>

*Note.* †$n = 134$. ‡$n = 131$. Across rows, means not sharing a common superscript differ at $p < .05$. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.
### Table 5

**Study 1 Intercorrelations for Mediation Analysis**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selection condition</td>
<td></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Doubts about competence</td>
<td>-.20*</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3. Mean performance</td>
<td>-.27**</td>
<td>-.03</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note. n = 131. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.*

** p < .01, * p < .05
Table 6

*Study 2 Intercorrelations between Dependent Variables for Solely Merit-Based Condition*

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doubts about competence</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived fairness</td>
<td>-.20</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Importance placed on task</td>
<td>-.23</td>
<td>.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Analytic performance</td>
<td>-.34*</td>
<td>-.16</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Assertive performance</td>
<td>-.35**</td>
<td>-.16</td>
<td>.05</td>
<td>.96**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>6. Mean performance</td>
<td>-.35**</td>
<td>-16</td>
<td>.05</td>
<td>.99**</td>
<td>.99**</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note. n = 58. All scale anchors are 1 to 7, except performance scores, which are 1 to 5.*

**p < .01, * p < .05
Table 7

Study 2 Intercorrelations between Dependent Variables for Weak Preferential Selection

**Condition**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doubts about competence&lt;sup&gt;a&lt;/sup&gt;</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived fairness&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.08</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Importance placed on task&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.09</td>
<td>.14</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Analytic performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.23</td>
<td>-.12</td>
<td>.20</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Assertive performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.17</td>
<td>-.02</td>
<td>.26*</td>
<td>.89**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>6. Mean performance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.21</td>
<td>-.07</td>
<td>.24</td>
<td>.97**</td>
<td>.97**</td>
<td>—</td>
</tr>
</tbody>
</table>

**Note.** <sup>a</sup>n = 60. <sup>b</sup>n = 58. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.

**p < .01, * p < .05**
### Table 8

**Study 2 Descriptive Statistics for Selection Conditions**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Solely</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>Doubts about competence†</td>
<td>2.83a</td>
<td>1.67</td>
</tr>
<tr>
<td>Perceived fairness†</td>
<td>6.02a</td>
<td>0.91</td>
</tr>
<tr>
<td>Importance placed on task†</td>
<td>5.48a</td>
<td>0.91</td>
</tr>
<tr>
<td>Mean performance‡</td>
<td>3.30a</td>
<td>1.14</td>
</tr>
</tbody>
</table>

*Note.* †$n = 118$. ‡$n = 116$. Across rows, means not sharing a common superscript differ at $p < .05$. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.
### Table 9

**Study 2 Descriptive Statistics for Discrimination Conditions**

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>No discrimination</th>
<th>Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doubts about competence†</td>
<td>2.98a 1.73</td>
<td>2.83a 1.64</td>
</tr>
<tr>
<td>Perceived fairness†</td>
<td>5.96a 1.09</td>
<td>5.43b 1.35</td>
</tr>
<tr>
<td>Importance placed on task†</td>
<td>5.46a 0.91</td>
<td>5.36a 0.86</td>
</tr>
<tr>
<td>Mean performance‡</td>
<td>3.21a 1.08</td>
<td>3.32a 0.97</td>
</tr>
</tbody>
</table>

Note. †n = 118. ‡n = 116. Across rows, means not sharing a common superscript differ at p < .05. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.
Table 10

*Study 2 Intercorrelations for Mediation Analysis*

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selection condition</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Doubts about competence</td>
<td>.05</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>3. Mean performance</td>
<td>-.03</td>
<td>-.28**</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note. n = 116. All scale response anchors are 1 to 7, except performance scores, which are 1 to 5.*

**p < .01.
Figure 1. Proposed mediation model of doubts about competence as a mediator of selection condition on mean performance (on the basis of Baron & Kenny, 1986).
References


Employment Equity Act, S.C. 1995, c. 44


Shapiro, J. R., Williams, A. M., & Hambarchyan, M. (2013). Are all interventions created equal?


WHAT IS THE BLAC?
We are interested in studying a series of assessment exercises called the Business Leadership Assessment Centre (BLAC). An assessment centre selection methodology uses a variety of assessment techniques (e.g., paper-and-pencil tests, simulation exercises) to evaluate an individual’s behaviours on a number of different dimensions. The BLAC is used to select students into the prestigious Masters of Leadership (MA) program at the Centre for Studies in Leadership, University of Guelph. The Centre undertakes and promotes innovative research on leadership issues relevant to the public, private and non-profit sectors. It also organizes and contributes to educational and professional development programs in Leadership Studies.

The assessment centre methodology is more fair and objective in terms of gender, race, and age than other selection methodologies (e.g., the interview). Research has also demonstrated its ability to predict future job performance. Research specifically on the BLAC has shown that it is a fair and accurate assessment of business leadership ability, as it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

HOW WERE YOU SELECTED FOR THIS STUDY?
We included a Leadership Questionnaire in Mass Testing that served as our selection test. This questionnaire fairly assesses prospective leadership abilities for all candidates (e.g., for men and women). In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only those who were among the top scorers on the Leadership Questionnaire used in Mass Testing have been selected for this project.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors.
Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 90 minutes to complete and you will receive two course credits for your participation.

**WHAT ARE THE EXERCISES?**

1. **Case Study Analysis**

One of the determinants to a successful business career is the ability to address critical problems and propose feasible solutions. In this exercise, you will be in the role of a senior executive in a fictitious organization. Your goal in this exercise is to propose a solution that addresses an organization’s problem. Your task is to read the case study materials and then write up a recommendation report. You have 35 minutes to complete this exercise.

2. **In-basket Exercise**

Administrative managerial skills are necessary for business managers. In this exercise, you will be in the role of a manager of a fictitious organization. You will be required to respond to a series of memos, reports and letters that may require you to deal with several customer complaints, budgets, subordinates’ requests and clashes in schedules etc. Actions that you may take are prioritising items, drafting memos, scheduling meetings and writing up meeting agendas etc. You have 15 minutes to complete this exercise.
Appendix B

Leadership Questionnaire

Please answer each of the following questions using the scale below. Please read through each question quickly and provide your immediate reaction.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Neither Agree Nor Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. ____ In conflict situations, I am normally able to think of constructive and fair solutions.

2. ____ A good leader is concerned with the feelings and opinions of those they supervise.

3. ____ I often defer to others when decisions need to be made.

4. ____ In social situations, my opinions are generally valued by my friends.

5. ____ I feel uneasy when there is little work for me to do.

6. ____ It is always better to try to talk people into doing things instead of giving them straight orders.

7. ____ My initial impressions of others are typically accurate.

8. ____ If a leader is sure of the best course of action, he or she must follow his or her instincts even if this requires putting pressure on subordinates.

9. ____ I don’t mind if other people advise me on how to do things.

10. ____ No matter what the circumstances, one should never arbitrarily tell people what they have to do.

11. ____ I am comfortable expressing my opinion in most situations.

12. ____ Efficiency and speed are not as important as letting everyone have a say in making decisions.

13. ____ At times, I am comfortable in leadership roles.

14. ____ When situations lack structure, I often impose structure.
Appendix C

Study Screening Questionnaire

Importance of a Business Career

1. How much do you value having leadership skills?

   1     2     3     4     5
   Not at all  Somewhat  Very much

2. How important is it to you to be a business leader someday?

   1     2     3     4     5
   Not at all  Somewhat  Very much

3. In the future, how likely would you be to take a job as a manager or an executive?

   1     2     3     4     5
   Not at all  Somewhat  Very much
Appendix D

Email Invitation to Wish-List Participants

Hello, my name is Maxine McBride and I am a Research Assistant at the University of Guelph. I am writing to you with an offer to receive one credit toward your Introductory Psychology class. You were selected based on your performance on the Leadership Questionnaire in the online mass testing. I hope that you will decide to participate.

The study will take approximately an hour to complete. Participation in this project requires you to go through a series of assessment exercises collectively called the Business Leadership Assessment Centre.

Please note that this study has received ethics approval from the Department of Psychology at the University of Guelph. All data obtained from participants will be anonymous and confidentiality is assured.

If you are interested in participating in this study please sign up for a time slot on the Experimenter and Subject Pool planner webpage. Time slots will be posted on a weekly basis. If you were not able to sign up for a time slot, do not worry because more will be posted at the end of each week.

Thank you,
Maxine
Appendix E

Business Leadership Assessment Centre Project Information-Consent Form

BUSINESS LEADERSHIP ASSESSMENT CENTRE PROJECT

INFORMATION-CONSENT FORM

PROJECT COORDINATOR:  Perng Yih Ong (e-mail: p.ong@psy.uoguelph.ca)

PROJECT ADMINISTRATOR:  Maxine McBride (e-mail: Maxine.McBride@sympatico.ca)

Participation in this project requires you to go through a series of assessment exercises collectively called the Business Leadership Assessment Centre (BLAC). For more details, please refer to the handout “Information on the BLAC”. You will be given specific instructions before you start each exercise. The BLAC will probably take about 60 minutes to complete and you will receive one course credit for your participation. At the end of the assessment, the project administrator will provide you with the date when you can receive an evaluation of your performance on the BLAC.

Your participation in this project is completely voluntary and you are free to withdraw from the project at any time. Also, your decision to participate or not in this project, or to withdraw from the project at any time, will have no effect on your grades or academic standing at the University of Guelph. Just tell the researcher at any time that you would like to withdraw. It is also your right to leave unanswered any specific questions that you would prefer not to answer. The information that you provide will be completely anonymous. Your name will not in any way be associated with the information you provide. Your data will be identified by subject number only. This form, which you will be asked to sign if you consent to participate, will be kept separately from the other information you provide.

You may also contact Perng Yih Ong at the e-mail address indicated above for further information about this project. If you have any ethics-related questions or concerns resulting from your participation in this project, please contact Sandy Auld at (519) 824-4120 Ext. 56606.

If you have any questions about what participation in this project involves, feel free to ask the project administrator.

Having read and understood the above as well as information on the BLAC, I agree:

(1) to participate in this study, and
(2) to permit use of my performance scores to be used in the assessment of the BLAC’s effectiveness for selecting students into the Masters of Leadership Program in Sept. 2005
(3) to permit use of my data for research purposes
Name (please print) ________________________________
Signature _______________________________________
Date __________________________________________
Hi. First of all, I want to thank you for coming. My name is Maxine McBride and I’m employed by the University of Guelph’s Leadership Center. \[Give subject Information-Consent Form – Read aloud and ask participants to read along\]

Please sign this consent form if you agree to participate.

To give you some more information about the Business Leadership Assessment Centre and about how you were selected to participate in this study, please read this information sheet. \[Give subject the Info on BLAC sheet\]. You will want to read it carefully as you will be completing a questionnaire regarding its contents afterward.

The Leadership Center has acquired a highly diagnostic assessment tool called the “Business Leadership Assessment Center” (BLAC) and they want to know how motivation affects people’s performance on this task. Therefore half of our participants have been assigned to the low motivation condition and half of our participants have been assigned to the high motivation condition. \(\text{Maxine Looks up}\) Everyone in this session has been randomly assigned to the high motivation condition. This means that in order to motivate you to perform your best on the BLAC we will be giving a prize of $50 to the best performer, $30 to the second best performer, and $20 to the third best performer. This is a good chance for you to see how you fare on different leadership tests.

Just to let you know, I will be administering the leadership exercises. Also, I will be reading from a script a lot today in order to keep the research standardized. It is important that each student that completes the BLAC receives exactly the same information.
Now that you know a little more information about what we are studying, I have a short questionnaire for you to fill out. [Hand subject the Initial Reactions Questionnaire] Take your time to complete the questionnaire. When you are done, please place your completed questionnaire in the envelope provided. Do not seal the envelope at this point in time as you will be placing all the other materials that you will be receiving in this envelope. Do not put your name on any of the provided materials.

[Note: subject can hold onto BLAC info sheet at this time]

Thank-you.

You'll begin the BLAC now. The first exercise is a Case study {Hand out The Interdot Case Study}.

I have another questionnaire for you to complete before we begin the Case Study {Hand out Perceived Competence – FORM 1}

When you have completed the questionnaire, please place it in the envelope.

Thank you. Does anyone have any questions? You will have 35 minutes to complete the case study. If you have finished before 35 minutes please let me know. Okay, please complete the analysis section then move on to the recommendation.

[Sit at table with back to them for 35 minutes or until notified by participant – notify participants when they have 15 minutes, 7 minutes, and 3 minutes left]

Your time is up, please stop typing. Please save your report in the diskette provided and place the diskette in the envelope.

Now that you have finished the first component of the case study we are interested in seeing how you think you performed. {Hand out Perceived Competence – FORM 2}
When you have completed the questionnaire, please place it in the envelope.

I now have another form for you to complete. I need to verify that you understood the nature of the study. Please fill this out [*Give suspicion probes*]. Take as much time as you want. Please make sure to complete both questions and then place the completed form in the envelope.

Okay, that's the end of the study. You will not be completing anymore of the diagnostic exercises.

I need to inform you that I have not been entirely honest with you up to this point about what this study is about. The case study you completed was actually part of a psychology study and not a leadership assessment study. In reality we are investigating how women react to tasks depending whether they were selected based solely on their merit and qualifications, or on their gender as well as their merit. If you did not guess the real purpose of the study or that this was a psychology study, you should not feel bad. We worked very hard to mask what we were really interested in studying and to present this study as one conducted by the University of Guelph’s Business Leadership Assessment Center. *{Make note of subject’s reactions}* 

It is important for you to understand why I had to mask the actual purpose of our study from you. Therefore, I will go over the debriefing form with you. *{Hand out debriefing forms}* Please read along with your copy as I read the form out loud.

Do you have any questions?

Just to let you know, you will still have a chance to win the money we promised, but instead of being rewarded based on your performance, you will be entered into a draw for five prizes of $20.
Now that you know everything about our study do you have any suggestions as to how it could be improved? How we could make things more believable or make anything that seemed confusing more clear? {take notes}

Now that you know about the actual purpose of the study, we need you to fill out another letter of informed consent. By signing this, you are acknowledging that we explained everything and you are allowing us to use your responses in our data analysis. Because you were deceived, you have the right to not sign the consent letter, and thus withdraw your data from our study. Please read over the post debriefing consent form and if you chose to let us use your data please sign it. {Hand out post-debriefing forms}.

Please don’t tell anyone about the real purpose of this study. As I’m sure you realize, if participants know the true nature of the study coming into it, it would spoil the results of the study.

Thank you very much for your participation today.
Appendix G

Information Sheet on the Business Leadership Assessment Centre for Participants in the Solely Merit-Based Selection and No Discrimination Condition for Study 1

INFORMATION ON THE BUSINESS LEADERSHIP ASSESSMENT CENTRE

WHAT IS THE BLAC?
In this project, we are interested in studying a series of assessment exercises collectively called the Business Leadership Assessment Centre (BLAC). This is commonly known as the assessment centre selection methodology. The assessment centre methodology uses a variety of assessment techniques (e.g., paper-and-pencil tests, simulation exercises) to evaluate an individual’s behaviours on a number of different dimensions. The BLAC is used to select students into the prestigious Masters of Leadership (MA) program at the Centre for Studies in Leadership, University of Guelph. The Centre undertakes and promotes innovative research on leadership issues relevant to the public, private and non-profit sectors. It also organizes and contributes to educational and professional development programs in Leadership Studies.

The assessment centre methodology has been found to be more fair and objective in terms of gender, race, and age than other selection methodologies. There is also consistent research demonstrating its ability to predict future performance. With regard to the BLAC, past research has shown that it is a fair and accurate assessment of business leadership ability, and it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

HOW WERE YOU SELECTED FOR THIS STUDY?
We included a Leadership Questionnaire in the on-line Mass Testing questionnaire that served as our selection test. This questionnaire fairly assesses prospective leadership abilities for all candidates (e.g., for men and women). In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only
those who were among the top scorers on the Leadership Questionnaire used in Mass Testing have been selected for this project.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 60 minutes to complete and you will receive one course credit for your participation.

WHAT ARE THE EXERCISES?

1. Case Study Analysis

One of the determinants to a successful business career is the ability to address critical problems and propose feasible solutions. In this exercise, you will be in the role of a senior executive in a fictitious organization. The general goal of this exercise is to propose a solution to address a problem the organization is facing. Your task is to read the case study materials and then write up a recommendation report. You have 35 minutes to complete this exercise.

2. In-basket Exercise

Administrative managerial skills are necessary for business managers. In this exercise, you will be in the role of a manager of a fictitious organization. You will be required to respond to a series of memos, reports and letters that may require you to deal with several customer complaints, budgets, subordinates’ requests and clashes in schedules etc. Actions that you may take are prioritising items, drafting memos, scheduling meetings and writing up meeting agendas etc. You have 15 minutes to complete this exercise.
Appendix H

Information Sheet on the Business Leadership Assessment Centre for Participants in the Strong Preferential Selection and No Discrimination Condition for Study 1

INFORMATION ON THE BUSINESS LEADERSHIP ASSESSMENT CENTRE

WHAT IS THE BLAC?
In this project, we are interested in studying a series of assessment exercises collectively called the Business Leadership Assessment Centre (BLAC). This is commonly known as the assessment centre selection methodology. The assessment centre methodology uses a variety of assessment techniques (e.g., paper-and-pencil tests, simulation exercises) to evaluate an individual’s behaviours on a number of different dimensions. The BLAC is used to select students into the prestigious Masters of Leadership (MA) program at the Centre for Studies in Leadership, University of Guelph. The Centre undertakes and promotes innovative research on leadership issues relevant to the public, private and non-profit sectors. It also organizes and contributes to educational and professional development programs in Leadership Studies.

The assessment centre methodology has been found to be more fair and objective in terms of gender, race, and age than other selection methodologies. There is also consistent research demonstrating its ability to predict future performance. With regard to the BLAC, past research has shown that it is a fair and accurate assessment of business leadership ability, and it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

HOW WERE YOU SELECTED FOR THIS STUDY?
We included a Leadership Questionnaire in the on-line Mass Testing questionnaire that served as our selection test. This questionnaire fairly assesses prospective leadership abilities for all candidates (e.g., for men and women). In our study, we have attempted to select students who demonstrated that they have the skill and ability needed to perform well as business leaders.
However, we have been running this study for a while now and have found that we have a larger number of men than women qualifying for the study. In fact, we have finished testing the most qualified women. So, we have adopted a policy of asking all women—such as yourself—to sign up, as long as they have achieved at least a minimum score on the Leadership Questionnaire used in Mass Testing.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 60 minutes to complete and you will receive one course credit for your participation.

WHAT ARE THE EXERCISES?

1. Case Study Analysis

One of the determinants to a successful business career is the ability to address critical problems and propose feasible solutions. In this exercise, you will be in the role of a senior executive in a fictitious organization. The general goal of this exercise is to propose a solution to address a problem the organization is facing. Your task is to read the case study materials and then write up a recommendation report. You have 35 minutes to complete this exercise.

2. In-basket Exercise

Administrative managerial skills are necessary for business managers. In this exercise, you will be in the role of a manager of a fictitious organization. You will be required to respond to a series of memos, reports and letters that may require you to deal with several customer complaints, budgets, subordinates’ requests and clashes in schedules etc. Actions that you may take are prioritising items, drafting memos, scheduling meetings and writing up meeting agendas etc. You have 15 minutes to complete this exercise.
Appendix I

Information Sheet on the Business Leadership Assessment Centre for Participants in the Solely Merit-Based Selection and Discrimination Condition for Study 1

INFOMATION ON THE BUSINESS LEADERSHIP ASSESSMENT CENTRE

WHAT IS THE BLAC?
In this project, we are interested in studying a series of assessment exercises collectively called the Business Leadership Assessment Centre (BLAC). This is commonly known as the assessment centre selection methodology. The assessment centre methodology uses a variety of assessment techniques (e.g., paper-and-pencil tests, simulation exercises) to evaluate an individual’s behaviours on a number of different dimensions. The BLAC is used to select students into the prestigious Masters of Leadership (MA) program at the Centre for Studies in Leadership, University of Guelph. The Centre undertakes and promotes innovative research on leadership issues relevant to the public, private and non-profit sectors. It also organizes and contributes to educational and professional development programs in Leadership Studies.

The assessment centre methodology has been found to be more fair and objective in terms of gender, race, and age than other selection methodologies. There is also consistent research demonstrating its ability to predict future performance. With regard to the BLAC, past research has shown that it is a fair and accurate assessment of business leadership ability, and it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

HOW WERE YOU SELECTED FOR THIS STUDY?
We included a Leadership Questionnaire in the on-line Mass Testing questionnaire that served as our selection test. This questionnaire assesses prospective leadership abilities. In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only those who were among the top scorers on the Leadership Questionnaire have been selected for this project.
There is some additional information that you should have. The Leadership Questionnaire used in Mass Testing is actually biased against women and favours men. In reality, there is no gender difference in leadership potential. However, men tend to score higher than women on the test because the items used to assess leadership potential focus on typical male strengths while ignoring typical female strengths.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 60 minutes to complete and you will receive one course credit for your participation.

WHAT ARE THE EXERCISES?

1. **Case Study Analysis**

One of the determinants to a successful business career is the ability to address critical problems and propose feasible solutions. In this exercise, you will be in the role of a senior executive in a fictitious organization. The general goal of this exercise is to propose a solution to address a problem the organization is facing. Your task is to read the case study materials and then write up a recommendation report. You have 35 minutes to complete this exercise.

2. **In-basket Exercise**

Administrative managerial skills are necessary for business managers. In this exercise, you will be in the role of a manager of a fictitious organization. You will be required to respond to a series of memos, reports and letters that may require you to deal with several customer complaints, budgets, subordinates’ requests and clashes in schedules etc. Actions that you may take are prioritising items, drafting memos, scheduling meetings and writing up meeting agendas etc. You have 15 minutes to complete this exercise.
Appendix J

Information Sheet on the Business Leadership Assessment Centre for Participants in the Strong Preferential Selection and Discrimination Condition for Study 1

INFORMATION ON THE BUSINESS LEADERSHIP ASSESSMENT CENTRE

WHAT IS THE BLAC?
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The assessment centre methodology has been found to be more fair and objective in terms of gender, race, and age than other selection methodologies. There is also consistent research demonstrating its ability to predict future performance. With regard to the BLAC, past research has shown that it is a fair and accurate assessment of business leadership ability, and it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

HOW WERE YOU SELECTED FOR THIS STUDY?
We included a Leadership Questionnaire in the on-line Mass Testing questionnaire that served as our selection test. This questionnaire assesses prospective leadership abilities. In our study, we have attempted to select students who demonstrated that they have the skill and ability needed to perform well as business leaders.

However, we have been running this study for a while now and have found that we have a larger number of men than women qualifying for the study. In fact, we have finished testing the
most qualified women. So, we have adopted a policy of asking all women—such as yourself—to sign up, as long as they have achieved at least a minimum score on the Leadership Questionnaire used in Mass Testing.

There is some additional information that you should have. The Leadership Questionnaire used in Mass Testing is actually biased against women and favours men. In reality, there is no gender difference in leadership potential. However, men tend to score higher than women on the test because the items used to assess leadership potential focus on typical male strengths while ignoring typical female strengths.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 60 minutes to complete and you will receive one course credit for your participation.

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Appendix K

Initial Reactions to the Business Leadership Assessment Centre Form

Please refer to ‘Information on the Business Leadership Assessment Centre’ information sheet when you reply to the following questions.

Please refer to ‘Information on the Business Leadership Assessment Centre’ information sheet when you reply to the following questions.

| 1. Women are selected to participate in the BLAC based **solely** on their performance on the Leadership Questionnaire used in mass testing: |
|---|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Disagree nor Agree | Slightly Agree | Moderately Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| 2. The Leadership questionnaire used in mass testing: |
|---|---|---|---|---|---|---|---|
| Favors men | Is equally fair to men and women | Favors women |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Based on the limited information you have been given, please respond to each of the following items in terms of how much you agree or disagree with respect to the statements.

| 3. I am somewhat unsure if I am qualified to participate in the BLAC. |
|---|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Disagree nor Agree | Slightly Agree | Moderately Agree | Strongly Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| 4. The way people were selected for the BLAC is just. |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| 5. The selection procedure used for the BLAC was unfair. |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

<p>| 6. I’m proud I was selected to participate in the BLAC. |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |</p>
<table>
<thead>
<tr>
<th></th>
<th>It doesn’t matter to me that I was selected to participate in the BLAC.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>It’s important to me to perform well on the BLAC.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>I don’t care how others judge my performance on the BLAC.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Appendix L

The Interdot Case Study Analysis

**Your Role**
You are one of 3 senior executives of Interdot, an Information Technology company with annual sales of $50 million and a fair amount of cash reserves. You joined the company 4 years ago. John Caiger, one of the other senior executives, has been with Interdot since 1997.

Over the past 2 years, Interdot has not been performing well. The profit margin has declined over the years (See Figure 1). The Board has expressed grave concerns over this trend and they would want your CEO to do something about it.

Your CEO, who has been at the helm of Interdot since its establishment in 1996, has indicated that he would like you to review two possible solutions:

1) Reduce the funding for the Innovation Project, and/or
2) Improve the existing Incentive/Compensation Policies at Interdot

Thereafter, your CEO will assign the task of overseeing the implementation of the recommendation to either you or John Caiger, the other senior executive.

At this point, your task is to read the documents contained in this case study and write a Recommendation Report. That is, based on the information contained in this case study, you need to make a recommendation to your CEO and the Board. Note that you can make any recommendation(s) that you deem fit based on the information provided in this case study. You will be given 35 minutes to complete the task.

Please take some time to go through the given information that will aid you in making your recommendation. Before you begin to write the Recommendation Report, please complete Form 1.

Next, write your recommendation in the provided Recommendation Report template.

When completing the task, please use the computer provided. The Recommendation Report template can be found electronically on the disk you have been provided. You may use the blank sheets of paper and pencils for rough notes. If you have any difficulty opening the word-processing program, please raise your hand and someone will assist you.

After you have completed the Recommendation Report, please raise your hand and the study administrator will give you Form 2 to complete.
Interdot, founded in 1996, is one of the leading software companies in North America. Creativity has been the core foundation for ensuring the survival and flourishment of Interdot. It is also what Interdot’s reputation is built upon.

Interdot sets aside 20% of its overall profits for the Innovation Project, a project that aims to encourage creativity and innovation. For every accepted innovative idea, employees are given a monetary compensation of $1,000. If the idea ends up as an actual product, the employee will receive 1% of the profits associated with the product for its first 3 years. This process for making and launching a new product usually takes 1 – 2 years.

Interdot has a team of research scientists to work on the new ideas. To promote creativity and innovation, the amount of funding for the Innovation Project provided is not determined by the number of research scientists, or the tenure/experience of the research scientists. Instead, the funding is dependent on the quality of ideas, the Board’s approval, and the success rate of past creations and market trends. This process for the Innovation Project is seen by employees to be fair.

Strategic decisions at Interdot have to be approved by the Board. The Chairman for the Board is also the CEO of the company. He holds 45% of the shares in the company. Forty-percent of the company shares are owned by VentureCare (i.e., a company owned by 3 friends that deals with computer hardware), with the remaining 15% of the company shares owned by employees of Interdot. In order for a decision to be approved, the decision has to be supported by at least 50% of the company shares. This implies that the CEO has to be in agreement with either VentureCare or the employees, or VentureCare and the employees must be in agreement, in order for a decision to be approved.

Demographics of Research Scientists: There is a pool of keen undergraduate and graduate students with expansive knowledge of computer engineering in this area. They worked as interns at Interdot, contributing significantly to the innovation of new products. Currently, there are 8 research scientists employed at Interdot. Two of them have been with Interdot since 1997, while the rest were employed between 1999 and 2000. Since then, there has been no new recruitment.
Financial Data

Figure 1: Annual Profits

Year
- 2003: $10.26
- 2001: $12
- 1999: $12.5

$ Millions

Figure 2: Annual Profits Per New Product

Year
- 2003: $1.15
- 2001: $1.5
- 1999: $1.55

$ Millions
Financial Data (cont’d)

Total Number of Ideas Received

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas</td>
<td>23</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>

Number of Accepted Ideas

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Number of New Products

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. The ideas received are accepted in the same year. However, it takes 1 – 2 years to work on the new ideas to determine the feasibility of the ideas before a new product can be launched.
## More about the Proposed Solutions

### Reduce Funding for the Innovation Project

Your financial advisors have informed you that a consistent and increasing decline in profits can eventually bring about the closure of the company. They suggested that reducing the funding to the Innovation Project could help to improve the profit margin situation for this year. That is, if you chose to:

- a) Reduce funding by 50% → Profit margin for this year will not further decline
- b) Reduce funding by 30% → Profit margin for this year will further decline by 5%
- c) Not take any actions → Profit margin for this year will further decline by 15%

However, your human resources (HR) consultant has argued that reducing the funding for the Innovation Project is not going to improve the situation. His main argument is that investment to the Innovation Project is essential for the long-term survival of the company. Your HR consultant said that the short-term decline is inevitable if Interdot would like to retain its reputation as a top-notch software company.

At the same time, it was brought to your attention that the two most senior research scientists have expressed displeasure over the potential cut to the Innovation Project and indicated that they would leave Interdot and join a competitor company if it is cut. These senior employees have many years of experience and have contributed to innovations in the past.

### Improve the Incentive/Compensation Policies

Your HR consultant has informed you that the existing human resources policies, especially the incentive/compensation policies, are lacking behind most of the high performing companies. If the policies were not improved, top scientists are not likely to join the company in the future.

Past research has indicated that a happy work environment can improve innovation and creativity in the workplace. Your consultant advised that investing in a more fair incentive/compensation system would help to boost staff morale, which will then increase the number and quality of new ideas/products that will be sustainable over the years. That is, if you chose to:

- a) Improve the incentives/compensations by providing childcare benefits, sabbatical opportunities, in-house cafeteria, and flexible benefits within 2 years → Employees will be happier. Profit margins for the 2 years will decline by 25% and 15%, respectively → Number and quality of new ideas/products will increase by 15% per year → After successful implementation, profits will increase steadily by 25% for at least the next 5 years
- b) Improve the incentives/compensations within 4 years → Employees will be happier. Profit margins for the 4 years will decline by 18%, 12%, 7% and 3%, respectively → Number and quality of new ideas/products will increase by 5% per year → After successful implementation, profits will increase steadily by 25% for at least the next 5 years

Your financial advisors have indicated there are barely adequate cash reserves to fund the change process. And, this is only feasible if the trend of the declining profits was short-term.
Confidential Information from the Board

What do the Owners of VentureCare Think?

The 3 owners of VentureCare argue that a strong statement should be made to the research scientists such that the funding to the Innovation Project is not guaranteed unless the number and quality of new products improve. They want to see a change in the process in which funding for the Innovation Project is determined.

Based on factual observations of data collected over the past years, the venture capitalists state that the senior research scientists have not contributed much in recent years. Therefore, the impact of their resignation on Interdot would not be significant.

The owners of VentureCare do not think that making changes to the existing human resources policies will have any positive impact on the profit margin for the company. They feel that the past successful performance of the company is an indication that the existing policies are working just fine. They think that the employees are just greedy for more benefits/incentives.

What do the Employee Shareholders Think?

The employee shareholders feel that reducing the funding to the Innovation Project would not significantly affect the profit margin for Interdot but it could potentially further constrain the number and quality of new products generated.

The employee shareholders state that most employees feel disheartened by the possibility of the reduction in funding to the Innovation Project. The employee shareholders also indicate that they would be highly motivated to perform if the existing work environment improved. In particular, when they compare their current incentive/compensation plans with their peers from other companies, they realize that they are losing out (e.g., no childcare benefits, no sabbatical leave). And, this is one key reason why many people have left Interdot in recent years.

As some of the employee shareholders are research scientists, they are deeply concerned with the treatment of the senior research scientists. They believe that people form the core of Interdot and that without the contributions of the senior research scientists, Interdot would not be able to survive long.
## Confidential Information Concerning other Competitor Companies

### Interware
- Competitor company
- Their profits were steadily declining between 2000 - 2002
- Interware reduced funding to their Innovation Project to reduce costs last year
- Interware was successful in cutting costs and was able to report an overall profit increase of 5% last year
- Has not generated any innovative new products last year or this year
- Has great difficulty in retaining and recruiting top research scientists
- Maintains a relatively big share of the market due to its high-performing products that were launched in its earlier years

### Sytech
- Competitor company
- Their profits declined consistently since 1998 – 2000, steady improvement in profit margin since 2002, increasing by a steady 10% per year
- Revamped its human resources policies (e.g., provided childcare benefits, sabbatical leave, flexible benefits) to attract and retain highly talented people in 1999
- The changes took more than 3 years before they were fully implemented
- During that period of time, the financial situation of Sytech was very weak – it was nearly bought out by another company
- Today, employees working at Sytech rave about the company’s fair policies and procedures
- Its financial situation is still not very desirable
- Remains one of the top software companies
Appendix M

Recommendation Report and Accompanying Instruction Sheet

Recommendation Report Template

Instructions for Completing the Recommendation Report:

a. Your task is to complete the following Recommendation Report based on the material you have read in the above case study.

b. A template for the Recommendation Report you are to complete is shown on subsequent pages. This template can also be found on the computer disk you have been given. This template has a total of two (2) sections.

c. You are required to complete the two (2) sections of this Recommendation Report. Specifically, you are to complete the following sections below: (1) Analysis; and, (2) Conclusions/Recommendations.

d. Below each of the sections you are to complete, you will find a brief instruction in red typeface.

e. You are to complete the Recommendation Report using the computer in front of you, and are to save your report on the disk provided. We strongly recommend that you save your work to disk continuously.

f. Your completed Recommendation Report must not exceed a total of three typed (3) pages in length (single-spaced, 12-point font), although it can be shorter. You can choose to write in point-form.

g. Once you have completed your Recommendation Report, raise your hand and the administrator will collect your disk and give you Form 2 to complete.
Recommendation Report Template

1) ANALYSIS

In this section, you will find 9 different categories. These categories are based on information provided in the case study. You should only respond to 7 out of the 9 categories based on your perception of their importance for making your subsequent recommendation(s). Your task is to list the key issues associated with each category. Note that you do not need to make your arguments here. There is an “Others” category where you can input information that you think is important but does not fit in any of the given categories.

1. Importance of Innovation

2. Importance of Profit Margin

3. Importance of Employee Satisfaction

4. Importance of the Board
5. Importance of the other Senior Executives

6. Importance of the Senior Research Scientists

7. Importance of Financial Advisors/Human Resources Consultant

8. Consequences of Solution(s)

9. Lessons learned from Competitor Companies

Others
2) CONCLUSION/RECOMMENDATION

In this section, make a recommendation(s) on the proposed course of action, based on your analysis in the previous section. You should include the issues you would raise to persuade the CEO so that he could in turn convince the various members of the Board to accept your recommendation(s). Remember that you should explain the reason(s) for making this recommendation(s).
Appendix N

Second Questionnaire Regarding Participant’s Feelings of Incompetence

**FORM 1: The Interdot Case Study**
Please answer the following questions in regard to your initial reactions to the case study.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This task is a good opportunity for me to demonstrate my capabilities in the company.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. I believe that John Caiger could do a better job than I will on this task.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. I am worried that I likely would not come up with the best recommendation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. I believe that I will be able to persuade the Board to accept my recommendation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Appendix O

Third Questionnaire Regarding Participant’s Feelings of Incompetence

**FORM 2: The Interdot Case Study**
Please answer the following questions in regard to the Recommendation Report you have prepared.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was successful in presenting a persuasive argument to the CEO and the Board for my recommendation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>My CEO will probably think highly of my leadership skills now.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>I prefer handing over the implementation of this task to John Caiger than to continue with the task myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>I am confident that I have performed better than other participants on this task.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Appendix P

Suspicion Probe

FORM 3: Nature of the Study
Please answer the following two questions in regard to the nature of this study.

1. Please take a moment to let us know what you think this study is all about.
2. Do you think that we are looking at anything other than what you have been told during this study?
Appendix Q

Feedback for “Business Leadership Assessment Centre” Study

Thank you for your participation in this study. A number of aspects of this study have been misrepresented to you. First, this is not a study of the effects of motivation on the Business Leadership Assessment Centre for the Leadership Centre. Your performance on the BLAC will not be shared with the Leadership Centre. Rather, your data will be used as part of our research.

In this research, we are interested in how women react to tasks depending on whether they are preferentially selected to do the task or not. Preferential selection means that an individual is selected on the basis of group characteristic (e.g., gender) in addition to abilities and qualifications. Previous research suggests that women feel less competent and do not perform as well when they are preferentially selected. We want to see if perceptions of discrimination in the assessment of women will reduce the negative effects of preferential selection. We think this is likely because women who feel that they were unfairly treated (i.e., discriminated against) might feel that subsequent preferential treatment restores justice to how they were treated in the first place.

To investigate the effects of preferential selection and perceptions of discrimination on task reactions, we led participants to believe that they were selected for this study based on one of four scenarios: (i) accurate selection test and selected based on merit (ii) accurate selection test and selected preferentially (i.e., based on merit and gender) (iii) biased selection test in mass testing and selected based on merit, or (iv) biased selection test in mass testing and selected preferentially. We randomly assigned all participants to one of four scenarios. To create the above scenarios, we led the participants in the relevant scenarios to believe that some selection tests in the mass testing booklet were biased against women. In reality, none of this is true.

We wanted to investigate participants’ reactions to our different study conditions when their performance in a domain is important to them. Therefore, all participants were selected for the study on the basis of one criterion: that a career in business leadership is important to them (as indicated in mass testing). In addition, we stated that the Business Leadership Assessment Centre would assess leadership ability relevant to a business career. Both the above would ensure that participants in the study would identify closely with leadership ability and should be concerned about their performance on the BLAC.

It should be noted that though the existence and the purpose of the BLAC is entirely fictional, the assessment centre methodology is a common form of assessment that institutions and businesses use to select individuals into their organizations. Please note that assessment centres are usually very difficult forms of assessment and not many people do well on them. Hence, do not worry about your performance in the BLAC. Also, for the purpose of this study we are not interested in your individual performance, instead we are more interested in group performances.
We made the BLAC, the BLAC exercise and the purpose of the study as real as possible because we are interested in how women students will respond to actual situations and past research suggests that people's responses vary, depending upon whether they are in hypothetical or actual situations. For example, if we had been forthcoming about the goals of the study (i.e., understanding women’s reactions to being preferentially selected), participants are likely to behave or react in a contrived manner. In other words, we would have only been able to investigate participants’ reactions in the hypothetical. Hence, it was important to mask the true nature of the study.

Because knowledge of this study's specific purposes could influence participants' responses, we will appreciate if you do not share the details of this research with any other students as they might participate in this study. Thank you again for your help with our research. If you are interested in receiving a copy of the study results please contact Dr. Leanne Son Hing at sonhing@psy.uoguelph.ca.
Appendix R

Post-debriefing Consent Form

University of Guelph

Post-debriefing Consent Form

**Project Title:** Business Leadership Assessment Centre Project

**Principle Investigator:** Dr. Leanne Son Hing  
**Ext. Number:** 54475

During the debriefing session, I learned that it was necessary for the researchers to use deception in this study. I understand that this was necessary because (a) having full information about the actual purpose of the study, and (b) knowing that the assessment tasks were fabricated may have influenced the way in which I responded to the tasks. Thus, to ensure that this did not happen, some of the details about the purpose of the study initially were not provided (or were provided in a manner that misrepresented the real purpose of the study). However, I have now received a complete verbal and written explanation as to the actual purpose of the study and have had an opportunity to ask any questions about this and to receive acceptable answers to my questions.

I have been asked to give permission for the researchers to use my data (or information I provided) in their study, and agree to this request. I understand that I may withdraw this consent by notifying the Principal Investigator of this decision. I also understand that I may contact the Subject pool coordinator Erin Cummins at subjectpool@psy.uoguelph.ca if I have any concerns or comments about my involvement in this study or Sandy Auld at (519) 824-4120 Ext. 56606 for ethical concerns.

Participant’s Name: ______________________________

Participant’s Signature: ____________________________

Date: ______________________________
Appendix S
Coding Instructions for Case Study

Pre-coding:
- Remember to white out/black out conditions (A,B,C,D)
- Read through a bunch first to get an idea of the range

Coding:
- Read through the conclusion/recommendation section. Consult analysis section if confusing remark/ambiguous interpretation
- On first page “analytical skills;” check off if key issues that were recognized
- Coding analytical skills: letters match up with scores of 1, 3, or 5, keep in mind analytical skills, which issues were raised, whether they can see the big picture, factual errors, etc.; you do not have to check every letter off, only those which are relevant
- Give an overall code between 1-5, based on where majority of scores are situated, some issues may be more important than others, so keep in mind when giving final score
- Coding assertiveness performance standard: when reading recommendation, keep in mind the language use, degree of persuasion, whether they can keep your interest and command your attention, etc. Note that ratings shouldn’t be affected by grammar, focus on whether they capture your attention through their arguments. Also, keep in mind that even if they write in point form, they can still write a firm recommendation or not. Focus more on content.

Consensus:
- Meet together to discuss ratings
- Be prepared to discuss how you came to your rating and argue with others and what the final rating should be
### ANALYTICAL SKILLS

#### Recognized that...

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>• The Board is concerned about the trend of the declining profits</td>
<td></td>
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<tr>
<td>• Other competitor companies face the same situation of declining profits — likely to be a systemic, economic situation that is affecting all software companies and not just Interdot</td>
<td></td>
</tr>
<tr>
<td>• Need to garner the support of the CEO and either the owners of VentureCare or employee shareholders to get the majority vote</td>
<td></td>
</tr>
<tr>
<td>• Employee shareholders are the pulse of Interdot — need to keep them happy</td>
<td></td>
</tr>
<tr>
<td>• The owners of VentureCare are major shareholders — need to keep them happy</td>
<td></td>
</tr>
<tr>
<td>• The owners of VentureCare interested in profits — if could demonstrate possible gain in profits with recommendation, would be able to keep them happy</td>
<td></td>
</tr>
<tr>
<td>• Funding idea creation is critical to the survival of Interdot — needs constant innovations</td>
<td></td>
</tr>
<tr>
<td>• Interdot’s reputation based on innovation/creativity — if reduce funding without considering consequences, will end up like Interware — something that Interdot does not want</td>
<td></td>
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<tr>
<td>• If accept recommendation to improve incentive/compensation policies without considering its immediate impact, Interdot may be in danger of being bought over by another company — like Sytech</td>
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<tr>
<td>• Adopting either one of the proposed solutions per se will have a huge impact on Interdot</td>
<td></td>
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<tr>
<td>• Reducing funding can only help to alleviate the short-term effect of profits this year, is not going to be sustainable</td>
<td></td>
</tr>
<tr>
<td>• Improving the incentives/compensation policies is going to help improve the long-term viability of Interdot but does not help with current situation</td>
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<tr>
<td>• Need to work together with the employees (research scientists) and the owners of VentureCare to ensure both short- and long-term viability of Interdot</td>
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<tr>
<td>• Current system of awarding funding is fair and should continue — not to take on the suggestion put forth by the owners of VentureCare</td>
<td></td>
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<tr>
<td>• If the two most senior research scientists were not willing to accept explanation for short-term reduction in funding, there is no great harm in letting them go since they have not been performing up to par recently. However, need to ensure that the other employees understand the situation to avoid any negative repercussions.</td>
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<tr>
<td>• The owners of VentureCare are only interested in cutting costs but not about employee welfare. Need to convince them otherwise.</td>
<td></td>
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<tr>
<td>• Employees have indicated their support for the proposed changes in the incentive/compensation policies – indication that the changes are going to be effective</td>
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<tr>
<td>• Need to take a balanced approach in recommending a solution</td>
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<tr>
<td>ANALYTICAL SKILLS</td>
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<tr>
<td>-------------------</td>
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<tr>
<td>Performance Standards</td>
<td></td>
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</table>

| 5 | A) Is able to integrate information from different sources/documents |
|   | B) Identifies all salient issues (without missing secondary detail) |
|   | C) Thoroughly reviews all information at hand |
|   | D) Has an in-depth understanding of the issues |
|   | E) Identifies both major and subtle implications of issues |
|   | F) Focuses on both short- and long-term implications |
|   | G) Can see the “big picture” – is not overwhelmed by details |
|   | H) Does not make any factual errors |
|   | I) Makes accurate inferences from available data |
|   | J) Maintains objectivity without losing sight of the emotions at play |
|   | K) Considers the different elements/perspectives pertaining to the issue |
|   | L) Provides balanced analyses – analysis is objective and free of personal bias/preferences |
|   | M) Proposed recommendation is feasible and practical |
|   | N) Proposed recommendation is highly likely to be effective |

| 3 | A) Integrates information from different sources/documents but the links between the points are not evident at times |
|   | B) Identifies all salient issues BUT misses some secondary detail |
|   | C) Identifies some, but not all, nuances in evidence |
|   | D) Has a good understanding of the issues but may be confused at times |
|   | E) Is generally able to identify the irrelevant/non-essential information but may occasionally pay too much attention to them |
|   | F) Understands the need to consider long-term implications but stays focused on the short-term OR vice-versa |
|   | G) Can see the “big picture” but may occasionally be overwhelmed and distracted by details |
|   | H) Makes minimal factual errors |
|   | J) Is generally objective in analysis |
|   | K) Considers the different elements/perspectives but may not completely understand them |
|   | L) Recognizes the need for objectivity but analysis is not always objective and free of personal bias/preferences |
|   | N) Proposed recommendation may be effective – average probability of effectiveness |

| 1 | A) Overlooks/ignores important issues |
|   | B) Is not able to identify most salient issues |
|   | B) Emphasizes trivial issues |
|   | C) Provides only cursory reviews of provided information; not thorough |
|   | D) Has difficulty absorbing the information provided and understanding important issues – showed significant confusion |
|   | E) Cannot distinguish between essential/relevant and non-essential/irrelevant information |
|   | F) Places emphasizes on the short-term implications, ignoring the long-term implications OR vice-versa |
|   | G) Is overwhelmed by the details and cannot see the “big picture” |
|   | H) Makes a number of factual errors |
|   | I) Makes unfounded/unwarranted assumptions from the information provided |
|   | J) Is overly emotion- or goal-focused |
|   | K) Analysis is always one-sided – did not consider all elements and perspectives relating to an issue |
|   | L) Demonstrates bias – analysis is coloured by personal biases/preferences |
|   | M) Proposed recommendation is not feasible or practical |
|   | N) Proposed recommendation does not address assigned problem |
|   | O) Does not identify important implications and emergent/potential problems |
## ASSERTIVE

**Performance Standards**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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</table>
| 5     | A) Is not intimidated by positional power but maintains respect for others  
      B) Uses assertiveness with judgement (thinks about appropriateness based on situation)  
      C) Asserts own views/ideas while remaining empathic of others' wishes/needs  
      D) Writes recommendation with confidence and with minimal moderation  
      E) Is persuasive with recommendation  
      F) Presents views, arguments, and recommendations in a compelling/convincing way  
      G) Is able to command the attention of the evaluator  
      H) Provides clear rationale for recommendation  
      I) Supports rationale with relevant information  
      J) Provides relevant facts/information to support recommendation  
      K) Gives one firm recommendation |
| 3     | A) May acquiesce when dealing with older or higher ranking colleagues or people with more positional power  
      C) Asserts own views/ideas but may not pay adequate attention to the needs/wishes of others OR vice-versa  
      D) Writes recommendation with confidence with some moderation  
      E) Presents views, arguments, and recommendations in a generally compelling way but sometimes seems uncertain/tentative  
      F) Is somewhat able to command the attention of the evaluator  
      G) Is somewhat able to sustain the evaluator's interest  
      H) Rationale for recommendation is not very clear but generally still understandable  
      I) Supports rationale with mostly relevant information but includes non-relevant information as well  
      J) Provides facts/information to support recommendation but the links are not very clear  
      K) Gives recommendation, providing more than one recommendation or not firm in the recommendation |
| 1     | A) Comes across as aggressive – tries to force opinion/recommendation on others  
      B) Is unassertive – does not use judgement  
      C) Accepts the majority view without judgement  
      C) Defers to others, is overly accommodative  
      C) Overly concerned about the needs/wishes of others  
      C) Does not care about what the others think/feel  
      D) Uses tentative language in writing the recommendation  
      E) Presents views, arguments, and recommendations tentatively and uncertainly  
      F) Is not effective in capturing the attention of evaluator  
      G) Is not effective in capturing the interest of evaluator  
      H) Has no clear rationale for recommendation  
      J) Has no supporting facts/information for recommendation  
      K) Does not give any recommendation |
Information Sheet on the Business Leadership Assessment Centre for Participants in the Solely Merit-Based Selection and No Discrimination Condition for Study 2

**INFORMATION ON THE BUSINESS LEADERSHIP ASSESSMENT CENTRE**

**WHAT IS THE BLAC?**

We are interested in studying a series of assessment exercises called the Business Leadership Assessment Centre (BLAC). An assessment centre selection methodology uses a variety of assessment techniques (e.g., paper-and-pencil tests, simulation exercises) to evaluate an individual’s behaviours on a number of different dimensions. The BLAC is used to select students into the prestigious Masters of Leadership (MA) program at the Centre for Studies in Leadership, University of Guelph. The Centre undertakes and promotes innovative research on leadership issues relevant to the public, private and non-profit sectors. It also organizes and contributes to educational and professional development programs in Leadership Studies.

The assessment centre methodology is more fair and objective in terms of gender, race, and age than other selection methodologies (e.g., the interview). Research has also demonstrated its ability to predict future job performance. Research specifically on the BLAC has shown that it is a fair and accurate assessment of business leadership ability, as it has the ability to predict leadership performance amongst business leaders. However, previous research findings have suggested that motivation affects performance. Thus, we are testing whether motivation plays a key role in affecting performance on the BLAC. You have been randomly assigned either to the low motivation or high motivation group.

**HOW WERE YOU SELECTED FOR THIS STUDY?**

We included a Leadership Questionnaire in Mass Testing that served as our selection test. This questionnaire fairly assesses prospective leadership abilities for all candidates (e.g., for men and women). In our study, we have selected students who demonstrated that they have the skill and ability needed to perform well as business leaders. Just to be clear, you and all our other study participants met the selection criteria. In fact, only those who were among the top scorers on the Leadership Questionnaire used in Mass Testing have been selected for this project.
Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 90 minutes to complete and you will receive two course credits for your participation.

WHAT ARE THE EXERCISES?

2. Case Study Analysis

One of the determinants to a successful business career is the ability to address critical problems and propose feasible solutions. In this exercise, you will be in the role of a senior executive in a fictitious organization. Your goal in this exercise is to propose a solution that addresses an organization’s problem. Your task is to read the case study materials and then write up a recommendation report. You have 35 minutes to complete this exercise.

2. In-basket Exercise

Administrative managerial skills are necessary for business managers. In this exercise, you will be in the role of a manager of a fictitious organization. You will be required to respond to a series of memos, reports and letters that may require you to deal with several customer complaints, budgets, subordinates’ requests and clashes in schedules etc. Actions that you may take are prioritising items, drafting memos, scheduling meetings and writing up meeting agendas etc. You have 15 minutes to complete this exercise.
Appendix V

Information Sheet on the Business Leadership Assessment Centre for Participants in the Weak Preferential Selection and No Discrimination Condition for Study 2

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Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 90 minutes to complete and you will receive two course credits for your participation.

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Appendix W

Information Sheet on the Business Leadership Assessment Centre for Participants in the Solely Merit-Based Selection and Discrimination Condition for Study 2

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There is some additional information that you should have. The Leadership Questionnaire used in Mass Testing is actually biased against women and favours men. In reality, there is no gender difference in leadership potential. However, men tend to score higher than women on the test because the items used to assess leadership potential focus on typical male strengths while ignoring typical female strengths.

Participation in this project requires you to go through the BLAC. The BLAC consists of a series of 2 inter-related exercises in which individuals are evaluated by a panel of assessors. Collectively, the 2 exercises are used to assess you on a number of competencies such as leadership ability, situational judgement, business acumen, and problem-solving ability. The BLAC will probably take about 90 minutes to complete and you will receive two course credits for your participation.

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Appendix X

Information Sheet on the Business Leadership Assessment Centre for Participants in the Weak Preferential Selection and Discrimination Condition for Study 2

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Appendix Y

Figure of Hypothetical Scores for Weak Preferential Selection Condition

Performance on Leadership Ability Selection Test in Mass Testing