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A thesis submitted to the Faculty of Graduate and Postdoctoral Studies at the University of Ottawa in partial fulfillment of the requirements for the Doctor of Philosophy

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What does it take to complete a doctoral degree? Below is a list of possible criteria. Actually, these are in reality my life's most precious gifts. To the people who have shared them with me, it is because of your generosity that I have reached this point in my journey, with a confident, determined, and enthusiastic view forward.

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Foreward

Born and raised in Ottawa, Ontario, I am not your typical child of war. I am, however, a grandchild of war. When in 1942 nazi soldiers arrested my family for having harboured the assassins of Reinhard Heydrich, one of the architects of the holocaust, my grandmother and father were the sole survivors. My grandmother was 21 years old when she lost her parents and siblings, including her twin sister. She and her husband were left alone to raise their son, and their nephew, with no support network.

In all we do, we are guided by our past, present, and perceived future. It is perhaps for this reason that I have embraced social identity theory--a theory Henri Tajfel developed as a result of his own face-to-face, life-or-death encounters with nazi soldiers. Tajfel was motivated to explain the process of intergroup discrimination, with the hope of reducing it and its devastating effects. In the three manuscripts presented herein, and under the rubric of social identity theory, I attempt to elucidate *intragroup* discrimination. Like Tajfel, I am motivated by a drive to understand the processes of in-group bias. Unlike Tajfel, however, my central focus is on the process whereby individuals derogate their own group members. It is hoped that understanding both valences of in-group bias—both *disfavouring* as well as *favouring*—my work can help society to understand and minimise the impact of discrimination, particularly in the workforce.

Chapter 1

General Overview

General Overview

When it was coined over thirty years ago, the term *queen bee* (Staines, Tavris, & Jayaratne, 1974) was used to describe a woman who had achieved success in a historically-male sphere of employment, and had the tendency to avoid helping her female colleagues and subordinates, in some cases actively disfavouring them so as to limit their upward mobility. It was purported that this form of prejudice ran counter-current to feminism, and was motivated by the belief that women were exaggerating the hardships they faced in the workplace. Researchers as well as professionals working in traditionally male arenas endeavouring to explain the lack of support women sometimes perceive from senior women continue to use the term queen bee sporadically in scientific and professional communications (Cooper, 1997; Etzowitz, Kemelgor, Neuschatz, Uzzi, & Alonzo, 1994; Ellemers, van den Heuvel, de Gilder, Maass, & Bonvini, 2004; Nyberg, 2005; Pugel, 1997). However, the topic of women's in-group subjugation appears to attract more popular discussion and ancillary analysis than it does direct scientific inquiry.

In the following three studies, the gender belief system of women is shifted from a marginal concern to a central focus. The first study provides an assessment of the Neosexism Scale (Tougas, Brown, Beaton, & Joly, 1995) in terms of its reliability and validity as a measure of contemporary sexism among women. The second study assesses the extent to which negative attitudes, over and above perceiver sex, account for the stereotyping of women in leadership roles. The third study examines the influence of social identity and attitudes on stereotyping--with female managers as both perceivers and targets.

The Gender Belief System From a Gynecocentric Perspective

Three components are integral to the gender belief system (Deaux & Lafrance, 1998): stereotypes, attitudes (i.e., prejudice; Fiske, 2004), and identity. Gender stereotypes are a set of beliefs about the characteristics that women and men possess (descriptive stereotypes) and ought to possess (injunctive or prescriptive stereotypes; Cialdini & Trost, 1998; Fiske & Stevens, 1993). Sexism, in its contemporary form, is the attitude that traditional gender roles should remain intact, and the negative evaluation of women attempting to alter this status quo (Tougas et al., 1995). Gender identity, from the social identity perspective (Tajfel, 1978; 1982; Tajfel & Turner, 1986), has three aspects: 1. awareness of belonging to a gender group (cognitive aspect); 2. recognition of the gender group as important (evaluative aspect); and 3. positive or negative feelings about one's gender group (affective aspect). In addition, a relational aspect has been added to gender identity to account for the "common fate" aspect often experienced by low status groups (Luhtanen & Crocker, 1992). It is this aspect, particularly the perceived evaluation of others, that has received the most empirical support for in-group bias (e.g., Hunter, Cox, O'Brien, Stringer, Boyes, Banks, Hayhurst, et al., 2005; Hunter, Kypri, Stokell, Boyes, O'Brien, & McMenamin, 2004; Long & Spears, 1998).

To date, stereotyping and sexism have been construed as mainly male phenomena, either by endorsement or by design. Men are viewed to be motivated to hold these perceptions and attitudes because the traditional (and current) arrangement of gender roles favours their higher status. The vast majority of research on gender prejudice and discrimination focuses on women as victims of male oppression, and ignores the role women play as active agents in their own subjugation. Illustrative of this observation is

Fiske's (1998) review of existing stereotyping, prejudice, and discrimination literature in the *Handbook of Social Psychology*, which provides an exclusively in-group-out-group treatment of the subject. Women factor in as passive victims; or, when their perceptions and attitudes *are* measured, the detection of sexism and stereotyping is attributed to the social learning of male-defined prejudice rather than motivational factors (Glick & Fiske, 1996), and these interpretations tend to occur post hoc, after results have gone "unexpectedly" counter to proposed hypotheses (e.g., Biernat & Fugen, 2001). Most often, though, women's egalitarianism has been taken for granted (e.g., Swim, Aikin, Hall, & Hunter, 1995), or their prejudice has gone unnoticed (for a discussion on this tendency in research, see Baron, Burgess, & Kao, 1991). Others have concluded that, whereas women once viewed the world in a sex-typed fashion, they have now become egalitarian (Schein, 2001).

A piecing together of extant research on women's intragroup sex-typing and prejudice, including the few articles that have articulated *a priori* hypotheses, as well as those that have discussed post hoc findings, reveals that women's intragroup derogation does indeed exist, and that its effects are not benign. The third component of the gender belief system—identity—provides a theoretical backdrop for the social forces that may motivate women to evaluate women negatively. Inquiries into correlates of in-group favouring and disfavouring biases have informed our understanding of how women, as a low-status group, may come to (de)value other women.

Overview of Studies 1, 2, and 3

If intragroup derogation among women is to be investigated, it cannot be assumed that existing measures of sexism tap the same construct as they do for men. Rather than

an overt anti-woman sentiment, neosexism is the expression of negative attitudes toward women via indirect means, such as the opposition to political policies aimed at rectifying the sexual asymmetry in the labour force. Using modern test theory methodology, *Study 1* assesses the adequacy of the Neosexism Scale (Tougas et al., 1995), designed to measure contemporary sexism among men, in capturing women's sexist attitudes. The scale is assessed at the item level, first for validity across sex using a differential item functioning technique, and second for reliability using item response analysis. The first analysis examines items to determine whether women and men with comparable levels of neosexism have the same response patterns for each item. The latter analysis is conducted to assess the extent to which scale items continue to be reliable indicators of contemporary sexism, given that they were based on scales of contemporary racism which are all at least two decades old (Gaertner & Dovidio, 1986; Jacobson, 1985; Kinder & Sears, 1981; McConahay, 1986; McConahay & Hough, 1976). A modern test theory approach is utilised due to the shortcomings of techniques under the classical test theory rubric, namely tests of invariance using confirmatory factor analysis and reliability as indicated using Cronbach's alpha. The valid and reliable measure yielded in Study 1 allows for a more precise assessment of the impact of attitudes and social identity on stereotyping, the subject of focus in the subsequent two studies.

Over 30 years of research, Schein and her colleagues, as well as those using her research paradigm (Brenner, Tomkiewicz, & Schein, 1989; Deal & Stevenson, 1998; Heilman, Block, & Martell, 1995; Schein, 1973; 1975), have investigated sex-typing. These researchers consider stereotyping to be a significant barrier to women's occupational progress, particularly that of female managers, and have used the Schein

Descriptive Index (SDI; Schein, 1973) paradigm to measure stereotyping. The SDI is a list of 92 traits typically ascribed to managers. In a between-groups design, participants are asked to provide ratings on these traits for one of three groups: females, males, or managers. The correspondence between ratings for males and the manager category, and the *lack* of correspondence between ratings for females and the manager category, signals the presence of stereotyping.

In current analyses in the U.S. (Schein, 2001), perceiver sex differences have been detected in the stereotyping of female managers, such that males have been found to view a discord between traits associated with females and those associated with managers. Although females were found to hold the similarly sex-typed perceptions of women in 1975 (Schein, 1975), current investigations have revealed that women no longer perceive differences in the traits associated with the three target groups (Brenner et al., 1989; Deal & Stevenson, 1998). Hence, Schein (2001) has concluded that women have become egalitarian in their perceptions.

A challenge to this contention has been a model of sexism among women tested by Tougas, Brown, Beaton, and St.-Pierre (1999). Tougas and her colleagues have found that women who endorse neosexist attitudes also view male managers to be more competent and qualified than female managers. This link between neosexism and pro-male bias among women is a direct challenge to Schein's (2001) contention of women's egalitarianism, and forms the basis of *Study 2*. The purpose of the second study is to demonstrate that stereotyping is endorsed by women as well as men as a function of their attitudes, not their biological sex. The link between attitudes and stereotyping is therefore tested among students attending a business school.

Intragroup derogation is not an intuitive concept. Social identity theory (Tajfel, 1978; 1982; Tajfel & Turner, 1986), a theory often applied in understanding intergroup relations and derogation, would predict that one is likely to derogate out-group members (as opposed to in-group members) in order to preserve the positive view of one's in-group. The theory offers an important caveat to this assertion, however. When one's in-group is of low status, one's personal identity may be at risk, and one may seek to restore or maintain one's self-esteem by distancing oneself from the low-status in-group in favour of identification with a higher status group. This personal mobility strategy has been linked to derogation of and hostility toward one's low-status in-group members (Cowan, Neighbors, DeLaMoreaux, & Behnke, 1998; Ellemers et al., 2004).

Low status is not an automatic impetus for either disidentification or intragroup derogation, however. In comparison with majority group members, minority group members have been found to identify more strongly with their in-group as a result of sharing a common struggle against oppression (Crocker & Major, 1989; Smith & Tyler, 1997). Robust in-group ties have been linked, in turn, to collective strategies of coping with status differentials (Ellemers & Van Rijswijk, 1997; Karasawa, Karasawa, & Hirose, 2004), particularly if they are viewed to be illegitimate (Tougas & Veilleux, 1988). Another indicator of social identity, public collective self-esteem (Luhtanen & Crocker, 1992) has been linked to in-group favouritism. Therefore, social identity has been found to be an important moderator of intragroup bias of two valences--favouring and disfavouring.

The first aim of *Study 3* is to re-assess the link between attitudes and stereotyping among women found in Study 2 in a professional context, with female managers as both

perceivers and targets. Added to the stereotype dimensions is an additional trait grouping, namely Democratic Approach, comprised of traits highly valued in contemporary management. This dimension is added in order to determine the extent to which negative attitudes give rise not only to sex-typed judgements, but also to negative evaluations of female managers. The second aim of Study 3 is to test the impact of social identity on stereotyping, both as a direct link and as a joint effect with neosexism. Age is added as a second moderator, also as a main and a joint effect. Studies have shown that older female professionals have a greater tendency to endorse negative attitudes toward women (Lortie-Lussier & Rinfret, 2002), and that sex-typing is most prominent in older women with a low identification with women (Ellemers et al., 2004).

This set of studies does not purport that women have a differential social psychology to that of men by virtue of their biological sex, alone. In fact, it is this person-centred perspective, namely blaming men for inventing and perpetuating the subjugation of women, that has stifled our understanding of that very process among women. However, women's low status--particularly what it means for them in a competitive employment sphere such as management—is proposed to give rise to an experience and gender belief system that are qualitatively unique to those of men.

This set of studies also does not intend to blame women for their oppression, nor does it posit that women and men share the same drive to keep the women's movement at bay. The effects of male prejudice are acknowledged as devastating, as their higher social and employment status affords them the power and authority to limit women's access to resources, and they tend to exercise that leverage. However, the "sting" of female prejudice is also painful for up-and-coming female scientific and business professionals

in need of role models with whom to identify (Gibson & Cordova, 1999). Equity programs have not yet managed to align the sexual asymmetry in occupational distribution, in part because they have not received unequivocal support by women (Tougas & Veilleux, 1988). This set of studies aims to elucidate the process of women's intragroup derogation by shedding two common assumptions: 1. that sexism among women is low, therefore irrelevant; 2. that sex is the best predictor of sex-typing. General findings are discussed both in terms of their theoretical contribution, and also in terms of their practical and specific relevance to developing innovative and effective equity programs.

Running head: FURTHER VALIDATION OF THE NEOSEXISM SCALE

Chapter 2: Study 1

Beyond Internal Consistency: Further Validation of the Neosexism Scale Using Modern Test Theory Methodology

Abstract

The validity and reliability of the Neosexism Scale (Tougas, Brown, Beaton, & Joly, 1995) have been well-documented using traditional, scale-level psychometric methods. The purpose of the present study was to examine the reliability and cross-sex validity of the Neosexism Scale under the more advanced, modern paradigms of differential item functioning and item response theory. The responses of 526 (279 female, 247 male) undergraduate students on each of the 11 scale items were analysed using PRELIS, SPSS, and MULTILOG software programs. The scale was found to be unidimensional and cross-sex validity was confirmed; however, three items were unreliable, and their elimination is recommended. Findings have important implications on the way neosexism is measured and conceptualised, and on the way attitudes scales are assessed and updated.

Beyond Internal Consistency: Further Validation of the Neosexism Scale Using Modern Test Theory Methodology

The measurement of sexism has preoccupied scientists for several decades. In fact, one of the first scales to measure attitudes and beliefs about women was developed over 60 years ago. Kitay's (1940) 90-item scale was designed to measure opinions about women's value to society (e.g., "Women are more interested in the trivial things in life than are men"), their attributes and rights ("Women have just as much ability as men to create new things"), and the spheres of work appropriate to them (e.g., "I have just as much confidence in women doctors as in men doctors"). It was not until the 1970s when more sophisticated (e.g., Likert-type) measures were developed (for a comprehensive list, see Vaughter, 1979).

In the 1970s, the Women's Movement made major advances. The Canadian Human Rights Act (1976-77) was introduced, barring sex discrimination and discriminatory policies in employment. Sex discrimination was also proscribed in U.S. universities (*Education Amendments Act*, 1972). In spite of these legislative milestones, the social climate continued to be prohibitive to women's social and economic advancement. Spence and Helmreich (1972) developed the Attitudes Toward Women Scale (AWS) in order to quantify this phenomenon empirically, rather than relying on a subjective or "impressionistic" view of the situation (p. 2). They developed the AWS largely because they were not satisfied with the "outdated [...] content and phraseology" (p. 3) of extant measures (i.e., the Kirkpatrick Belief-Pattern Scale for Measuring Attitudes Toward Feminism; Kirkpatrick, 1936).

Although psychometrically more advanced, sexism scales of the 1970s were based on a traditional conceptualisation of sexism as a blatantly endorsed or expressed "prejudicial attitude or discriminatory behaviour based on the presumed inferiority or difference of women as a group" (Cameron, 1977, p. 340). In the subsequent two decades, a paradigm shift occurred. A marked reduction in women's and men's sexism scores between 1970 and 1995 led to the precipitous conclusion that sexism was on the decline (Twenge, 1997). Ironically, the AWS met the same criticism of being outdated in the mid-1990s when Spence, herself (Spence & Hahn, 1997), questioned its utility and relevance after finding definitive ceiling effects (with the AWS, higher scores represent more positive attitudes) in a college sample, particularly among women. However, a closer examination of this attitude change (Glick & Fiske, 1996; Swim, Aikin, Hall, & Hunter, 1995; Tougas et al., 1995) revealed that the weakening endorsement of sexist statements was not due to a reduction in prejudice, *per se*; rather, a measurement problem was at its root. Prejudice remained, though people were no longer willing to openly endorse the traditionally sexist attitudes and beliefs represented by old-fashioned sexism measures.

Neosexism

Based on advances in the measurement of racism (Kinder & Sears, 1981; McConahay, 1986), researchers in the mid-1990s (Glick & Fiske, 1996; Swim et al., 1995; Tougas et al, 1995) developed more sensitive, contemporary sexism measures. One such measure was the Neosexism Scale (Tougas et al., 1995). The introduction of neosexism as a construct offered an updated definition of sexism as "a manifestation of a conflict between egalitarian values and residual negative feelings toward women"

(Tougas et al., 1995, p. 843). Tougas and her colleages argued that although underlying anti-female attitudes had not changed, their expression had metamorphosed into a subtle form that, at face value, appeared to conform to society's increasing emphasis on egalitarian values. Interestingly, the concept of neosexism anticipated more recent findings that strong normative pressures (e.g., human rights legislation, equity programs) could result in a reduction of blatant prejudice without changing underlying attitudes (Tan et al., 2001).

Since its introduction, the Neosexism Scale has been used to measure contemporary sexism among female and male workers and students in Canada (Beaton, Tougas, & Joly, 1996; Cameron, 2001; Campbell, Schellenberg, & Senn, 1997; Hawkes, Senn, & Thorn, 2004; Tougas et al., 1999), Great Britain (Masser & Abrams, 1999), Spain (Exposito, Moya, & Glick, 1998; Moya Morales & Exposito, 2001), and in the U.S., Slovenia, and Croatia (Frieze, Ferligoj, Kogovsek, Rener, Horvat, & Sarlija, 2003). The validity and reliability of the Neosexism Scale, cross-nationally and as compared to the Modern Sexism Scale (MSS; Swim et al., 1995) and the Ambivalent Sexism Inventory (ASI;Glick & Fiske, 1996), have been well-documented (Campbell et al., 1997; Masser & Abrams, 1999; Moya Morales & Exposito, 2001). In spite of its merits, however, the Neosexism Scale is not without its flaws. Among them is the fact that most of the Neosexism Scale items are based on scales developed two decades ago; thus, some items may no longer be relevant. As well, the reliability of the scale has been found to be consistently lower for females than it is for males. Investigating these two potential psychometric shortcomings is the focus of the present study.

Updating the Contemporary

The Neosexism Scale (Tougas et al., 1995) was introduced as an update to old-fashioned measures, such as the AWS. Five of the Neosexism Scale items were created by Tougas and her colleagues, and the remaining six were inspired by covert racism scales developed in the 1970s and 1980s (Gaertner & Dovidio, 1986; Jacobson, 1985; Kinder & Sears, 1981; McConahay, 1986; McConahay & Hough, 1976). At the time it was developed, the Neosexism Scale was intended to overcome social desirability effects by capturing subtle sexism in a subtle manner. Whereas mean scores on the Neosexism Scale have been relatively stable since 1995, certain items have been shown to be unreliable over the years. Specifically, UNFAIR ("I consider the present employment system to be unfair to women") was found to be unreliable in Campbell et al.'s (1997) validation study, and the items UNFAIR and FAIR ("In a fair employment system, men and women would be considered equal") were eliminated from the structural equation modelling analysis of Tougas et al. (1999). Given this lack of reliability of at least two of the Neosexism Scale items it seems appropriate that, one decade after the inception of the scale, an item-level analysis be conducted in order to assess the continued relevance of all items. Two modern test theory methods will be employed, namely a test of differential item functioning (DIF) across sex, as well as an item response analysis based on item response theory (IRT).

Measurement Invariance

The Neosexism Scale was originally designed to measure the attitudes of men. When used in all-male samples, results show adequate internal consistency, with Cronbach's alpha values ranging from .71 (Beaton et al., 1996) to .76 (Tougas et al.,

1995). In mixed-sex samples, however, Cronbach's alpha has been as high as .85, but has also dipped as low as .62 (Masser & Abrams, 1999). Given this variable reliability when women are sampled, the question arises as to whether or not the scale is a valid measure of sexism among women.

To date, sex differences in mean scores have served as a testament to the construct validity of the Neosexism Scale (Campbell et al., 1997). According to Swim et al. (1995), "most tests of the construct validity of sexism scales seek to determine whether women and men respond differently to these scales" (p. 201). In other words, construct validity is established if women's scores are found to be significantly lower than those of men. Using mean differences to gauge construct validity, however, may mask other threats to validity (Embretson & Reise, 2000). For example, women and men at equivalent levels of neosexism may be responding differently on certain items, which may be giving rise to mean differences between the groups.

According to Angoff (1993), "an item is biased if equally able (or proficient) individuals, from different groups, do not have equal probabilities of answering the item correctly" (p. 4). This definition refers to item bias in cognitive ability tests. The study of item bias has its origins in the 1960s, when measurement experts were called upon to respond to the growing contention that cultural differences, rather than ability levels, were accounting for consistently lower test scores among members of visible minority groups as compared to Whites. Psychometricians now distinguish between *differential item functioning* (DIF) and item bias, with differential functioning not necessarily reflecting a bias, per se. DIF models have been applied to a wide variety of clinical tests

and psycho-social measurement scales, however determinations of prejudice or bias are left to theoreticians.

A recent finding may serve to illustrate how an item may function differently based on group membership. In their item analysis of the Center for Epidemiologic Studies Depression (CES-D) scale, Gelin and Zumbo (2003) found a reliable difference between women's and men's scores on one item, namely "crying." When matched with women on mean depression level, men were less likely to report engaging in crying behaviour and, as a result, their ratings on this item tended to be lower than those of women. The result of this differential response pattern was a lower CES-D score for men, though their actual level of depression was equivalent to that of women. Therefore, in the context of attitudes, it is conceivable that mean neosexism scores among women may be reflecting, at least in part, a differential understanding or expression of the construct as compared to men.

As mentioned, the traditional application for DIF assessments has been cognitive assessment (e.g., educational, achievement, and aptitude testing). However, there is mounting evidence that such tests have utility in other settings. For instance, sex-based DIF has been revealed in vocational preference tests (Aros, 1996), and in Likert-scale questionnaires in general (Collins, Raju, & Edwards, 2000). More relevant to the present investigation, sex-based DIF has also been detected in responses to attitudes scales. In an analysis of 982 test items measuring attitudes, Dodeen and Johanson (2003) found that women and men at the same level of attitudes responded differentially to nearly one third of all items. This finding is not surprising, since women's attitudes tend to differ from those of men on various political issues (Shapiro & Mahajan, 1986).

The implications of item bias are epistemological as well as psychometric. If item bias is present, the measurement instrument is not adequately capturing the intended construct, and inferences drawn from this instrument is not valid for both sexes. In other words, the scores for two groups may differ for two reasons: 1. The trait level of the two groups actually differs; or 2. the scale is measuring the construct on a different metric for each group. Given that the Neosexism Scale is regularly administered to mixed-sex samples, and that some researchers have used the scale to tap exclusively sexism among women (Tougas et al., 1999), it is necessary to ensure that the inferences drawn from this scale are, in fact, valid for both sexes.

Purpose and Hypotheses

According to Reise, Widaman, and Pugh (1993),"measurement invariance is a basic requirement or prerequisite for studying group differences" (p. 562). Therefore, the first goal of the present study is to use differential item functioning analysis to assess whether or not the Neosexism Scale is well-suited to capturing contemporary sexist attitudes among women as well as men. The second goal of this study is to confirm whether all 11 scale items continue to be reliable indicators of neosexism. Given the aforementioned trend toward more covert forms of sexism, it is not implausible that at least some of the Neosexism Scale items may be more *overt* in 2006 than they were when they were originally developed over a decade ago.

Method

Participants

In all, 526 (279 females, 247 males) Arts, Health Sciences, Engineering, Math, and Science students[1] taking an introductory psychology course at a large Southern

Ontario university participated in the present study. Most participants were in their first year of study[2], and were White (66%) and Asian (21%), English-speaking Canadians. The frequency distribution of reported sexual orientation was approximately 96.4% heterosexual, 2.0% bisexual, and 1.6% homosexual (lesbian females and gay males had approximately equivalent distributions). Of note, almost 15% of participants did not report their sexual orientation. Missing values analyses (using SPSS 12.0 MVA) indicated that this information was missing systematically, such that participants with higher scores on three Neosexism items (PUSH, BOSS, and UNIV; see Table 1) were less likely to indicate their sexual orientation.

Measures

Participants were invited to complete a Validation Pool Questionnaire, which included a demographic information sheet, the scale of interest for this study (including ten distractor items pertaining to sex and work), and several other scales of interest to other researchers.

Neosexism Scale. The 11 items of the Neosexism Scale (Tougas et al., 1995) appear in Table 1. Participants were asked to rate the extent to which they agreed or disagreed with each statement on a 7-point Likert-type scale, with 1 indicating total disagreement, and 7 indicating total agreement. Two items, namely UNFAIR and FAIR, were reverse-scored. The overall internal consistency of the scale, as assessed via Cronbach's alpha, was good ($\alpha = 0.79$). As expected, reliability was somewhat lower for women ($\alpha = .74$) than it was for men ($\alpha = .78$).

Procedure

The measures of interest were included in a larger Validation Pool Questionnaire.

The questionnaire was distributed during class time by graduate level teaching assistants; the professor was not present. Students were asked to fill out questionnaires on their own time, and return them after the following week's lecture. Participation was strictly voluntary, and required informed consent. Anonymity was guaranteed, as participants were not required to disclose any identifying information. Completion of the Neosexism Scale and demographic information sheet took less than five minutes. Compensation was offered to participants in the form of course credit, though credit could also be attained by other means involving an equivalent effort. Following the testing session, information detailing the purpose of the study was posted on an internet site accessible to students.

Analyses

Over the past 80 years, attitude and personality scales have been constructed and assessed using scale-level methods falling under the auspices of classical test theory (Reise & Henson, 2000). Cronbach's alpha and multi-group confirmatory factor analysis are two widely-used classical approaches for assessing reliability and cross-sample validity, respectively. However, researchers have begun to adopt a modern test theory approach, as methods under this rubric have been found to overcome the shortcomings of classical test theory approaches. These shortcomings are described, and the tools used in the present study, namely differential item functioning (DIF) and item response theory (IRT) analysis, are described.

Differential item functioning (DIF). DIF analysis is an item-level methodology, and is a prerequisite to any IRT analysis where groups differences are suspected. DIF analysis is used to distinguish between variance caused by real group differences and that caused by instrument bias (Thissen, Steinberg, & Gerrard, 1986). DIF occurs when an

item yields differing scores (i.e., differing α and *b* parameters) for respondents from different groups whose underlying trait is, in fact, the same. DIF analysis is analogous to the CTT multi-group CFA approach to testing measurement invariance, a technique with which social and personality researchers are undoubtedly more familiar. Although both techniques are used for the same purpose, namely to ensure that scale items are behaving the same way from one group to another, DIF analysis offers more information, and is a more powerful technique, particularly in the assessment of unidimensional scales.

The CFA test of invariance assesses the extent to which the number of factors, loadings, and error variances are statistically equivalent across groups. As a scale-level CTT method, CFA assumes a linear relation between trait and score, and obtained scores are influenced only by the latent trait level and error; the strength of the relation between the latent trait and items is represented by the factor loadings. DIF analysis also accounts for the relation between the item and latent trait (i.e., *a* or slope), but offers the additional parameter accounting to gauge how the obtained scores may be influenced by item difficulty; CFA does not provide *b* (difficulty) parameters (Maurer, Raju, & Collins, 1998). DIF analysis is also superior at detecting differences in response patterns. Zumbo (2003) simulated mild, moderate, and severe DIF conditions in an artificially generated sample of Test of English as a Foreign Language responses. He analysed the extent to which multi-group CFA could detect invariance, and found that even when as many as 42.1% of items displayed large DIF, the CFA results indicated that the factor structure, loadings, and error variances were statistically equivalent.

Several methods of detecting DIF have been developed since they were first introduced. All methods are designed to match groups on the construct being assessed,

but differ in the way that the conditioning criterion, or trait level, is calculated. Methods can be roughly categorised into two types: those which use observed scores (i.e., the total score) or those which estimate the latent trait using maximum likelihood methods. The method for testing the presence of DIF in the present study was modeled on procedures used by Slocum, Gelin, & Zumbo (2003) using Ordinal Logistic Regression (OLR). This procedure involves matching both sex groups on total scores before looking for group differences in item responses.

Using Zumbo's OLR procedure, DIF is assessed in three steps. First, an overall test of the difference between the full and the null models is conducted. If significant, uniform DIF is tested (consistent differences across trait levels). If uniform DIF is not found, the item is deemed to have non-uniform DIF (intersecting differences across trait levels). Two criteria are used to evaluate DIF: a 2 df χ^2 significance of $p < .01$ (Slocum et al., 2003); and an R^2 of less than 0.035 (Jodoin & Gierl, 2001, as cited in Slocum et al., 2003). In a comparison of four observed-score methods for DIF detection in ordinal items, Kristjansson and her colleagues (Kristjansson, Ayelsworth, Boss, McDowell, & Zumbo, 2003) demonstrated that an unconstrained version of Zumbo's OLR demonstrated excellent performance. Power for uniform DIF averaged 0.96, power for nonuniform DIF was nearly perfect at .99, and Type I Error was near the nominal rate of 0.05.

Item response analysis. Scale reliability is most commonly assessed via Cronbach's alpha (Cronbach, 1951). An internally consistent scale is expected to have an overall coefficient alpha of .70 or higher (Nunnally, 1978), with little benefit with coefficient levels beyond .80 (unless the scale is used in deciding the fate of an

individual; John & Benet-Martìnez, 2000). In addition, item-total correlations are examined for possible item elimination; items are removed if their exclusion substantially increases the overall alpha.

Although Cronbach's alpha is a quick and accessible method of checking the internal consistency of a scale, "it is not a panacea" (John & Benet-Martìnez, 2000, p. 343). Analysts have noted two problems with coefficient alpha. First, it is a function of the number of scale items. In fact, the overall alpha may be increased by simply adding more items to the scale, even if the inter-item correlations are low (for a graphical depiction of this statistical artefact, refer to John & Benet-Martìnez, 2000, p. 345). Thus, an adequate overall alpha may mask a scale comprised of a large set of poorly-related items. A second problem of note is that coefficient alpha is sample-dependent. It is a function of its item-total correlations, which are affected by sample variance. As such, the reliability of a scale may be high in a heterogeneous sample because of the higher variability commonly associated with these samples (Reise & Henson, 2003), and not because the scale is a better gauge of the construct in that population.

Model-based Item Response Theory (IRT) methodologies overcome the limitations of Cronbach's alpha by offering a parsimonious, sample-free method of examining the relation between scale items and the construct they are intended to measure. The key difference between the two approaches is that all methods under CTT assume a one-to-one relation between underlying trait level and score, such that higher scores necessarily correspond to higher trait levels. As such, CTT assumes that reliability and error are constant for all respondents, regardless of their standing on the true score (Reise & Henson, 2003). In contrast, IRT (the 2PL model, specifically) proposes that the

metric for each person's score on an item may differ depending on its level of *discrimination* and *difficulty*.

Item-level analyses of polytomous (i.e., Likert-type, 1, 2, 3...) scales, such as the Neosexism Scale, generate one parameter for discrimination (or slope with polytomous items, or α), and several parameters for between category thresholds (b), or difficulties. Item discrimination is an index of how well the item distinguishes participants who are high versus those who are low on a trait. High item discrimination indicates that an item is very sensitive in detecting changes across trait levels. Low item discrimination indicates a low association between the item and the trait, and inclusion of such items in a scale leads to inaccurate total scores.

Item difficulty is an index of how high one's trait level must be in order to achieve a particular score on an item. The b parameters in polytomous IRT models represent the trait levels necessary to respond above a certain threshold with a .50 probability. The number of b parameters is equal to the number of response categories minus one. In the case of the Neosexism Scale, there are 7 response categories, yielding 6 b parameters. An item with a high level of difficulty would yield high scores only from those participants high on the trait level. The assessment of item difficulty underscores the potential for a variable metric for each item. For instance, a score of 4 on an item with a high level of difficulty could be indicative of a higher trait level than a score of 5 on an item with a lower level of difficulty. Therefore, without assessing item difficulty, there is no way of knowing whether a total or mean scale score is providing the most accurate reflection of the trait level.

IRT overcomes the first problem noted with Cronbach's alpha in that item

reliability using IRT modelling is unaffected by the number of scale items. Discrimination and difficulty parameters are based on the relation between the item and the trait level, as estimated via maximum likelihood methods, not the relations among the items, *per se*. In fact, the goal of IRT is to achieve the smallest number of reliable items (Embretson & Reise, 2000). Discrimination and difficulty parameters are also unaffected by sample variability. IRT uses the full range of trait levels in determining how well each item relates to the construct of interest. In reliable items, there is a good match between trait levels and response probabilities, such that higher trait levels are associated with a higher probability of responding in higher response categories. The overall (scale-level) relation between the item and scale scores is not of interest; rather, we are looking at the probability of response in each category option based on trait level. In this manner, although the test is measured in a particular sample, the reliability parameters are not tied to that sample; rather, they are based on trait level, which is one factor responsible for the item score. This sample-free advantage of IRT makes it possible to compare responses to items completed by two different groups, though one group may display a higher mean level on the latent trait.

Results

Preliminary Analyses

Examination of the Neosexism Scale item distributions indicated that the variables were fairly normally distributed, with skewness values ranging from -0.01 to 1.50, and kurtosis values ranged from -0.06 to 2.11. Taken together, mean neosexism scores for females ($M = 2.85$, $SD = 0.67$) were significantly lower than were those for

males ($M = 3.38$, $SD = 0.76$, $t(493) = 8.50$, $p < .001$; see Table 2 for correlations, means, and standard deviations for individual items).

Analyses under the IRT paradigm have two requirements. First, the underlying latent trait (in this case, neosexism) must be unidimensional. Second, item responses must not depend on responses to other items (i.e., there must be local independence). Violation of these two assumptions may be avoided, at least in part, by ensuring that the scale represents only one factor. Tougas and her colleages (1995) introduced the scale as a unidimensional representation of sexism, and several validation studies have confirmed a single-factor structure (Campbell et al., 1997; Masser & Abrams, 1999).

The unidimensionality assumption was tested using a nonlinear principal components analysis in PRELIS, an appropriate assessment of ordinal data, and as has been recommended by methodologists in preparation for IRT analysis (Hambleton & Rovinelli, 1985; Hattie, 1984, 1985). The first component accounted for 37.09% of the variance in neosexism scores, which was larger than the recommended criterion of 20% (Reckase, 1979); and the second component was substantially smaller than the first at 12.63%. The ratio of the first to the second eigenvalues was 4.08:1.39 = 2.94, a value only slightly under the recommended 3:1. Therefore, it was concluded that a unidimensional representation of the data was adequate.

Item Analyses

The analysis of the Neosexism Scale items was conducted in two steps. Scale items were first tested for DIF to determine whether or not item response patterns were equivalent across sex groups. Next, overall item response analysis was carried out to

assess how well each item related to the latent trait (neosexism), and how well each discriminated among respondents with higher versus lower levels of neosexism.

DIF analysis. Using men as the reference group and women as the focal group, a differential item functioning analysis was assessed via OLR using the SPSS 12.0 statistical software program. Eleven sets of χ^2 tests were conducted using Zumbo's (1999) OLR procedure. Each set included three tests: 1. the 1 *df* test of the total score; 2. the 2 *df* test of group (i.e., sex in this case) while holding total score constant; and 3. the 3 *df* test of the Group x Total Score interaction. DIF is assessed by subtracting the first from the third test, yielding a 2 *df* χ^2 test of the effect of the Group x Total Score interaction while holding total score constant. This test is also the test of non-uniform DIF. If significant, the next step would be to test the effect of group while holding total score constant (i.e., subtracting the effect of the total score, or step 1 from step 2).

Analyses indicated that none of the χ^2 tests was both significant and meaningful (i.e., none of the effect sizes were in excess of 0.035, see Table 3). Therefore, DIF was not detected for any of the 11 items of the Neosexism Scale. Only CHANGE showed borderline DIF, χ^2 (2) = 15.18, $p < .001$, $R^2 = 0.02$. Therefore, item response analysis may be conducted on the scale, combining responses of both women and men.

IRT analysis. Given that the Neosexism Scale items are rated in terms of multiple ordinal response categories, the polytomous *graded response model* (GRM; Samejima, 1996) was the most appropriate choice for the present analysis (Embretson & Reise, 2000)[3]. Maximum likelihood methods are used to estimate α and *b* parameters, and item characteristic curves (ICC) are used to graphically represent the curvilinear relationship between items and the latent trait they represent. Each response curve

represents the probability of a particular response conditional on trait level, item difficulty, and item discrimination. Response patterns for each of the 11 Neosexism Scale items were compared to the maximum likelihood estimate of the latent trait using MULTILOG 7.03. Of the 11 items, 8 were found to be highly or at least adequately related to the latent trait, and were found to differentiate extremely well between categories. Discrimination parameters for these items ranged from $\alpha = 1.08$ to $\alpha = 2.32$ (see Table 4). Threshold parameters for these items indicated that all category responses were evenly distributed across trait levels. Three items, PROBLEM, UNFAIR, and SEXIST, displayed very poor item discrimination (ranging from $\alpha = 0.50$ to $\alpha = 0.81$). Item discriminations for HIRE and FAIR were also low, but acceptable ($\alpha = 1.08$ and $\alpha = 1.03$, respectively).

Figure 1 displays the ICCs for DESERVE and UNFAIR. As can be seen, seven curves are displayed in each graph (recall that the Neosexism Scale response options range from 1 to 7). The y-axis represents the probability of response, and the x-axis represents the trait level (neosexism level, standardised). For a reliable item, one would expect that the probability of responding at a certain level would match the trait level. In other words, an individual with low neosexism should have a higher probability of scoring a 1 or a 2 on each item than scoring a 6 or 7. The ICC for DESERVE provides an example of an *excellent* item. The ICC for UNFAIR is displayed below the first, and provides an example of a *poor* item.

Discussion

The Neosexism Scale has been used widely since its inception nearly 10 years ago. In comparison to other measures, it has been deemed to provide a highly accurate

account of contemporary sexist attitudes. The methods used to assess the reliability and validity of the scale, however, have several shortcomings. The present study represents an effort to address these inadequacies by providing a test of sex invariance, as well as a detailed item analysis, under the modern test theory paradigm.

Although sex-based item bias has been found in attitude scales (Dodeen & Johanson, 2003), the presence of sex DIF was not detected in any of Neosexism Scale items. Only the item tapping into beliefs about women pushing too hard for change (PUSH) showed a significant χ^2 value, though the effect size was not sufficiently large to corroborate the presence of DIF. Thus, measurement invariance was established across sex, meaning that all of the Neosexism Scale items were shown to be free from DIF. It can be concluded, therefore, that mean sex differences are strictly the result of item impact without the influence of instrument bias, and that the scale is as scientifically valid for measuring contemporary sexism among women as it is among men. Researchers may use the Neosexism Scale with confidence as a valid measure of contemporary sexism in all-male, all-female, and mixed-sex samples.

Having established the absence of sex-based DIF, the next step was to conduct an IRT analysis on the sample as a whole in order to assess the reliability of the Neosexism Scale, item-by-item. Poorly-performing items have the consequence of generating inaccurate total scores, as ratings on unreliable items do not reflect an accurate trait level, and inferences based on these scores are necessarily inexact. The IRT analysis revealed that the performance of eight of the 11 items ranged from adequate to excellent. These items were moderately to highly related to the latent trait, and discriminated well among

respondents who had lower endorsement versus those with higher endorsement of neosexist beliefs and attitudes.

Three items, PROBLEM, UNFAIR, and SEXIST, were found to be unrelated to neosexism, and had poor discrimination. SEXIST was developed by Tougas and her colleagues (Tougas et al., 1995), while the remaining two items were based on modern racism scales developed nearly 20 years ago (Gaertner & Dovidio, 1986; McConahay, 1986). It is possible that these items have outlived their usefulness, and that they now bear a stronger relation to explicit rather than to covert attitudes. Alternatively, there may be some ambiguity in their interpretation. In the SEXIST item, the context and social role of women and men may be ambiguous. PROBLEM and UNFAIR may have yielded high scores for otherwise low neosexist individuals. Some people may view that discrimination is no longer a problem because, although they otherwise endorse feminist values and goals, they feel that the battle for workplace equality is over. Also, the introduction of equity programs legislating equality in the workplace may give the impression that the workforce is more egalitarian than it actually is. Given the poor performance displayed by these three items, it is recommended they be eliminated from the Neosexism Scale.

To the classical test theorist, outright item elimination may seem rash as, at 11 items, the Neosexism Scale is already a short measure. However, the aim of IRT is to measure the latent trait with a minimum number of maximally-discriminating items. The advantage of having used IRT to assess reliability is that the scale has been reduced to eight highly discriminating, highly reliable items, and is more accurate than its 11-item predecessor. For the skeptical or the curious, a re-calculation of Cronbach's alpha on the

reduced 8-item scale showed no change to the overall internal consistency. In fact, the alpha coefficient for women and men was actually equalised (Cronbach's $\alpha = 0.76$).

In spite of the many advantages to IRT analysis, this technique is not without its shortcomings. An important limitation of IRT relevant to research in social psychology and personality is the assumption of unidimensionality. The present analysis worked well because neosexism is most accurately represented by a single dimension. However, an assessment of the Ambivalent Sexism Inventory (Glick & Fiske, 1996), for instance, with Hostile and Benevolent components, would require a multidimensional technique. Currently, dimensionality is most commonly assessed with the linear model (exploratory and confirmatory) factor analytic approach. However, linear factor analysis assumptions, notably normality of distributions and a continuous metric, are regularly violated; data are rarely completely normal, and scales are almost always ordinal (i.e., 1, 2, 3... Likert-type), at best. These violations can have serious consequences on results obtained and inferences made (Waller, Tellegen, McDonald, & Lykken, 1996). Although less well-developed, nonlinear factor analytic models are available (Waller et al., 1996). Alternatively, the full-information item-factor analysis model, which combines the intuitively appealing factor analytic and the rigourous IRT measurement approaches, may be used (Johnson, Cohen, & Junker, 1999; Muraki & Carlson, 1995). More research is required on both nonlinear factor analysis and multidimensional polytomous IRT modelling before either of these techniques are recommended over traditional factor analysis for multi-dimensional constructs.

An oft-cited research limitation in psychological papers pertains to the generalizability of research findings associated with samples comprised entirely of first-

year introductory psychology students. As already mentioned, item-total correlations are sensitive to sample variance, and can differ substantially across samples. However, a major advantage of IRT is that an "unbiased estimates may be obtained from unrepresentative samples" (Embretson & Reise, 2000, p. 23). A comparison of the present results with those obtained in a more heterogeneous sample, such as a work setting, would allow us to assess the extent to which this theoretical claim is true in practical terms.

Once used almost exclusively in cognitive assessment, applications of DIF and IRT are on the rise in social and personality assessment (Dodeen & Johanson, 2003), as well as in organisational research (Collins, Raju, & Edwards, 2000; Maurer, Raju, & Collins, 1998). In terms of the present study, modern test theory has furthered insight into neosexism as a theoretical construct and a measurement tool. The absence of DIF confirms that neosexism is an attitude present in both women and men, and that its conceptualisation is independent of sex. Additionally, the improved measure will help researchers to more accurately investigate of the origins and consequences of neosexist beliefs and attitudes, particularly among women, who are essentially rating their in-group. It is recommended that IRT and DIF analyses also be used to assess the reliability and cross-group validity of other measures, such as the Modern Sexism (Swim et al., 1995) and Modern Racism (McConahay, 1986) scales. Old-fashioned attitude measures could also be assessed to corroborate or dispute recent findings that these attitudes are not, in fact, "dead" (Leach, Peng, & Volckens, 2000).

Although the present study presents important findings in the measurement and understanding of contemporary sexism, the implications and applications of modern test

theory in social and personality research reach well beyond this paper. One application is strictly practical. By improving scale efficiency, IRT analyses have the advantage of trimming overly-lengthy questionnaires, which are cumbersome for both respondent and researcher. Another practical application of IRT would be that it could provide a facile solution to the problem of attitudes scales becoming dated over time. Stereotypes change over time (Hilton & von Hippel, 1996), and it is incumbent upon researchers to ensure that psychometric measurement keeps apace with social change. IRT would be very useful in isolating unreliable, outdated items, and testing new, contemporary ones. In fact, banks of items matched on difficulty and discrimination could be generated and applied in testing such concepts as attitude or identity change. The advantage of IRT-based tests in this case would be methodological. At time 1 and time 2, parallel tests could be administered--identical psychometrically, but comprised of entirely different items. In this manner, attitude or identity change could be assessed prior and subsequent to a manipulation or an intervention, without the artefact of carryover effects, particularly if the period between testing sessions is short.

One final implication pertains to inferences based on cross-national research. Any measurement instrument developed in one culture or context must be tested for measurement invariance when inference-making about another culture or context is the goal. In this case, DIF could be used to first assess the measurement instruments along linguistic and cultural lines (Kristjansson, Desrochers, & Zumbo, 2003) before theoretical conclusions are drawn about mean differences between cultures.

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Footnotes

[1]Only one student was enrolled in a program other than those listed.

[2]Age of participants was not available in the sample.

[3]The modified graded response model may have been chosen instead, as all items are identical in format; however, Multilog does not provide the M-GRM option.

Table 1

Neosexism Scale Items and References

#	Name	Item
1	PROBLEM	Discrimination in the labour force is no longer a problem in Canada (McConahay, 1986).
2	UNFAIR	I consider the present employment system to be unfair to women (Gaertner & Dovidio, 1986).
3	PUSH	Women shouldn't push themselves where they are not wanted (Gaertner & Dovidio, 1986; Kinder & Sears, 1981; McConahay, 1986).
4	CHANGE	Women will make progress by being patient and not pushing too hard for change (Jacobson, 1985).
5	BOSS	It is difficult to work for a woman boss.
6	REQUEST	Women's requests in terms of equality between the sexes are simply exaggerated (McConahay, 1986; McConahay & Hough, 1976).
7	DESERVE	Over the past few years, women have gotten more from government than they deserve (McConahay, 1986).
8	UNIV	Universities are wrong to admit women into costly programs such as medicine, when in fact a large number will leave their jobs after a few years to raise their children.
9	SEXIST	In order not to appear sexist, many men are inclined to overcompensate women.
10	HIRE	Due to social pressures, managers frequently have to hire underqualified women.
11	FAIR	In a fair employment system, men and women would be considered equal.

Table 2

Correlations and Descriptive Statistics for Neosexism Scale Items

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. PROBLEM	-	.34***	.20***	.21***	.09	.23***	.16***	.17***	.02	.08	.11**
2. UNFAIR		-	.19***	.19***	.05	.21***	.13**	.14**	.00	.03	.07
3. PUSH			-	.45***	.42***	.41***	.47***	.35***	.23***	.23***	.22***
4. CHANGE				-	.30***	.51***	.50***	.25***	.28***	.28***	.17***
5. BOSS					-	.35***	.39***	.25***	.19***	.21***	.36***
6. REQUEST						-	.49***	.25***	.28***	.39***	.30***
7. DESERVE							-	.33***	.29***	.40***	.26***
8. UNIV								-	.17***	.19***	.31***
9. SEXIST									-	.40***	.13**
10. HIRE										-	.19**
11. FAIR											-
M	3.16	4.33	2.89	3.26	2.67	3.39	2.67	1.90	4.13	3.55	2.16
SD	1.26	1.23	1.51	1.31	1.53	1.36	1.30	1.19	1.24	1.34	1.51

Table 3

DIF Statistics

Item		χ^2 (2*df*)	R^2
1	PROBLEM*	0.13	0.001
2	UNFAIR*	5.08	0.009
3	PUSH	0.14	0.000
4	CHANGE	15.18***	0.020
5	BOSS	3.67	0.006
6	REQUEST	7.38*	0.009
7	DESERVE	3.21	0.004
8	UNIV	8.67*	0.013
9	SEXIST*	10.10**	0.018
10	HIRE	8.07*	0.013
11	FAIR	2.27	0.004

Notes. *p < .05. **p < .01. ***p < .001. *poor items.

Table 4

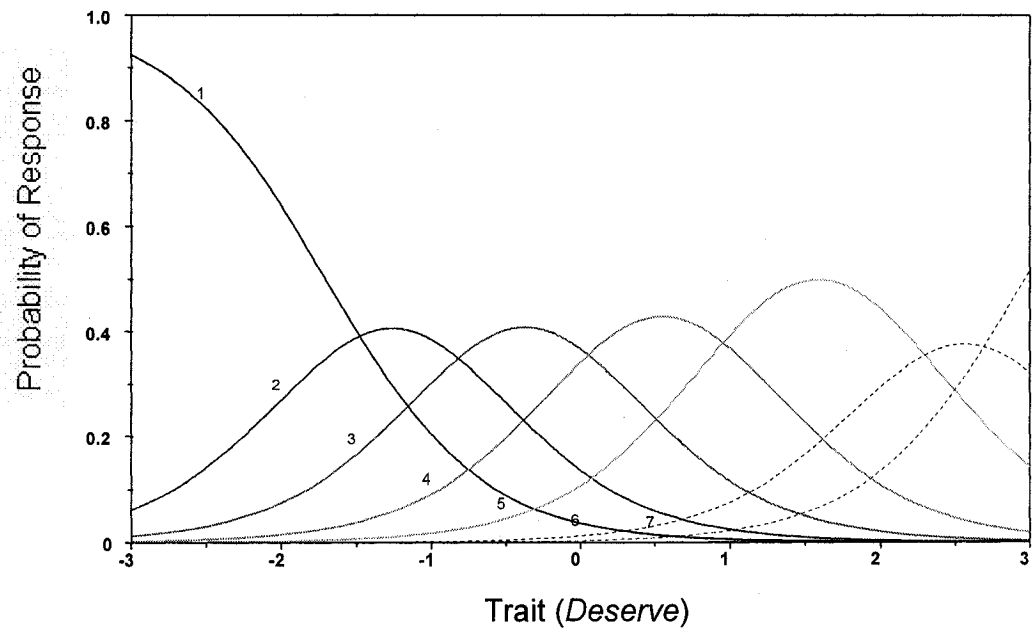
IRT Parameters for Neosexism Items

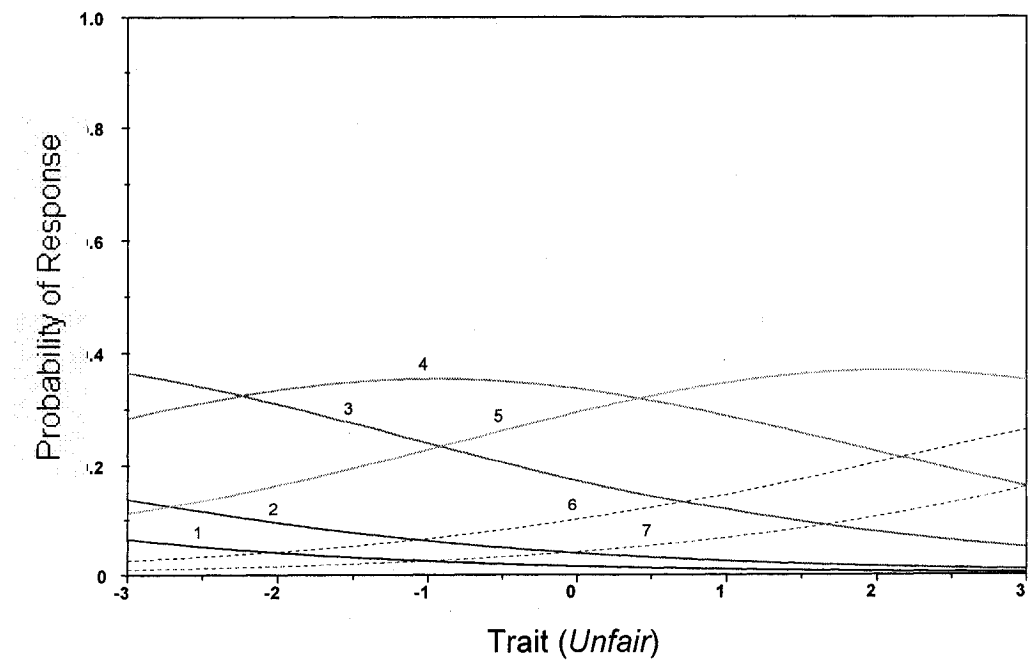
Item		α^a	$b1^b$	*b*2	*b*3	*b*4	*b*5	*b*6
1	PROBLEM	0.67	-3.78	-1.69	1.28	2.96	4.42	6.92
2	UNFAIR	0.50	-8.36	-5.73	-2.45	0.51	3.60	6.29
3	PUSH	1.85	-1.03	-0.16	0.58	1.36	2.08	2.81
4	PROGRESS	1.85	-1.80	-0.68	0.26	1.27	2.34	3.49
5	BOSS	1.35	-0.82	0.11	0.82	1.88	2.64	3.43
6	REQUEST	1.93	-1.71	-0.82	0.08	1.02	2.15	2.97
7	GOVT	2.32	-0.83	-0.08	0.62	1.84	2.59	3.12
8	UNIV	1.28	0.08	1.07	2.01	2.96	3.84	4.54
9	SEXIST	0.81	-4.83	-2.97	-1.16	0.28	3.18	4.96
10	HIRE	1.08	-2.74	-1.39	-0.13	1.24	2.87	4.44
11	FAIR	1.03	-0.16	0.97	2.00	2.41	3.25	3.91

a = discrimination; b = threshold parameters

Figure Caption

Figure 1. Item Characteristic Curves (ICCs) for *Deserve* (Excellent Item) and *Unfair* (Poor Item)


Probability of Response
1.0
0.8
0.6
0.4
0.2
0
-3
-2
-1
0
1
2
3
1
2
3
4
5
6
7
Trait (*Deserve*)


Probability of Response
1.0
0
-3
-2
-1
0
1
2
3
1
2
3
4
5
6
7
Trait (*Unfair*)

Running head: THINK MANAGER, THINK *NOT* FEMALE

CHAPTER 3: Study 2

Think Manager, Think *Not Female*: Linking Attitudes to Stereotypes

Abstract

The present study tested the hypothesis that attitudes, over and above perceiver sex, would predict stereotyped perceptions of female managers. This conjecture was tested among 106 female and 117 male business management students who each completed one of three versions of a questionnaire measuring perceptions of *successful female managers*, *successful male managers,* or *successful managers in general.* Hierarchical regression analyses were performed on the seven subscales of the Scale of Stereotyped Attributes (Heilman, Block, & Martell, 1995), representing characterisations of successful managers': 1. Work Competence, 2. Activity/Potency, 3. Emotional Stability, 4. Rationality, 5. Independence, 6. Concern for Others, and 7. Hostility Toward Others.

Perceiver sex, alone, was found to have little predictive efficacy. Neosexism, however, predicted perceptions of female managers as less competent (e.g., inferior leaders, less skilled in business matters) than the prototypical manager. Neosexism also interacted with perceiver sex to reveal a pattern of stereotyping that differed between females and males. This finding is interpreted, and further investigation under the paradigm of social identity theory is suggested.

Think Manager, Think *Not Female*: Linking Attitudes to Stereotypes

> There's an overlap in people's minds between the qualities that we associate with leadership and the qualities we associate with masculinity—decisiveness, aggressiveness, competence. There is much less overlap between leadership qualities and those we associate with being feminine—an inclination toward consensus building, to being communal, expressive, nurturing. That's why for many people it was rather disturbing that I was Prime Minister. A woman wasn't supposed to be Prime Minister. (The Right Honourable Kim Campbell, in Campbell & Morse, 2002, p.20).

Adopted by Parliament in 1977, the Canadian Human Rights Act (1976-77) rendered sex discrimination illegal in the Canadian workplace. The achievement of this legislation was a major milestone in the Canadian labour movement, and served as a catalyst for women's career progress. Women presently constitute nearly half of all Canadian workers, with the strongest representation in the healthcare, trade and education sectors (Statistics Canada, 2001). Perhaps one of the best exemplars of women's professional progress has been the trajectory of women in management. Historically dominated by men, the proportion of women in management has increased by more than 40% over the past decade (Statistics Canada, 2003).

It might be tempting to conclude that, in time, women managers will gain an equal footing to men, and that continued investigations of inequity are outdated and unnecessary; but, such conclusions would be precipitous. At present, female managers are still segregated in terms of earnings, power, and prestige (Gibelman, 2003; Statistics Canada, 2003). The top of the corporate ladder remains prohibitive, as women continue

to occupy a minority (just under 25%) of senior management positions, and constitute only 0.4% of Fortune 500 CEOs (Catalyst, 2000). The resistance to female leadership is evidenced in the public sector, as well, where women constitute only 20% of Ministers of Parliament and Cabinet Ministers. Women who do succeed in ascending to higher echelons of leadership earn 64% of the salary of men holding equivalent jobs (DeLaat, 1999). In fact, a comparison of earnings for full-time managers in 1995 and 2000 reveals that the wage gap between women and men has actually widened in 7 of the 10 major industries examined (i.e., communications; business and repair; entertainment and recreation; retail trade; finance, insurance, and real estate; professional medical services; and other professional services; Lips, 2003). These statistics are disconcerting, given that equity programs have been legislated for nearly two decades with the specific mandate of eliminating workplace inequality (Employment Equity Act, 1986).

Why does sex segregation persist in field of management? Two root causes have been explored in the literature. Some researchers have argued that women avoid entering traditionally male fields of employment as a matter of personal choice, because such workplaces are competitive and hierarchical, and women are thought to prefer work settings offering collaborative relationships with coworkers and more egalitarian power structures. A more pervasive and contemporary view attributes the proportional asymmetry to contextual rather than person-centred factors. The most prevalent and damaging of these factors is stereotyping, or the view that women simply do not possess the ideal combination of traits and dispositions to succeed as managers.

Males have been targeted as the main instigators of such perceptions because, by virtually all accounts and measures, they have displayed significantly higher levels of

stereotyping than females. It is argued that their obstinate view of women as not measuring up to an ideal (i.e., stereotypically male) standard of management is particularly harmful because they are situated in positions of authority, and hold the power to maintain the status quo.

By attributing stereotyping to males, however, researchers have reverted back to a person-centred approach to understanding the sexual asymmetry in the distribution of top jobs, this time blaming men's perceptions as opposed to women's choices. Researchers have also ignored the participation of women in this social process as little more than helpless victims. However, some research has shown that, under certain circumstances, women also hold prejudicial views against members of their own sex. Acknowledging women not only as targets but also as agents of stereotyping is the necessary ingredient for jarring the stalemate generated and maintained by the assumptions that women are all egalitarian, and that their negative views of women have benign consequences.

For these reasons, the present study challenges the assumption of biological sex as a precursor to stereotyping, and presents attitudes toward the distribution of sex roles as the more important factor prompting people—both women and men—to hold stereotyped perceptions of women. The present study does not seek to engage in victim-blaming; on the contrary, acknowledging that women and men share attitudes that may lead to women's subjugation necessarily situates stereotyping as a social process available to all people, regardless of sex. It thus places women's social psychology on an equal footing to that of men.

Explaining the Inequalities: A Matter of Personal Choice?

Prior to the 1970s, person-centred explanations of workforce segregation were common (Burn, 1996). For instance, it was argued that women self-selected lower-paying, "feminine", occupations because of their personal preference for jobs that were more pleasant and more conducive to mothering. However, the workforce structure contradicts this contention, in that women tend to be clustered in occupations requiring high levels of exertion, and offering inflexible hours. Also ironic is the fact that historically male-dominated positions, such as management, are less physically strenuous, and offer a level of autonomy more conducive to balancing work and parenting roles (Glass & Camarigg, 1992).

A more recent person-centred explanation has been the possible lack of interest, motivation, and/or comfort among women to manage in hierarchical contexts. A meta-analysis of 51 samples found that men reported having a stronger desire to manifest competitive and assertive qualities in managing (Eagly, Karau, Miner, & Johnson, 1994). The difference found was minimal, however, and more recent evidence suggests that this difference is diminishing, non-existent, or losing relevance. According to a meta-analysis of 242 studies of sex differences in job attribute preferences spanning three decades, the extent to which women value challenge, leadership, prestige and power is actually closing in on men's levels (Konrad, Ritchie, Lieb, & Corrigall, 2000). If university enrollment figures may serve as a testament, there is no lack of interest among women for careers in management. Business management programs attract the third highest numbers of female students, and women in these programs have outnumbered men for at least a decade (Statistics Canada, 2001). As well, a recent study of managers in Hong Kong and

mainland China found no sex differences in the motivation to manage (Ebrahimi, Young, & Luk, 2002). There is evidence to suggest that the hierarchical culture of management, itself, is also changing. By recent accounts, the most effective leadership style in contemporary organizational settings is one that is democratic, transparent, participatory, empowering, and team-based (Cleveland, Stockdale, & Murphy, 2000; Fondas, 1997; Garvin, 1993). This leadership style is the one more often adopted by, and ascribed to, women (Eagly & Johannesen-Schmidt, 2001). Therefore, even from a person-centred perspective, women have been found to possess the desire, drive, and ability to manage in both traditional and contemporary management contexts.

Stereotyping: A Situation-Centred Explanation

As demonstrated in the previous section, the power and earnings segregation of working women is not the result of their systematic, free and deliberate choice of careers that are poorly remunerated, strenuous, inflexible, non-prestigious, and offer little power to exercise professional autonomy; nor are these iniquities the result of women's lack of motivation or inability to manage effectively in hierarchical organizations. Person-centred explanations of workforce segregation have been shown to have weak predictive power and, in fact, could be construed as nothing more than sex-typed assumptions regarding the traditional role of women. Researchers focussing on more systemic or situation-centred (Burn, 1996) factors have investigated such stereotyping as the strongest proverbial girder supporting the *glass ceiling* (Hymowitz & Schellhardt, 1986).

In a survey of managerial and professional women (Catalyst, 2002), several factors were cited as stifling women's progress, including the lack of senior or visibly successful role models, lack of significant general management or line experience,

commitment to family or personal responsibilities, and lack of mentoring. Topping the list, however, was the stereotyping of women's roles and abilities. As she unequivocally expressed in the introductory quotation of this paper, the Right Honourable Kim Campbell felt as though she was not viewed to *measure up* to the expected (i.e. male) leadership stereotype. Research has corroborated the damaging consequences of stereotyping reported by professional women. Women—by virtue of their sex—are disfavoured in terms of how their work is evaluated (Chung, Marshall, & Gordon, 2001), how their feedback is perceived by subordinates (Sinclair & Kunda, 2000), how rapidly they are promoted (Tharenou, Latimer, & Conroy, 1994), and whether or not they are hired at all (Harvie, Marshall-McCaskey, & Johnston, 1998).

For nearly three decades, Schein and her colleagues (see Schein, 2001, for a review) have examined the stereotyping of women managers in the U.S. and, more recently, in the U.K., Germany, China, and Japan. The point of departure for Schein's research is the *think manager, think male* hypothesis. This hypothesis purports that people view the role of manager androcentrically. In other words, when people think of a typical manager, the image of a male—possessing stereotypically male characteristics—comes to mind; the image of a female is simply not evoked.

To operationalise this phenomenon, Schein developed the Schein Descriptive Index (SDI; Schein, 1973). Comprised of a list of 92 traits typically associated with either females or males (but not both), the SDI asks participants to rate the extent to which each trait applies to one of three categories of people: *women in general*, *men in general*, or *successful middle managers*. Of note is that the last of these conditions makes no reference to the sex of the managers. Participants in the *successful middle managers*

condition are thereby prompted to characterise what they view to be *prototypical* managers. Stereotyping is signalled by a lack of correspondence between the standard set for the prototype and ratings of female targets (or between the prototype and male targets).

An important merit of the SDI is that, unlike popular measures of gender role perceptions (e.g., Bem Sex-Role Inventory; Bem, 1974), the presence or absence of stereotyping is not assessed against a pre-supposed categorisation of traits as feminine or masculine. There are two benefits to using this methodology. First, the researcher is able to avoid unnecessary (and possibly inaccurate or outdated) interpretations of what is stereotypically *feminine* or *masculine*. Secondly, the researcher is able to avoid participating in a "metalevel" of stereotyping (Condor, 1988), or the proliferation and reinforcement of stereotypes by the perpetual attribution of traits to a specific sex in her research.

Schein's initial (1973; 1975) findings among middle managers in the U.S. showed that both female and male raters sex-typed the managerial role. A reliable correspondence was found between the traits ascribed to males and those ascribed to the protoypical manager (e.g., logical, competent). There was a mismatch, however, between the traits ascribed to the prototypical manager and those ascribed to females. Females were perceived to lack traits requisite to managing. In addition, traits typically associated with females (e.g., helpful, aware of other's feelings) did not correspond to the managerial profile.

More recent SDI replications in the U.S. (Brenner, Tomkiewicz, & Schein, 1989; Deal & Stevenson, 1998; see Schein, 2001, for a review) indicate that women have come

to perceive women and men to be equally capable as leaders. Although males continue to perceive a woman-manager discord, there is no longer a gap between how women perceive females and how they characterise managers. Schein (2001), as well as researchers corroborating the attenuation of stereotyping among women (Deal & Stevenson, 1998), have identified perceiver sex as the key predictor of sex stereotyping. Because of the stability in stereotyping displayed by male participants across these replications, males have been targeted as the main culprits in thwarting women's career progress. However, several important drawbacks associated with this assumption are outlined below.

Perceiver Sex is Not a Panacea: Women as Agents of Stereotyping

Over a dozen studies have used the SDI paradigm to examine stereotyping in the managerial context. By SDI accounts, women in the U.S. have become egalitarian in their perceptions. Replications among management students in the U.K. and Germany (Schein & Mueller, 1992) and in the People's Republic of China and Japan (Schein, Mueller, Lituchy, & Liu, 1996), however, have revealed that women in these cultures sex-type the managerial position as much as do men (though to a greater extent in Japan than in China, the U.K., and Germany). Both female and male managers and business management students were found to share the view that women lack leadership and analytical abilities, business skills, and a desire for responsibility; males additionally were found to view women to lack a desire for competition, whereas females were found to view women as lacking self-confidence.

Schein (2001) suggests that women may serve as a "barometer of change" (p. 681), and that the level of stereotyping among women could be directly linked to

differences in attitudes resulting from the differential proportional representation of women managers in the countries sampled. Indeed, a comparison of International Labour Office (2001) statistics and SDI findings (Deal & Stevenson, 1998; Schein & Mueller, 1992; Schein, Mueller, Lituchy, & Liu, 1996) indicates that, at least at face value, the proportion of female senior officials and managers in each of the countries studied by Schein and her colleagues matches the level of stereotyping in an exactly reversed ranking. For instance, the smallest proportion of female managers was found in Japan (about 9%), corresponding to the highest level of stereotyping; the U.S. had the largest proportion of female managers (about 46%), and the lowest (i.e., ostensibly non-existent) level of stereotyping. Empirical evidence supports this hypothesis among men, but not women. In their analysis of the impact of 9%, 20%, 35%, and 45% representation contexts on managerial attitudes toward female managers, Lortie-Lussier and Rinfret (2002) found context to have no impact on female managers' attitudes, though male managers' attitudes were significantly better in the 45% as compared to the 9% (i.e., token) condition. Of note is that none of the countries studied by Schein and her colleagues, with the exception of the U.S., had a proportion of female managers of 35% or more.

Across time and place, perceiver sex has been shown to be an inconsistent predictor of sex-typing. This inconsistency suggests that it is not biological sex that is guiding perceptions, but rather some other predictor. Schein (2001) and Eagly and Karau (2002) have conjectured that the shift in females' perceptions may be due to changing attitudes among women. Yet, the link between attitudes and sex-typing under the SDI paradigm has not been assessed. Critics of sample segregation (Condor, 1988; 1989;

Henwood, 1994) have argued that studies drawing conclusions based on variables such as race or sex, without exploring the underlying reasons for those differences, assume that "differences between groups are simply natural, intractable and non-negotiable" (Henwood, p. 44). A handful of studies have emerged recently that have gone beyond demographics, and have examined attitudes toward women as a qualifier for sex as a predictor (Konrad & Hartmann, 2001; Konrad & Spitz, 2003; O'Connor, Gutek, Stockdale, Geer, & Melançon, 2004). In all cases, attitudes have been found to fully or partially mediate sex differences.

For instance, in their examination of sexual harassment judgements, O'Connor and colleagues (2004) found that, although women were more likely than men to define a case as sexually harassing and identify with the victim, sexism partially accounted for these effects; both women or men with lower as opposed to higher sexism were more likely to define a case as sexually harassing, and were more likely to identify with the victim. Konrad and Hartmann (2001) and Konrad and Spitz (2003) sought to explain sex (as well as other demographic) differences regularly found in studies examining attitudes toward affirmative action programs. They hypothesised that traditional attitudes toward women would qualify (i.e., render non-significant) sex as a predictor of affirmative action attitudes, as people who hold such attitudes believe that women and men are suited to differential roles, and would consequently oppose measures to correct this difference. Sex was fully qualified by attitudes toward women. In other words, regardless of sex, people (i.e., women as well as men) with more negative attitudes toward women were less likely to endorse affirmative action programs. These findings help researchers move beyond demographics in understanding attitudes toward equalising programs, and identify

attitudes toward women, in particular, as a worthwhile qualifier of sex to consider in other contexts where sex roles are evaluated.

In order for attitudes to be a significant qualifier for sex, both women and men have to endorse these attitudes, and this endorsement has to be more strongly associated with the predicted variable than sex. To date, only one study has linked women's attitudes toward women and stereotyping of female managers. Tougas, Brown, Beaton, and St.-Pierre (1999) found that attitudes and beliefs about women—by women in particular—are significantly linked to a pro-male bias. In their study of the effect of career mobility on neosexism (i.e., subtle, contemporary manifestation of sexist attitudes), Tougas and her colleagues (1999) found that higher neosexism among women predicted stronger perceptions that women in management are incompetent, and lack the necessary qualifications to do their job. Thus, the attitude that women should not be full and equal participants in the workforce was found to translate into the judgement of women as incapable managers.

All Men Are Not Created "Unequal"

Although Schein and colleagues (1996) have claimed that men's perceptions have remained unchanged since the 1970s, research indicates that male perceptions are not immutable. Modified versions of the SDI have been used to probe the contexts in which stereotyping is likely to occur, as well as the content of this stereotyping (i.e., on which traits women are perceived to be lacking). Heilman, Block, Martell, and Simon (1989) added two levels of specificity to the targets in the original SDI paradigm—*female (or male) managers, and successful female (or male) managers*. Based on the social role work of Eagly and Steffen (1984), these researchers purported that the *males* and *females*

target conditions may be eliciting "working male" and "housewife/mother" stereotypes rather than "working male" and "working female" evaluations. Although the detection of such a bias is certainly evidence of the stereotyping of social roles, it is does not necessarily provide an accurate portrayal of how a female would be perceived in a professional managerial context. Heilman et al. (1989) wished to emulate the evaluative context more realistically, given previous (Heilman, 1984) findings that information specificity reduces stereotyping in hiring decisions.

Indeed, stereotyping abated in the *female manager*, and *successful female manager* target conditions in Heilman et al.'s (1989) all-male managerial sample. A subsequent study using the modified target groups, among female as well as male participants, yielded similar results: Female middle and upper-level managers did not appear to be stereotyped by either sex when they were presented as *successful* (Dodge, Gilroy, & Fenzel, 1995). In both cases, however, intraclass correlation coefficients were used to assess the overall matching of traits across categories. Trait-by-trait analyses, however, consistently reveal that even when presented as successful managers, women are perceived by males to be inferior leaders (Heilman et al., 1989), and a host of other negative stereotypes, including incompetent, and unintelligent (Deal & Stevenson, 1998). Also exposed by Heilman et al. (1989) was early evidence of a backlash, as women managers were perceived to be bitter, quarrelsome, and selfish.

Methodological Issues

Although analyses of specific SDI traits have revealed the presence of stereotyping that might otherwise be masked using exclusively intraclass correlation coefficients, this trait-by-trait approach—particularly with 92 items—is statistically

cumbersome and precarious. As an alternative, Heilman, Block, and Martell (1995) offered a multi-dimensional version of the SDI. Called the Scale of Stereotyped Attributes, this scale organizes 46 of the original 92 SDI traits into seven subscales based on work-relevant characteristics: Work Competence, Activity/Potency, Emotional Stability, Independence, Rationality, Concern for Others, and Hostility Toward Others. Using these subscales, Heilman et al. (1995) found that male managers depicted female managers to be less competent, active/potent, emotionally stable, independent, and rational than male managers. Even as successful managers, women were depicted as less rational than male managers. Also revealed was that, as successful managers, women were viewed as less concerned for others and more hostile than male managers. Therefore, the specificity of the professional category attenuated sex-typing of female managers, but did not eliminate it. Thus, even at their best, women did not measure up to a male-defined standard of managerial success.

A shortcoming of the research conducted by Heilman and her colleagues is their comparison of female to male targets, assuming that male managers define the yardstick against which women are to be judged. Certainly, the *think manager, think male* hypothesis assumes these perceptions to be the case; but, the use of the *prototype* category serves as a gauge of the extent to which this androcentric view continues to predominate. Given that women are changing the content of what is valued in good management (Eagly & Johannesen-Schmidt, 2001), their perceived differences from men are not necessarily to be construed as disadvantageous. Another shortcoming of the research conducted by Heilman and her colleagues is their exclusive use of male samples. Since their innovative scale has revealed sex-typing otherwise masked using traditional

intraclass correlations, the same scale could reveal sex-typing in female samples, particularly since sex-typing among women has been documented in certain contexts (Tougas et al., 1999).

Purpose and Hypotheses

The purpose of the present study is threefold: 1. to test whether sexist attitudes nullify the effect of perceiver sex on stereotyped perceptions of female managers. 2. to make use of the distinct merits of several SDI-inspired studies simultaneously, namely the use of a mixed-sex sample, the seven-scale version of the SDI, and the three target categories: *successful female managers*, *successful male managers*, and *successful managers in general* (prototype category); and 3. to test the *think manager, think male* hypothesis in a Canadian sample. Based on an integration of the research findings, three hypotheses are proposed:

Hypothesis 1. There are approximately twice as many male as there are female managers in Canada (Census 2001). This proportion is lower than that in the U.S., but higher than any other country studied by Schein and her colleagues (Schein et al., 1996; Schein & Mueller, 1992). Given that Canada and the U.S. share a similar domestic socio-political history (particularly in the past 30 years; International Labor Office, 2001), and based on U.S. findings (Deal & Stevenson, 1998; Schein, Mueller, & Jacobson, 1989), a perceiver sex effect is expected: Male raters will sex-type the managerial role significantly more than will female raters. Because Heilman et al.'s (1995) "successful manager" target category will be used, it is expected that males will perceive successful female managers as differing from successful managers in general on only three

dimensions: They will view them as less rational, less concerned for others, and more hostile than the prototype.

Hypothesis 2. Based on findings that attitudes qualify sex as a predictor (Konrad & Hartmann, 2001; Konrad & Spitz, 2003; O'Connor et al., 2004), as well as the direct link between neosexism and pro-male bias found among women (Tougas et al., 1999), it is hypothesised that any effects of sex will be qualified by the effects of attitudes. In other words, once attitudes are taken into account using hierarchical multiple regression techniques, the effect of sex will no longer be significant on rationality, concern for others, and hostility dimensions. Rather, neosexism will emerge as a better explanatory predictor of sex-typing on these traits.

Hypothesis 3. Based on Tougas et al.'s (1999) finding that women high in neosexism perceive female managers to be less competent and lacking management skills, it is hypothesised that high neosexism will predict lower work competence for successful female managers as compared to the prototype. No sex effects are expected on this variable.

Method

Participants and Procedure

Two hundred fifty-two questionnaires reflecting the three conditions under investigation (*successful female managers*, *successful male managers*, and *successful managers in general*) were pseudo-randomly distributed (i.e., in sets of 123 across rows) to two class sections of introductory business management students. In all, 251 participants completed the questionnaire, yielding a 99.6% participation rate. A total of 13 participants did not indicate their sex, and 15 cases had an excess of 20 % missing

data. T-test comparisons revealed no systematic differences between cases with missing versus non-missing data; therefore, these 28 questionnaires were deleted from further consideration. The demographic profile of the 223 participants (106 females, 117 males) retained for the analyses showed that they were 23.64 years old on average (SD = 6.46 years) and that 79.9% percent had had previous work experience. The average length of employment for those with experience was 2.49 years part-time, and 3.01 years full-time. Of those with work experience, 19.7% had management or leadership experience.

Questionnaires were administered and completed during class time with the permission of the course professor. Researchers briefly described the study to students, and requested their participation. Students were informed that their participation in this study assessing attitudes about the workplace was voluntary, and had no bearing on the course in which they were enrolled. Completion of questionnaires took approximately 20 minutes.

Measures

The three versions of the questionnaire were comprised of items related to the hypotheses followed by a section designed to gather demographic information (i.e., age, sex, language, nationality, academic program, and employment experience).

Scale of Stereotyped Attributes. The present study utilised the seven subscales developed by Heilman, Block and Martell (1995)[1]. Participants were given one of three versions of a questionnaire, and were asked to rate each trait in terms of how characteristic it was of *successful male managers, successful female managers* or *successful managers in general* (depending upon which version the participant received). Each trait was rated on a scale of 1 (uncharacteristic) to 5 (characteristic). The seven

subscales derived by Heilman and her colleagues were as follows: Work Competence, Activity/Potency, Emotional Stability, Rationality, Independence, Concern for Others, and Hostility Toward Others. According to Heilman et al., the first five trait groupings represent male stereotypes; the latter two represent feminine stereotypes. Cronbach's alpha values for each of the subscales indicated that all were adequately reliable, though some reliabilities were rather low: Work Competence (α = .78); Activity/Potency (α =.70); Emotional Stability (α = .60); Rationality (α = .60); Independence (α = .67); Concern for Others (α = .80); and Hostility (α = .80). Deletion of items did not substantially improve reliability of the subscales.

Neosexism Scale-Revised. The Neosexism Scale (Tougas, Brown, Beaton, & Joly, 1995) was designed to measure the modern manifestation of sexist attitudes. Example items are as follows: *Women shouldn't push themselves where they are not wanted* and *It is difficult to work for a woman boss.* Originally comprised of 11 items, the shorter 8-item scale (Kocum, Rye, Kristjansson & Rostaing, 2006) was ulitised in the present sample. Participants were asked to estimate their degree of agreement with each statement on a Likert-type scale ranging from totally disagree (1) to totally agree (7); a score of 4 indicated a neutral response. The reliability and validity of the original scale have been well documented (Campbell, Schellenberg, & Senn, 1997; Kocum, Rye et al., 2006; Masser & Abrams, 1999; Tougas et al., 1995, 1999). In the present sample, the reliability of the scale was .79 overall (α = .68 for women; α = .80 for men).

Social Desirability Scale. The 13-item short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) was interspersed with the Neosexism Scale items in the questionnaire for the first testing session[2]. This scale was included to detect biased

responding motivated by the wish to be viewed as adhering to social norms. The correlation between the Social Desirability Scale and the Neosexism Scales was significant, but not high ($r = .34$, $p < .05$).

Results

Preliminary Analyses

Estimates for the remaining missing data were imputed using the Estimation Maximization method available in SPSS 12.0. Scores on the Neosexism Scale and each of the seven subscales of the Scale of Stereotyped Attributes were checked for univariate and multivariate normality, linearity, heterogeneity of variance, multicollinearity and singularity. Examination of the correlation matrix (see Table 1), frequency tables, histograms, plots, and Mahalanobis distance for females and males separately revealed that all assumptions for multiple linear regression were met, and that no extreme univariate or multivariate outliers were present. Mean differences on Neosexism were checked to ensure that the condition "Manager Type", alone, did not have a main effect on Neosexism scores. An ANOVA showed no difference in neosexism scores for participants in any of the conditions, though they did significantly differ between males ($M = 3.14$; $SD = 1.03$) and females ($M = 2.32$; $SD = 0.81$) overall, $t(216) = 6.69$, $p < .001$.

Hierarchical Regression Analyses

A series of hierarchical regression analyses was conducted using SPSS 12.0 REGRESSION to assess the extent to which neosexism, over and above sex, accounted for differences in ratings for each subscale of stereotype attributes. On the first step, each of the seven subscales of stereotype ratings was regressed onto perceiver sex, neosexism scores, and two dummy coded variables for the two orthogonal contrasts representing

manager type: Female Managers versus Managers in General, and Male Managers versus Managers in General. The interactions between sex and the manager type contrasts were entered on the second step, with the interactions between centred neosexism scores and manager type contrasts being entered on the third step. In the final step, the three-way interactions (Sex x Neosexism x Manager Type) were tested.

Familywise error was controlled for each regression analysis by employing the procedure suggested by Jaccard and Wan (1996). This procedure is a modified, less conservative Bonferroni correction in which the critical alpha is divided by the number of independent variables tested (including interactions) for the effect with the smallest alpha only. The subsequent obtained alphas are placed in ascending order, and the denominator of the alpha-to-variable quotient is reduced by one for each test until non-significance is obtained. For example, in order to maintain a critical alpha of .05 for the overall analysis, the first obtained alpha would have to be less than .005 (i.e., .05/10); if significant, the next smallest obtained alpha would have to be less than .006 (i.e., .05/9), and so on.

Work Competence. When entered at Step 1, sex, neosexism, and manager type explained a significant proportion of variance in Work Competence scores, $F(4, 218) = 10.09, p < .001, R^2_{Adj} = 0.14$ (Table 2 displays the results for the five male-stereotyped subscales). After controlling familywise error, examination of the standardised betas for the variables entered in the model indicated that the overall effect of Neosexism was significant, such that higher Neosexism scores were related to lower competence ratings, $\beta = -.19, p < .005, sr^2 = 0.03$.

At Step 2, Sex x Manager Type did not explain a statistically reliable proportion variance in Work Competence scores. However, at Step 3, Neosexism x Manager Type

added a significant proportion of explained variance to the regression equation, F_{change} (2, 214) = 8.14, $p < .001$, $R^2_{change} = 0.06$. In particular, the interaction between neosexism and the female manager versus prototype contrast was significant, such that higher neosexism scores were related to lower competence ratings for female managers versus the prototypical manager, $\beta = -.30$, $p < .006$, $sr^2 = 0.04$. Neither of the three-way interactions at Step 4 was significant. The Neosexism x Female vs. General interaction was plotted to facilitate interpretation (see Figure 1).

Activity/Potency. The model at Step 1 explained 6% of the variance in Activity/Potency ratings, $F(4, 218) = 4.31$, $p < .01$. After controlling familywise error, none of the beta coefficients was significant. In fact, only the Sex x Neosexism x FvsG interaction was significant at Step 4, $\beta = -.33$, $p < .005$, $sr^2 = 0.04$. Females with low neosexism scores rated female managers as less potent than the prototype. In contrast, higher neosexism among females was associated with higher ratings of Activity/Potency among female managers as compared to the prototype. A different pattern emerged among males. Males with lower neosexism scores rated female managers as equivalent in potency to the prototype; however, those with higher neosexism scores rated female managers as less potent than the prototype. To facilitate interpretation, the interaction was plotted (see Figure 2). Some suppression was detected, as the beta for the Sex x Neosexism x FvsG effect was somewhat larger than its zero-order correlation with Activity/Potency. The suppressor was isolated as the Neosexism x FvsG interaction, its correlation with the Sex x Neosexism x FvsG interaction being $r = .78$, $p < .001$. The three-way interaction was significant without the presence of this suppressor; thus, the

results may be interpreted reliably (see Table 1 for correlations among independent variables).

Emotional Stability. Only the model at Step 1 explained a significant proportion of variance in Emotional Stability scores, $F(4, 218) = 3.96, p < .01$. After controlling familywise error, however, the standardised beta for the coefficient representing the Female versus General Manager only *approached* significance, such that participants tended to view female managers as less emotionally stable than managers in general, $\beta = -.21, p = .007, sr^2 = 0.03$ (the adjusted alpha for this contrast being $p < .005$).

Rationality. Overall, the Step 1 model explained 16% of the variance in Rationality ratings, $F(4, 218) = 11.49, p < .001$. Overall, males had significantly lower rationality ratings than did females, $\beta = -.21, p < .006, sr^2 = 0.03$. Neosexism contributed a significant proportion of explained variance to the model, such that higher neosexism scores were related to lower Rationality scores, $\beta = -.20, p < .006, sr^2 = 0.03$. The effect of manager type was also significant, $F(2, 218) = 9.35, p < .001$. Both male and female participants viewed female managers to be significantly less rational than the prototype, $\beta = -.31, p < .005, sr^2 = 0.07$; suppression by the MvsG contrast bolstered this effect, but the effect of FvsG remained significant even without the inclusion of this contrast in the model.

Independence. The Step 1 model explained a significant proportion (20%) of the variance in Independence ratings, $F(4, 218) = 14.42, p < .001$. The contribution of neosexism to the Model 1 regression equation was significant, such that higher neosexism scores were associated with lower Independence ratings, $\beta = -.33, p < .005, sr^2 = 0.09$. Manager type also made a significant contribution, such that female managers

were rated by both female and male participants as significantly less independent than the prototype, $\beta = -.22$, $p < .006$, $sr^2 = 0.04$.

At Step 2, Sex x Manager Type did not explain a statistically reliable proportion variance in independence scores. At Step 3, the Neosexism x Manager Type interaction added a significant proportion of explained variance to the regression equation, $F_{change}(2, 214) = 3.86$, $p < .05$, $R^2_{change} = 0.03$. However, neither of the interactions was significant after the Bonferroni correction was applied. The interaction between neosexism and the female manager versus prototype contrast only approached significance, such that higher neosexism scores tended to be related to lower independence ratings for female managers versus prototypical manager, $\beta = -.25$, $p = .007$, $sr^2 = 0.04$ (the adjusted alpha for this effect was set at $p < .006$). Neither of the three-way interactions at Step 4 was significant.

Concern for Others. After controlling familywise error, only two coefficients were significant (see Table 3), and suppression was largely responsible for both effects. The effect of manager type was significant at Step 1, such that males were rated as significantly less concerned for others than the prototype, $\beta = -.22$, $p < .01$, $sr^2 = 0.03$. This effect was substantially bolstered by the inclusion of the FvsG contrast, which acted as a suppressor; without it, the MvsG effect was reduced to $p < .05$, which no longer meets the alpha criterion adjusted by the Bonferroni correction. The three-way Sex x Neosexism x Manager Type interaction was significant at Step 4, such that females high in neosexism viewed female managers as significantly less concerned for others than the prototype, whereas highly neosexist males viewed female managers as significantly more concerned for others than the prototype, $\beta = .39$, $p < .001$, $sr^2 = 0.05$. This interaction appears in Figure 3. Of note is that the inclusion of independent variables at steps

previous to this three-way interaction significantly reduced error. Without this suppression effect, there would be no relation between the three-way interaction and Concern for Others, $r = .07$, ns. Thus, this finding must be interpreted with caution.

Hostility Toward Others. Only the first model was significant, $F(4, 218) = 9.34$, $p < .001$, explaining 15% of the variance in hostility ratings (see Table 3). Only neosexism contributed a significant proportion of explained variance in Hostility ratings, $\beta = .26$, $p < .001$, $sr^2 = 0.06$. Higher neosexism scores were associated with higher Hostility ratings.

Post Hoc Intraclass Correlational Analyses

Regression analyses in the present study revealed sex-typing among both female as well as male participants. These findings run counter to those of Dodge et al. (1995), who found that neither sex stereotyped the female manager once she was described as *successful*. It was surmised that the analyses conducted by Dodge et al., namely intraclass correlations as per the methodology followed by Schein in all of her studies, may have masked the stereotyping.

To test this conjecture, post hoc intraclass correlational analyses were calculated from four randomized-groups analyses of variance, one for each target comparison (successful female managers and successful managers in general; successful male managers and successful managers in general) for both females and males. Higher intraclass correlation coefficient values indicate a higher degree of similarity between the target categories. Table 4 compares the intraclass correlation coefficients for the present study, as well as those obtained by Brenner et al. (1989) and Dodge et al. (1995). A high degree of correspondence was found between both females' and males' ratings of

successful male managers and successful managers in general. When tested against males' ratings (r' = .84), however, females' trait ratings for successful female managers corresponded more strongly to ratings for successful managers in general (r' = .94), $F(44, 12) = 2.63, p < .05$.

Discussion

Perceptions of female, male, and non-gender-specified (prototypical) managers were measured using 45 traits comprising seven dimensions: Work Competence, Activity/Potency, Emotional Stability, Rationality, Independence, Concern for Others, and Hostility Toward Others. It was hypothesised that, in line with previous U.S. findings, perceiver sex would emerge as a strong predictor of stereotyping. Females' ratings of successful prototypical managers were predicted to match their ratings of both successful female and successful male managers. Males' ratings of successful prototypical managers were also predicted to match their ratings of successful male managers, but not their ratings of successful female managers. More specifically, males were expected to rate successful female managers as being less rational, less concerned for others, and more hostile than the prototype. It was further expected that the effect of perceiver sex on these three dimensions of managerial success would be supplanted by neosexism, such that those (women as well as men) with higher neosexism would stereotype successful female managers. A final prediction was that higher neosexism would be associated with the view of successful female managers as less competent. Some findings were surprising, while others corroborated or expanded upon our hypotheses.

The first hypothesis was not supported, as there were no perceiver sex differences in the evaluation of female managers on Rationality, Concern for Others, Hostility, or any of the other four dimensions. The lack of perceiver sex differences was not a sign of egalitarianism, however. On the contrary, both female and male raters perceived successful female managers to be less rational (e.g., unsteady, inconsistent) and less independent (e.g., indecisive, easily influenced) than the prototypical successful manager.

It should be noted that, on both dimensions, average ratings of female managers were still above the midpoint of the scale (i.e., between *neutral* and *somewhat characteristic*; see Table 5 for descriptive statistics of all trait dimensions). However, if their occurrence is greater than would be expected by chance, even small perceived differences could have a significant impact in a world where hiring and promotional decisions are dichotomous (i.e., to hire or promote, or not). Hence, U.S. findings of egalitarianism among women were not replicated as expected. The present results more closely resemble the trans-national work of Schein and her colleagues (Schein & Mueller, 1992; Schein et al., 1996), in which women were perceived to lack leadership, analytical, and business skills, as well as the desire for responsibility—traits which would fall under Work Competence and Independence dimensions. Though Canadians in the present study were not found to doubt the competence of female managers at this main effect level, they extended their sex-typed judgements in underestimating their rationality.

Why was there such strong evidence of sex-typing in the present sample, and why did women share these views with men? One conjecture might be that the impact of the lower representation of female managers in Canada, as compared to the U.S., was underestimated in the formulation of the hypotheses. In the U.S., females constitute 46%

of the managerial workforce (International Labour Office, 2001). In Canada, there are twice as many male as there are female managers (Census 2001), a proportion that is just shy of the critical mass of 35% required before women view their female colleagues as displaying requisite managerial characteristics (Rinfret & Lortie-Lussier, 1996). However, this interpretation falls short in that it does not explain why the views of Canadian women and men would be relatively on par with those of people in the U.K., Germany, China, and Japan, particularly since there is a greater proportion of female managers in Canada than in any of these countries (Census 2001; International Labour Office, 2001).

A more plausible explanation we offer is methodological. Although Dodge et al. (1995) employed context-specific targets in a mixed-sex sample, they did not detect sex-typing among either female or male raters. It is possible that their use of intraclass correlational analyses may have masked stereotyping in their sample, and that use of the seven-dimension version of the SDI exposes these perceptions. To test this conjecture, post hoc intraclass correlational analyses were conducted. Our suspicion was confirmed. According to the intraclass correlations, raters appeared to be egalitarian. Females' and males' trait ratings for both successful female and male managers matched those for the prototype condition. When correlations were compared, however, male raters were found to perceive a stronger match between successful male and prototypical managers as compared to successful female and prototypical managers. Therefore, although both female and male raters perceived females to possess *all the right stuff* to be successful managers according to the intraclass correlations, male raters displayed a more favourable view of males in this role.

The findings using (interclass) regression over intraclass correlational analyses in the present study challenge the contention that women's perceptions have become egalitarian. Rather than relying on analyses designed to detect the synchrony of traits between female and general managers, it appears demonstrably more informative to break down the list of traits into dimensions, and analyse them under a regression model. Such analyses have revealed that sex-typing among women is not only alive and well, but on par with that of men, at least in the present study.

The second set of predictions pertained to neosexism. As expected, neosexism stood alone as a predictor of Work Competence. Both females and males valuing a traditional distribution of gender roles viewed that female managers were lacking in the leadership and business skills, competence, knowledge, and analytical ability to meet the successful managerial profile. Thus, the link between neosexism and pro-male bias found among women (Tougas et al., 1999) was upheld, and was accounted for among men, as well. A similar link was found between neosexism and the Independence dimension. Those higher in neosexism had a tendency to view female managers as being less independent than the prototype. Though this effect was not significant after alpha adjustment, the obtained alpha was quite small (i.e., $p = .007$), suggesting that this effect could emerge as significant in an analysis with fewer comparisons.

The principal hypothesis of the present study was that neosexism—among women as well as men—would serve as a strong predictor of sex-typing, supplanting the effect of perceiver sex. Although there were no significant perceiver sex effects found under the at the "main effect" level, the entry of neosexism as an interaction with perceiver sex revealed stereotyping that differed qualitatively between females and males. Higher

neosexism among females was found to predict stronger perceptions of the potency (e.g., dominance, force, aggression) of female managers as compared to the prototype. Among males, higher neosexism predicted weaker perceptions of potency. A reversal of perceptions occurred on the Concerned for Others dimension. Higher neosexism among females was associated with their ratings of female managers as less concerned (e.g., not kind, not understanding) as compared to the prototype, whereas highly neosexist males held the opposite view: They perceived female managers to be more concerned than successful managers in general. Findings for this latter dimension must be interpreted with caution, as this effect only emerged as a result of suppression caused by the entry of highly related (but not usefully interpretable) independent variables into the regression model. Thus, the link between sex, neosexism, and stereotyping of female managers on the Concern for Others dimension is indirect, at best. Nonetheless, the finding that differential levels of sexism among women and men predicted stereotyping of female managers as either too aggressive (by neosexist women) or not aggressive enough (by neosexist men) provides evidence that 1. not all women are egalitarian; and 2. neosexism among women has different consequences for stereotyping, as compared to men.

Thus, the present analysis has revealed neosexism to be a vital variable in the examination of sex-typing. Unexpectedly, lower neosexism did not shield female managers from intragroup sex-typing. Lower neosexim among female raters was associated with lower activity/potency ratings for female managers as compared to managers in general--a view shared by men with higher neosexism scores, but not men with lower neosexism scores. This result suggests the presence of a benevolent brand of sex-typing, whereby women who hold positive attitudes toward women view dominance,

forcefulness, and aggression as traits which render success in management prohibitive to women. Perhaps women who disapprove of the fact that there are far more male than female managers are indirectly devaluing traits they view to be typical of males, but not ideal for managers.

In spite of these sex-typed judgements, the news is not all bad for women in management. An unexpected but highly pertinent finding (or trend, if we take into account the interpretive limits that suppression imposes) was that, on the Concern for Others dimension, both female and male participants perceived *male* managers to be less caring than the prototypical manager. This mismatch signals an erosion in the androcentric *think manager, think male* view of the world. This finding also provides evidence that the managerial role has begun to incorporate characteristics typically ascribed to women (Eagly, 2003), as the increasing presence of women managers may be serving to re-define the normative managerial role (Willemsen, 2002).

In order to detect changes in the characterization of successful managers, future investigations are encouraged to use the *prototype* category originated by Schein (1973; 1975) as a benchmark for managerial success rather than of the category *male managers* as Heilman and colleagues (1995) have done. The present study demonstrates that being male is no longer 100% synonymous with being a manager. Thus, a mismatch between female and male managers should no longer be automatically interpreted as a deficiency among female managers. Also suggested is a modification of the Scale of Stereotyped Attributes (Heilman et al., 1995) to include traits representative of the democratic, transparent, participatory, empowering, and team-based leadership style most favoured in contemporary organizations (Cleveland et al., 2000; Fondas, 1997; Garvin, 1993), and a

style of leadership more often adopted by, and ascribed to, women (Eagly & Johannesen-Schmidt, 2001). Examples of traits to include are as follows: empowers others, good communicator and listener (Cleveland et al., 2000); highly motivated (Donnell & Hall, 1980); and able to resolve conflicts (Duane, 1989).

The link between neosexism and stereotyping reveals the restrictive consequences of gender-role attitudes on occupations perceived to be a good fit for women. The more people endorse the notions that women are pushing too hard for change, that it is difficult to work for a woman boss, and that discrimination is no longer a problem in Canada, the less competent they view female managers to be. The ambivalent findings—of women as too concerned and aggressive and, at the same time, not concerned enough and too passive—shed a new light on the "damned if she does, damned if she doesn't" dilemma (Geis, 1993). Underscored is the fact that these opposite ratings were produced for identical targets, demonstrative of the fact that a perfect balance between caring (or not), and potent (or not) is impossible. Previous findings have indicated that women face the threat of prejudice and devaluation for adopting traits that are leader- but not gender-role congruent (Eagly, Makhijani, & Klonsky, 1992). The present findings suggest that the opposite patterns of incongruity perceived by sexist women and sexist men are likely based on different social role expectations. Perhaps sexist women deem that female managers have adopted too strong an *occupational* role at the expense of their gender role (i.e., they are not feminine enough). In the eyes of sexist males, perhaps female managers are seen as unable to shake their feminine *gender* role (i.e., they are not managerial enough). In light of these competing and contradictory standards, it is no wonder women

have problems imagining themselves in high-profile, powerful roles (Killeen, López-Zafra, & Eagly, 2006).

Most alarming in the present analysis was that, by more accounts than were expected, women sex-typed their own sex. Women's negative attitudes toward women were expected to be associated with their sex-typing of female managers. Unexpected was the finding that females shared with males a sex-typed view, with and without the influence of negative attitudes, and that neosexism revealed a characterization of sex-typing unique to women. The females in the present sample were students training for careers in management; yet, they viewed females in their profession, categorically, to lack the necessary ingredients for success. Female managers were even viewed by sexist women to lack "feminine" traits, such as kindness, understanding, and helpfulness. The collective self-esteem (Ellemers, Kortekaas, & Ouwerkerk, 1999) of these female business management students must be rather low for them to perceive that women have less to offer to the field of management.

How do female management students reconcile their negative view of female managers with the fact that they are, themselves, up-and-coming management professionals? Do they consider themselves to be exceptions to the rule or do they believe that they are, as women, deficient, and opt for engaging in self-limiting, self-derogating behaviour (Heilman, 1995)? It is possible that the intragroup prejudice evidenced in the present analysis is the result of a weak identification with female managers. Firstly, participants had little or no experience as managers; their prejudice might weaken once they enter the workforce. Secondly, the pioneering legacy left by an earlier generation of female managers may be viewed as more taxing than empowering—something to be

dismissed rather than embraced. New professionals can gain higher personal status by deliberately distancing themselves from female managers, and excluding from their identity the negative aspects of being female in a traditionally male occupation. Subsequent research should examine the gender belief system of women working in management to assess whether mean levels of sexism are lower, whether a similar pattern of stereotyping exists, and whether (gender and occupational) social identity has an impact on intragroup attitudes and stereotyping. Studying the female manager in context could reveal how the female manager, herself, handles the conflict between her gender and occupational roles, and how her coping strategy influences her attitudes and perceptions of other women.

The present analysis challenged Schein's contention that women's perceptions have become egalitarian. The contribution of the present study has been to acknowledge women's active role in their own disadvantaged social position. By incorporating women's social psychology in this investigation, rather than dismissing (or minimising) women's attitudes and sex-typing as *lesser* effects, we have come to better understand the process and content of intragroup stereotyping among women. It is imperative that sex iniquities remain a high priority for social science investigation. Policymakers must be provided with the correlates underlying the involuntary aspects of workforce sex segregation in order to facilitate the more effective implementation of existing employment equity programs, and to inform the development of improved equity initiatives.

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Footnotes

[1] Due to a typographical oversight, one trait in the "Concern for Others" dimension, namely "generous", was not measured

[2] Due to practical constraints, the questionnaire length had to be shortened for the second testing session. Consequently, the SDS was administered to the first testing group only.

Table 1

Correlations Among Independent Variables

	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Sex	.41***	-.10	-.03	.40***	.42***	.24***	.25***	.16*	.13
2. Neosexism	-	.02	-.04	.21**	.15*	.60***	.52***	.47***	.41***
3. FvsG		-	-.49***	.60***	-.31***	.02	.03	.23***	-.10
4. MvsG			-	.30***	.64***	-.01	-.05	-.11	.20**
5. Sex x FvsG				-	-.19**	.35***	.02	.39***	-.06
6. Sex x MvsG					-	-.01	.30***	-.07	.31***
7. Neo x FvsG						-	.00	.78***	.00
8. Neo x MvsG							-	.01	.79***
9. Sex x Neo x FvsG								-	-.02
10. Sex x Neo x MvsG									-

Note. FvsG = female managers vs. prototype; MvsG = male managers vs. prototype. *p < .05. **p < .01. ***p < .001.

Table 2

Hierarchical Regressions For Male Stereotype Subscales (N=216)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	$R^2_{total/change}$
Work Competence	Step 1	Sex	-.25	-.17*	.08	.02	.16***
		Neosexism	-.33	-.27***	.04	.06	
		FvsG	-.10	-.19*	.09	.03	
		MvsG	-.04	-.15*	.09	.02	
	Step 2	Sex x FvsG	-.22	.00	.18	.00	.01
		Sex x MvsG	-.09	.13	.18	.00	
	Step 3	Neosexism x FvsG	-.39	-.30**	.09	.04	.06***
		Neosexism x MvsG	-.04	.07	.10	.00	
	Step 4	Sex x Neosexism x FvsG	-.40	-.21*	.13	.01	.02
		Sex x Neosexism x MvsG	-.02	.04	.15	.00	
Activity/Potency	Step 1	Sex	-.11	-.04	.08	.00	.07**
		Neosexism	-.20	-.18*	.04	.03	
		FvsG	-.13	-.06	.08	.00	
		MvsG	.18	.15	.08	.02	
	Step 2	Sex x FvsG	-.16	-.05	.17	.00	.00
		Sex x MvsG	.10	.05	.17	.00	
	Step 3	Neosexism x FvsG	-.20	-.15	.09	.01	.01
		Neosexism x MvsG	-.09	-.07	.09	.00	
	Step 4	Sex x Neosexism x FvsG	-.29	-.33**	.12	.04	.00
		Sex x Neosexism x MvsG	.02	.18	.15	.01	

Table 2 (Continued)

Hierarchical Regressions For Male Stereotype Subscales (N=216)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	$R^2_{total/change}$
Emotional Stability	Step 1	Sex	-.13	-.10	.07	.01	.04*
		Neosexism	-.17	-.13	.04	.01	
		FvsG	-.18	-.21**	.08	.03	
		MvsG	.06	-.05	.08	.00	
	Step 2	Sex x FvsG	-.23	-.13	.17	.00	.01
		Sex x MvsG	.00	-.01	.17	.00	
	Step 3	Neosexism x FvsG	-.18	-.07	.09	.00	.00
		Neosexism x MvsG	-.04	.04	.09	.00	
	Step 4	Sex x Neosexism x FvsG	-.21	-.11	.12	.00	.00
		Sex x Neosexism x MvsG	-.06	-.16	.15	.01	
Rationality	Step 1	Sex	-.25	-.21**	.08	.03	.12***
		Neosexism	-.29	-.20**	.04	.03	
		FvsG	-.22	-.31***	.08	.07	
		MvsG	.02	-.15*	.08	.02	
	Step 2	Sex x FvsG	-.31	-.08	.17	.00	.01
		Sex x MvsG	-.07	.06	.17	.00	
	Step 3	Neosexism x FvsG	-.30	-.15	.09	.01	.04
		Neosexism x MvsG	-.05	.08	.09	.00	
	Step 4	Sex x Neosexism x FvsG	-.31	-.08	.13	.00	.00
		Sex x Neosexism x MvsG	-.01	.04	.15	.00	

Table 2 (Continued)

Hierarchical Regressions For Male Stereotype Subscales (N=216)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	$R^2_{total/change}$
Independence	Step 1	Sex	-.24	-.13*	.08	.01	.18***
		Neosexism	-.38	-.33***	.04	.09	
		FvsG	-.22	-.22**	.09	.04	
		MvsG	.14	.01	.09	.00	
	Step 2	Sex x FvsG	-.32	-.12	.17	.00	.01*
		Sex x MvsG	.01	.04	.17	.00	
	Step 3	Neosexism x FvsG	-.38	-.25**	.09	.03	.04**
		Neosexism x MvsG	-.16	-.06	.09	.00	
	Step 4	Sex x Neosexism x FvsG	-.42	-.24*	.13	.02	.01*
		Sex x Neosexism x MvsG	-.11	-.06	.15	.00	

Note. Betas refer to the final-step coefficients. FvsG = female managers vs. prototype; MvsG = male managers vs. prototype. *p < .05. **p < .01. ***p < .001. Betas meeting the adjusted Bonferroni alpha criterion are underlined.

Table 3

Hierarchical Regressions For Concern for Others (Female Stereotyped Scale) and Hostility (N=216)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	$R^2_{total/change}$
Concern for Others	Step 1	Sex	-.01	.00	.11	.00	.03
		Neosexism	-.07	-.08	.05	.00	
		FvsG	-.03	-.14	.12	.01	
		MvsG	-.15	-.22**	.12	.03	
	Step 2	Sex x FvsG	.02	.23	.24	.02	.02
		Sex x MvsG	-.07	.21	.24	.01	
	Step 3	Neosexism x FvsG	-.07	.00	.12	.00	.03
		Neosexism x MvsG	.10	.19	.13	.02	
	Step 4	Sex x Neosexism x FvsG	.07	.39***	.17	.05	.01
		Sex x Neosexism x MvsG	.04	-.03	.21	.00	
Hostility	Step 1	Sex	.26	.17*	.11	.02	.15***
		Neosexism	.33	.26***	.01	.06	
		FvsG	.04	.13	.12	.01	
		MvsG	.08	.16*	.13	.02	
	Step 2	Sex x FvsG	.17	-.01	.25	.00	.00
		Sex x MvsG	.14	-.09	.25	.00	
	Step 3	Neosexism x FvsG	.28	.08	.13	.00	.01
		Neosexism x MvsG	.05	-.14	.14	.01	
	Step 4	Sex x Neosexism x FvsG	.22	-.01	.19	.00	.00
		Sex x Neosexism x MvsG	.06	.03	.23	.00	

Note. Betas refer to the final-step coefficients. FvsG = female managers vs. prototype; MvsG = male managers vs. prototype. *p < .05. **p < .01. ***p < .001. Betas meeting the adjusted Bonferroni alpha criterion are underlined.

Table 4

Intraclass Correlation Coefficients for the Current and Two Past Studies

	Dodge, Gilroy, and Fenzel (1995)[a]	Brenner, Tomkiewicz, & Schein (1989)[b]	Present Study[b]
Female Raters			
Female Target v.s. Prototype	.87	.52**	.94***
Male Target v.s. Prototype	.83	.59**	.95***
Male Raters			
Female Target v.s. Prototype	.91	-.01	.84***
Male Target v.s. Prototype	.94	.72**	.94***

Note. [a]Targets in this study were context-specific: *successful female managers*, *successful male managers*, and *successful managers in general.* [b]Targets in this study were *females*, *males*, and *managers in general.* ** $p < .01$. *** $p < .001$.

Table 5

Descriptive Statistics for Trait Dimensions

Trait Dimension	Successful Female Managers	Successful Managers in General
Work Competence	4.36 (0.64)	4.48 (0.53)
Activity/Potency	3.72 (0.50)	3.86 (0.53)
Emotional Stability	3.68 (0.54)	3.87 (0.49)
Rationality***	3.80 (0.62)	4.06 (0.50)
Independence**	3.83 (0.70)	4.10 (0.48)
Concern for Others	3.74 (0.70)	3.79 (0.75)
Hostility Toward Others	2.23 (0.75)	2.17 (0.84)

Note. Mean (Standard Deviation). Differences revealed as significant in regression analyses.

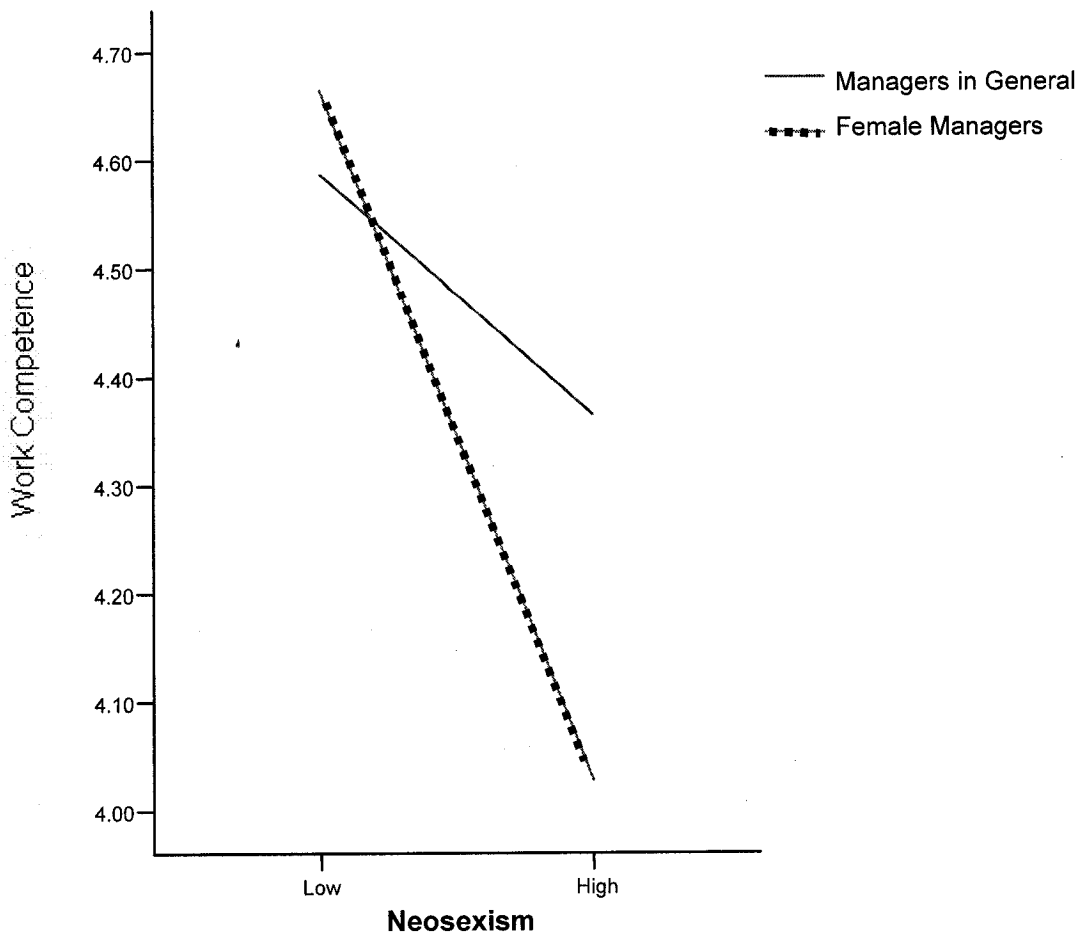
**$p < .01$. ***$p < .001$.

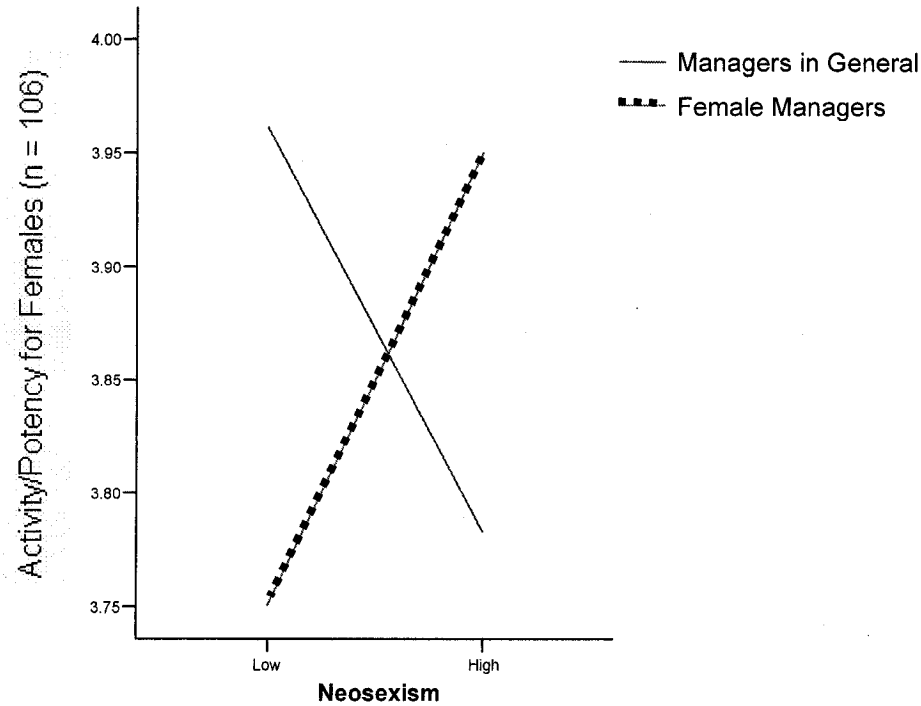
Figure Captions

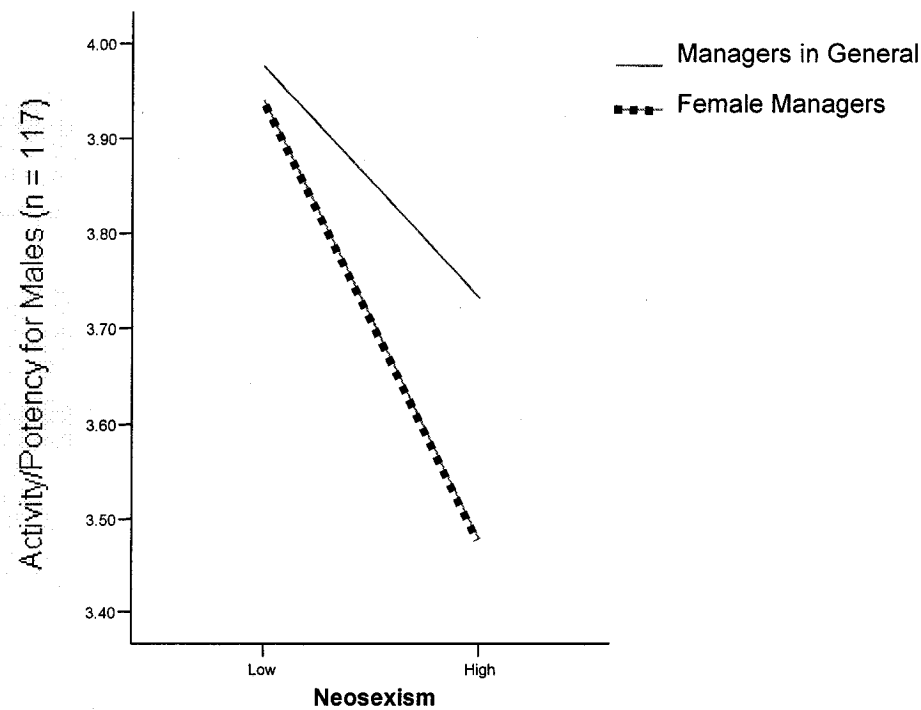
Figure 1. Neosexism x Manager Type on Work Competence Ratings

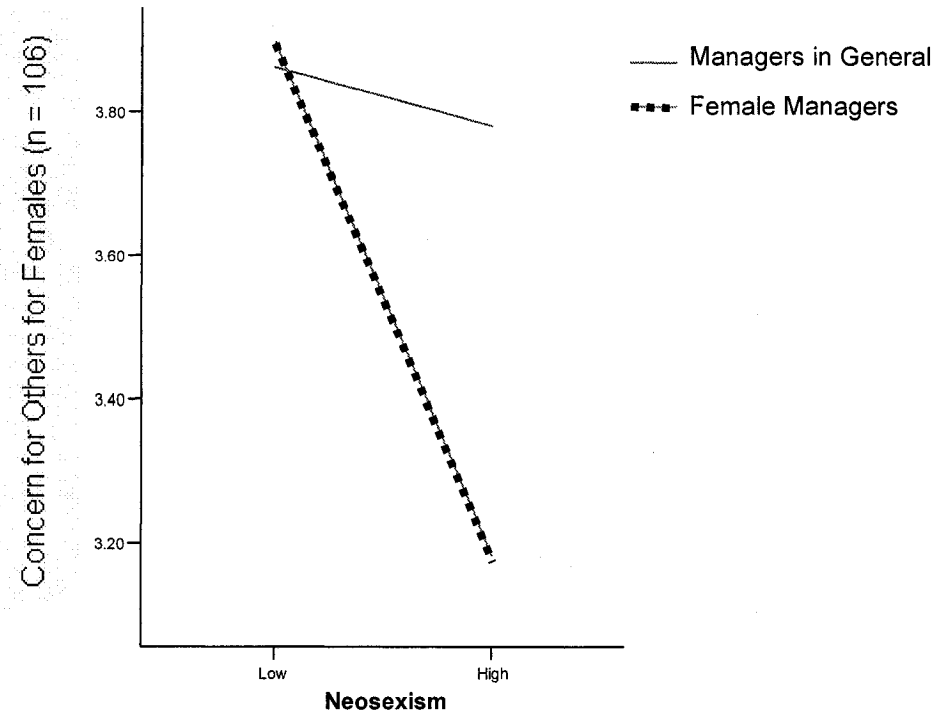
Figure 2. Sex x Neosexism x Manager Type on Activity/Potency Ratings

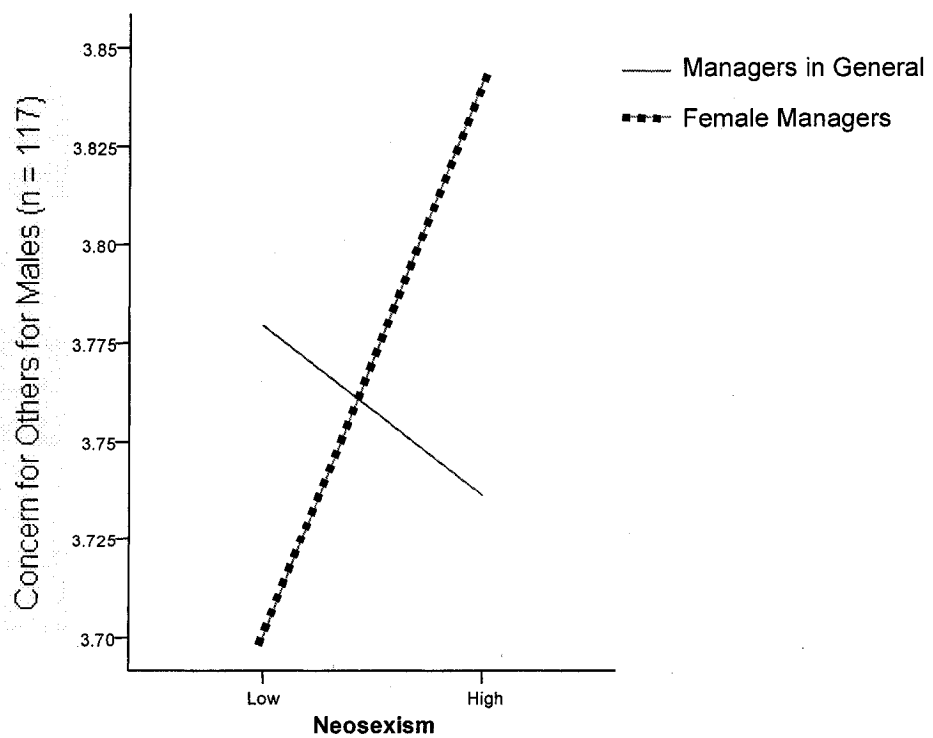
Figure 3. Sex x Neosexism x Manager Type on Concern for Others Ratings


4.70
4.60
4.50
4.40
4.30
4.20
4.10
4.00
Work Competence
Low
High
Neosexism
Managers in General
Female Managers


Activity/Potency for Females (n = 106)
4.00
3.95
3.90
3.85
3.80
3.75
Low
High
Neosexism
Managers in General
Female Managers


Activity/Potency for Males (n = 117)
4.00
3.90
3.80
3.70
3.60
3.50
3.40
Low
High
Neosexism
Managers in General
Female Managers


Concern for Others for Females (n = 106)
3.80
3.60
3.40
3.20
Low
High
Neosexism
Managers in General
Female Managers


Concern for Others for Males (n = 117)
3.85
3.825
3.80
3.775
3.75
3.725
3.70
Low
High
Neosexism
Managers in General
Female Managers

Running head: WOMEN AT THE CROSSROADS

CHAPTER 4:

The Buzz on the Queen Bee Phenomenon, or Modelling the Gender Belief System Among Women at the Crossroads of Occupational and Gender Roles

Abstract

The impacts of neosexism, age, and social identity on in-group bias were assessed in a managerial sample. Responses from a total of 308 female managers working in the Canadian Federal Public Service and Crown Corporations were analysed. Contrary to expectations neosexism, age, and social identity had little or no direct impact on sex-typed or evaluative dimensions. Differences did emerge in the joint impact of Age x PCSE x Neosexism. However, contrary to the *queen bee* hypothesis, it was the *younger* neosexist managers who displayed higher levels of in-group bias. Theoretical and policy implications are discussed.

The Buzz on the Queen Bee Phenomenon, or Modelling the Gender Belief System Among Women at the Crossroads of Occupational and Gender Roles

Managers striving for success face the challenge of adopting an appropriate leadership style in order to achieve the buy-in of subordinates, the respect of their colleagues, and approval from their superiors. According to experts, the most effective leadership style in contemporary organizational settings (characterised by diversity, growth, and frequent change; Baglia & Hunt, 1988) is one that is democratic, transparent, participatory, empowering, team-based, and passionate (Cleveland, Stockdale, & Murphy, 2000; Fondas, 1997; Hatcher, 2003). This transformational—as opposed to transactional—style of leadership is the one more often adopted by, and ascribed to, women (Eagly & Johannesen-Schmidt, 2001). By traditional and contemporary management standards, in fact, research seems to corroborate the title of a popular business magazine article, "*As leaders, women rule*" (Sharpe, 2000). In both line and staff management positions, women have been found to exhibit higher levels of work motivation than men (Donnell & Hall, 1980), and a greater leadership orientation (U.S. Department of Labor, 1991); female managers' conflict resolution skills have also been documented (Duane, 1989).

Given that they have been found to be exceptionally-suited to managing in traditional, hierarchical and in more contemporary, collaborative contexts, logic would dictate that women should be on a steep trajectory toward the summit of success in all managerial levels and fields, and that societal perceptions of women as capable leaders would be changing in concert. In fact, some researchers view such a trend as inevitable (Eagly, Wood, & Johannesen-Schmidt, 2004). The view through the glass ceiling is not

rosy, however. As compared to their male counterparts, female leaders are more heavily scrutinised (Eagly & Johanesen-Schmidt, 2001; Eagly, Makhijani, & Klonsky, 1992), and are hired and promoted less often (Tharenou, Latimer, & Conroy, 1994); the latter finding is especially prominent with regards to promotions to high-level positions (Lyness & Judiesch, 1999). Women, as well as men, tend to give males hiring priority (Harvie, Marshall-McCaskey, & Johnston, 1998), and are more critical of women in authority who give them negative feedback (Sinclair & Kunda, 2000).

Perhaps most ironic is the finding that women continue to be perceived as not measuring up to the managerial ideal. A consistent mismatch has been found between the traits ascribed to women and those ascribed to managers—a perception held not only by men (Brenner, Tomkiewicz, & Schein, 1989; Heilman & Martell, 1986; Schein, 1973), but also by women (Kocum, Tougas, & Brazeau, 2006; Schein & Mueller, 1992; Schein, Mueller, Lituchy, & Liu, 1996). It seems that normative gender roles, or the stereotype of women as subordinate and compliant, for instance (Eagly et al., 2004), continue to hold women back from achieving proportional equality in leadership roles. It is also evident that women are not immune to making these sex-typed judgements.

The purpose of the present investigation is to assess several correlates of in-group disfavouring bias, with female managers as both perceivers and targets. In a previous investigation, Kocum, Tougas et al. (2006) found that, among female business students with elevated neosexism, successful female managers were perceived to be less competent, less independent, and more potent than successful managers in general. The first aim of this study is to replicate Kocum, Tougas et al.'s findings among women in a professional context. In addition to testing the impact of neosexism on the application of

traits stereotypically associated with males and management (Schein, 1973; 1975; Heilman, Block, & Martell,1995) a fourth trait dimension, *Democratic Approach*, is developed and tested. This dimension is comprised of traits that are highly valued in the contemporary management context, and that have been attributed to female managers (e.g., strategic, democratic, fair, skilled at resolving conflicts). Inclusion of this dimension will permit a test of the extent to which negative attitudes elicit negative evaluations of women, even on traits viewed to be typical of their contribution to management.

In-group disfavouring bias has also been detected among older, professional women working in traditionally male spheres of employment (Ellemers, van den Heuvel, de Gilder, Maass, & Bonvini, 2004; Lortie-Lussier & Rinfret, 2002). Ellemers et al. found that older female professors who defined themselves in masculine terms significantly underestimated the professional commitment of female graduate students. Ellemers et al. interpreted their results under the rubric of social identity theory (Tajfel, 1978; 1982; Tajfel & Turner, 1986), suggesting that identification with males rather than females, a strategy of individual mobility, was at the root of their bias. A social identity theory explanation is plausible; however a theoretically-based measure of social identity was not utilised by the researchers. The second aim of this study, therefore, is to assess the impacts of age and social identity on in-group disfavouring bias using Public Collective Self-Esteem (Luhtanen & Crocker, 1992), a theoretically-based measure of social identity that has been empirically linked to in-group bias.

Neosexism and Stereotyping

According to Fiske (2004), stereotyping "entails applying to an individual one's cognitive expectancies and associations about the group" (p. 398). Stereotypes serve both a descriptive (i.e., how people are) and an injunctive (i.e., how people should be) function (Cialdini & Trost, 1998), and have been found to influence judgements in one of two ways: either as an interpretive guide for encoding and processing information, or as a standard by which the stereotyped group member is judged (Cleveland, Vescio, & Barnes-Farrell, 2005). Eagly (1987) contends that people associate the roles people occupy with their inner dispositions. Eagly and Karau (2002) explain that, because males have historically occupied the majority of leadership positions, traits associated with effective managing are associated with males. Thus, there is a perceived incongruity between the sex role of women (as affectionate, helpful, kind, sympathetic, and interpersonally sensitive, for example) and the occupational role of leaders (e.g., aggressive, ambitious, dominant, forceful, and independent).

As the opening of this paper has evidenced, women have been found to master both contemporary and traditional management styles. However, there is a perdurable perception that women fall short of the managerial ideal. Female managers are in the unique position of at once being members of the low status sex whilst simultaneously occupying (or seeking membership in) a high status occupation. As aspiring leaders, their gender role is their "implicit, background identity" (Ridgeway, 1997, p. 231). This bias is not altogether surprising, given that sex stereotypes tend to persist in the face of contrary evidence (Heilman & Martell, 1986), and successful execution of tasks by women is more often than not misattributed to external factors such as luck rather than competence

(Heilman, Block, & Lucas, 1992). What is somewhat unexpected, however, is the finding that women—as well as men—apply sex-typed judgements to women.

A consistent assumption permeating studies assessing stereotyping, prejudice, and discrimination has been that women are more egalitarian than are men. Although there is societal and cross-cultural consensus as to the content of stereotypes (Fiske & Cuddy, 2006; Lee, Jussim, and McCauley, 1995), there is an implicit expectation that women will avoid applying stereotypes in their judgements, whether for group interest (Bobo, 1998), or because they more strongly identify with women (Tajfel, 1978; 1982; Tajfel & Turner, 1986; Williams, 1984). Consistently lower mean levels of sexism among women, as compared to men, may be considered to support this assumption (Glick & Fiske, 1996; Swim, Aikin, Hall, & Hunter, 1995; Twenge, 1997).

However, if one looks beyond mean levels and focusses on the *relations* among variables, evidence emerges that even low levels of prejudice can have negative consequences and, thus, warrant further examination. For example Leach, Peng, and Volckens (2000) found that, in spite of low mean levels, racism was shown to be strongly related to ethnic majority attitudes. Using Neosexism (Tougas, Beaton, Brown, & Joly, 1995) to measure the subtle, contemporary manifestation of sexist attitudes, Tougas, Brown, Beaton, and St.-Pierre (1999) found that women who endorse neosexist attitudes also view male managers to be more competent and qualified than female managers. A previous investigation (Kocum, Tougas et al., 2006) corroborated this finding among female and male business students, whose attitudes toward women were found to be related to their stereotyped perceptions of female managers. Higher neosexism scores were found to be associated with the perception of female managers as less competent

(e.g., possessing less leadership ability, less business skill) and less independent (e.g., indecisive, not self-reliant) than a participant-defined managerial standard.

Notable in the Kocum, Tougas et al. (2006) findings was that, though females' neosexism scores were significantly lower than those of males in the sample, the predictive power of neosexism held for both sexes. In fact, a sex difference also emerged, revealing an impact neosexism altogether different for females. Female business students with higher neosexism perceived female managers to be more potent (e.g., aggressive, dominant) than the managerial standard, while male business students held the opposite perception of female managers as less potent than a typical successful manager. This "shifting standard" (Biernat & Vescio, 2002) has been evidenced previously, as females have been found to judge female assertiveness more negatively than do males (Mathison, 1986).

The most novel aspect of the Kocum, Tougas et al. (2006) study was that it revealed the content of women's scrutiny toward women in managerial roles. There are two important limitations of the findings, however. First, the work experience of business students would have been minimal, as would have been their exposure to (or work experience as) managers. It could be argued that their perceptions were limited because of their lack of real-world experience. Thus, a replication with a natural group (i.e., female managers) is required. The second limitation pertains to the trait dimensions used. They were based on gender stereotypes, and not necessarily managerial characteristics. Thus, they may not provide an ideal or complete measure of perceived credentials for management, particularly since, as has already been reviewed, valued qualifications have changed over the years.

In developing her descriptive index, Schein (1973; 1975) deliberately included traits that would elicit stereotypic differences; traits upon which males and females did not differ were eliminated in pilot testing. Her aim was to assess how stereotypes limited the perception of women as capable leaders. In her initial research, she found that managers were most often attributed masculine stereotypes and that women, having been ascribed feminine traits, did not fit the managerial profile. Stereotyping was confirmed not by the mismatch in traits between females and managers, *per se*, but rather by the correspondence of ratings of males and managers on masculine traits, and the ratings of women on feminine traits which did not match the managerial profile. Heilman et al. (1995) retained the gender stereotyping rubric when they grouped many of Schein's traits into five masculine dimensions (Work Competence, Activity/Potency, Emotional Stability, Rationality, and Independence), and two feminine dimensions (Caring for Others and Hostility Toward Others). In fact, Heilman et al. did not make use of the prototype "managers in general" category for comparison, but rather they used ratings of "male managers" as the yardstick. Stereotyping was signalled by a mismatch between ratings of male and ratings of female managers.

In their analysis, Kocum, Tougas et al. (2006) construed the utility of the trait ratings differently. These researchers used Heilman et al.'s (1995) trait groupings (as opposed to Schein's [1973] 92-item index), as they were comprised of a reduced number of traits, and rendered interpretation of the results more meaningful. However, stereotyping was not located in the application of gender stereotype-congruent ratings. Rather, all traits were construed as being potentially applicable to both female and male managers, and stereotyping was signalled by the discrepancy in the ratings—that is to

say, the extent to which ratings of female (or male) managers did not match ratings of managers in general (i.e., the non-gender-specified prototype).

Implicit in this liberal application of the traits was the assumption that each was relevant to the context of management, and that the list was exhaustive enough that an adequate managerial characterisation could be established for female, male, and non-gender-specified managers. Notably absent from the list, however, were traits most valued in the contemporary managerial context and, incidentally, those attributed most often to women. Thus, it is conceivable that female managers were perceived not to fit the managerial profile because the traits administered to participants for rating did not reflect the dispositions and capabilities of contemporary managers.

In order to assess this possibility, an additional dimension must be tested, comprised not of traits stereotypical to women and/or men, but rather of traits *typical* of the most valued contemporary managers. Traits such as communicates effectively (Cleveland et al., 2000), collaborative, empowers and motivates others, democratic (Donnell & Hall, 1980), able to resolve conflicts, diplomatic, fair, and strategic (Duane, 1989), may yield more similarities than differences 1. if these traits are shown to be valued in managers, and 2. if these traits are shown to be recognised in female managers.

Age and Stereotyping: The Queen Bee

The context of management has changed dramatically over the past several decades. Until 1955, it was federal policy to fire women working in the Canadian public service if and when they married (Prentice, Bourne, Cuthbert Brandt, Light, Mitchinson, & Black, 1988). Two decades later, the Canadian Human Rights Act (1976-77) was ratified, prohibiting discriminatory policies in employment based on sex and race. Two

decades after that, Canada saw its first female appointment to the position of Clerk of the Privy Council and, recently, its second female appointment to the position of Deputy Minister of International Trade. These examples demonstrate that it is *possible* for a woman to achieve the highest level positions. More pertinent to the working context, half of workers in Canada are women (Statistics Canada, 2001), and the proportion of women managers has increased by more than 40% over the past decade (Statistics Canada, 2003).

Progress may be slow, but the rules and context are changing for the better for women. It is therefore likely that women who began their careers decades ago may have had an altogether different career trajectory than would be expected for those who are newer to the profession who have not experienced the same (degree of) struggle. Thus, it is conceivable that older workers may have different perceptions of their current context. Though accounts are not numerous (as is the case with the topic of intragroup derogation among women, as a whole), there is evidence to suggest that older women engage in a higher level of in-group disfavouring bias. This same-sex derogation by older, often higher-status workers has been popularly termed (but rarely discussed in the literature) the *queen bee* phenomenon[1] (Staines, Travis, & Jayaratne, 1974).

The queen bee phenomenon (Staines et al., 1974) is defined as a bias whereby women belittle other women in order to keep their distinct position in a (usually male-dominated) hierarchy. Research examples of the queen bee phenomenon are few, but notable. One example is the underestimation among female professors of the professional commitment of female (as opposed to male) graduate students (Ellemers et al., 2004)—an effect especially pronounced among older female professors (i.e., aged 47 and older). Results by Lortie-Lussier and Rinfret (2002) also found an intergenerational difference in

intragroup prejudice. In their examination of the impact of proportional representation on attitudes toward women, their perceived status, and their contribution to the corporate culture, they found that the oldest female managers in their sample (51 years and over) had the least favourable attitudes toward women as managers.

Both Ellemers et al. (2004) and Lortie-Lussier and Rinfret (2002) attributed their findings to the professional context of older women. They asserted that, in order to have achieved success in a male-dominated profession, women had to adopt a strategy of personal mobility by identifying more with men in their profession at a time when women were a rarity—if not completely absent. The consequence has been a distancing from other women, and the derogation of same-sex colleagues. What is not entirely clear in Ellemers et al.'s (2004) and Lortie-Lussier and Rinfret's (2002) findings is the content of the derogation.

Ellemers and her colleagues use only one item, namely the perceived lack of commitment to the academe, as a stereotype indicator. Though they were careful to choose measures that were highly relevant to the context (i.e., commitment to career is an important component upon which graduate students are judged, and influences the quality of mentoring offered by a supervisor), it would be prudent to triangulate the measure by including additional items for evaluation. Lortie-Lussier and Rinfret used the Women as Managers Scale (WAMS; Peters, Terborg, & Taynor, 1974) as a measure of attitudes. However, this scale is largely comprised of both stereotype ratings and items measuring attitudes and beliefs. Many questions are double-barrelled (e.g., "On the average, a woman who stays at home all the time with her children is a better mother than a woman who works outside the home at least half of the time") or necessarily compare women to

men (e.g., "Women would no more allow their emotions to influence their managerial behaviour than would men"). Examining the impact of age on ratings of female professionals, using a variety of relevant trait dimensions, would provide a clearer picture of where exactly older women perceive trait deficiencies—or the threats—to exist.

Social Identity and Stereotyping: In-Group (Dis)favouring Bias

Social identity theory (Tajfel, 1978; 1982; Tajfel & Turner, 1986) is often applied in understanding conflicts between groups. The fundamental premise of the social identity approach is that the perceptions held, attitudes endorsed, and behaviours carried out by individuals are largely piloted by the groups to which they belong. In others words how one perceives, feels, and acts toward members of a given social group is determined, in large part, by one's own social groups, and the relation among one's in-groups and relevant out-groups. In technical terms, social identity is defined as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership (Tajfel, 1981, p. 255). Thus, the extent to which social behaviour is influenced by one's group membership depends on 1. how strongly aware one is of one's group membership (cognitive aspect), 2. one's recognition of one's group as important (evaluative aspect), and 3. one's feelings about the group (affective aspect).

According to the second corollary[2] of social identity theory's self-esteem hypothesis (best-articulated by Abrams & Hogg, 1988), and the one most pertinent to the present investigation, invidious social comparisons—and the threat to self-esteem they invoke—are the trigger for in-group enhancing strategies (i.e., either in-group favouritism or out-group derogation). Individuals are motivated to maintain a positive self-esteem

and, when the status of their in-group is threatened, they elevate their group status by forcing down that of another. There is an important qualification to this hypothesis, however. Members of low-status groups who perceive their self-concept to be in jeopardy may choose to derogate *in-group* rather than *out-group* members. In order to bolster their personal identity, members of low-status groups may adopt an individual mobility strategy (Taylor & McKirnan, 1984) by seeking membership in the higher status group, thereby distancing themselves from the negative identifiers associated with the low-status group.

There is some evidence supporting this explanation of in-group derogation. Dennis and Kunkel (2004) assessed the impact of gender identity on perceptions of female CEOs using the Bem Sex-Role Inventory (BSRI; Bem, 1974) to measure gender identity, and the Schein Descriptive Index (Schein, 1973; 1975) to assess stereotyped perceptions of female, male and non-gender-specified CEOs. Dennis and colleague found that both female and male undergraduates who identified themselves in masculine terms perceived women not to measure up to the CEO role. Those who characterised themselves in feminine terms did not display sex-typed judgements. Thus, these findings support the hypothesis that those who distance themselves from the low-status group by adopting self-categorisations stereotypical of the higher-status group (i.e., males), and very few stereotypical of the low-status group (i.e., females), tend to underestimate the capabilities of the low-status group.

Ellemers et al. (2004) also interpreted their findings within this framework. In addition to finding a significant impact of age, as previously described, Ellemers et al. found that female professors' identity exacerbated negative evaluations of female

graduate students. Also using the BSRI (Bem, 1974) as a measure of gender group identity, these researchers found that it was older female professors who identified more strongly on masculine traits who viewed female graduate students as lacking commitment to the academe. Ellemers and her colleagues concluded that the older women in their sample, by virtue of having achieved success in a male-dominated context, identified with those who constructed the context, and actively protected their status by disfavouring younger, up-and-coming female professionals.

Although these investigations have highlighted the importance of identity to negative judgements of one's in-group, they are limited both methodologically and theoretically. The first critique questions the use of the BSRI (Bem, 1974) as a measure of social identification to one's gender group. Bem (1993), herself, notes that the "masculinity" and "femininity" scale dimensions of the BSRI can foster a polarised view of women as intrinsically feminine, and men as intrinsically masculine, with deviants possessing some combination of both or neither sets of traits. Although she presented a more sophisticated view of gender identity in schematic terms in her subsequent work (1993), with gender-congruent trait adoption represented as a sex-typed tendency rather than a reflection of one's gender identity, researchers have ignored this theoretical development and continue to use the BSRI as gender-group social identity measure.

Research also shows that people are flexible with the traits that they adopt, depending on the social context. In traditional BSRI terms, both women and men are more masculine at work, and more feminine at home (Echabe & Castro, 1999), and traits adopted fluctuate for both sexes across a variety of contexts (Smith, Noll, Bryant, 1999). Since the BSRI is a set of commonly-held stereotypes, which are a product of the social

roles that women and men have traditionally occupied (Eagly, 1987), it is an inadequate measure of identity in a context in which women are directly challenging those gender roles. By occupying the role of a manager, for instance, women would be expected to have "leadership ability" and to "act as leaders;" both traits are items on the masculinity scale of the BSRI. Does the adoption of these traits automatically render female managers as less identified with women? By design, the BSRI confounds gender and occupational roles and is not an accurate measure of in-group ties, especially among women with career aspirations in traditionally male contexts.

A final shortcoming with using of the BSRI is that traits, *per se*, may be construed as personal rather than social identity (Tougas, Lagacé, de la Sablonnière, & Kocum, 2004). Gurin and Markus (1988) argue that gender identity is not simply a matter of possessing a list of traits commonly ascribed to one sex or the other, but rather the "internal representation of belonging to the social category, women" (p. 157). In fact, using the BSRI as an indicator of identity ignores the active role the individual plays in the identification process. To recapitulate, identifying with a group means that an individual is aware that s/he belongs to the group, feels that the group membership is important to her sense of self, and perceives the group as being worthwhile. As the BSRI does not apply to any of these aspects of social identity, predictions using the BSRI under the social identity paradigm are arguably misguided.

In addition to the shortcomings of using the BSRI as a measure of social identity, a second critique of these studies is levelled at the assumption that low-status group members necessarily have a negative social identity necessitating "corrective" measures. In fact, it has been found that low-status group members often take pride in their in-group

membership as a result of sharing a common struggle with them (Crocker & Major, 1989; Smith & Tyler, 1997). As opposed to reacting to one's low status with a strategy of personal mobility, stronger in-group ties have been linked to collective strategies of coping with status differentials and enhanced in-group favouritism, particularly if they are viewed to be illegitimate (Tougas & Veilleux, 1988). Researchers have thus expanded social identity theory to include this shared aspect of "common fate" (Gurin & Markus, 1988) in women's identity as a low-status group, and have included a relational aspect to their respective operationalisations (Luhtanen & Crocker, 1992; Phinney, 1992).

One such measure is the Collective Self-Esteem Scale developed by Luhtanen and Crocker (1992). The CSE scale was developed as a measure of social identity intended to provide researchers with a tool for assessing the moderation of in-group favouritism. The CSE scale was designed to tap all of the aspects of social identity theorised to give rise to collective, group-enhancing strategies, namely how one feels about one's group (i.e., private collective self-esteem), how others view one's group (i.e., public collective self-esteem), and how important the group is to the individual (i.e., identity)[3]. Luhtanen and Crocker originally conceived this scale to assess global esteem for all of one's ascribed social groups (i.e., sex, race, religion, nationality, ethnicity, and socioeconomic class), but they suggested that collective self-esteem with respect to specific target groups—both acquired (e.g., managers) and ascribed (e.g., women)—could be assessed with this scale. Since its inception, the CSE scale has been used in over 100 peer-reviewed articles, many of which have used it to measure reactions to a threatened group identity.

Of all the aspects of social identity captured by the CSE, it is the public collective self-esteem (PCSE) subscale that has been found to be the most strongly related to in-

group favouring bias and out-group derogation. PCSE is comprised of four items tapping judgements of how others view one's social group (e.g., "In general, others respect female managers"). An individual with low PCSE holds the view that others do not value her in-group and, conversely, an individual with high PCSE perceives that others hold her in-group in high regard. Though support for the self-esteem hypothesis has been mixed (see Rubin & Hewstone, 1998) since it was introduced theoretically by Tajfel and colleague (Tajfel, 1978; 1982; Tajfel & Turner, 1979), findings using the PCSE subscale have been consistent with theory. Specifically, low PCSE has been found to be associated with elevated in-group favouring bias in both lab-generated and natural groups (Hunter, Cox, O'Brien, Stringer, Boyes, Banks, Hayhurst, et al., 2005; Hunter, Kypri, Stokell, Boyes, O'Brien, & McMenamin, 2004), and to increased out-group derogation (Long & Spears, 1998). Lower PCSE has also been found to be related to higher perceived discrimination (Luhtanen & Crocker, 1992). Conversely, higher PCSE scores have been found among self-identified anti-feminists (Smith, 1999), suggesting a possible corollary of these findings not yet tested could be that group members with *higher* PCSE would have higher levels of in-group *disfavouring* bias.

Joint Effects with Public Collective Self-Esteem

Given the utility of the PCSE as a measure of social identity, two joint effects are theoretically possible. The first is a re-examination of the Age x Identity interaction found by Ellemers et al. (2004). As already described, the shortcomings of using the BSRI as a measure of social identity are numerous, not the least of which is the lack of theoretical underpinning. Ellemers et al. surmised that the older women in their sample likely derogated members of their sex because of the threatening context in which they

had established their careers, forcing them to identify along masculine lines and, as such, distance themselves from their in-group. It is possible that, because of the contrast between the current workforce and the context they experienced in the past, older female workers may have a higher PCSE (i.e., a view that women are currently valued in the workplace) than women newer to workforce. Consequently, this lowered perception of threat to identity, together with age, may be linked to greater in-group disfavouring bias.

As has already been articulated, social identity theory contends that individuals who feel that their self-concept is threatened have the option of distancing themselves from the low-status in-group. Several other options for maintaining a positive in-group identity are articulated under the social identity paradigm, and fall under the general categories of social creativity and social competition (Taylor & McKirnan, 1984). In brief, low-status groups can maintain a positive social identity through creativity by redefining the points of comparison (e.g., women may be less directive but they are more compassionate as leaders than are men), redefining the derogated aspects as good (e.g., being caring is a positive leadership trait), and choosing a different comparison group altogether (e.g., as a younger worker, I am more energetic than older workers). Social competition involves rejection of the status quo altogether; political lobbying is included in the list of possible actions taken.

As a measure of the endorsement of the status quo state of affairs for women, neosexism could be construed as a measure of the extent to which women are or are not willing to challenge the system. Luhtanen and Crocker (1992) suggested that those who are activist in their views, but view others do not value their group, may have the most pronounced level of in-group favouritism. As such, the joint effect of perceiving one's

group as devalued and endorsing lower neosexism scores (e.g., women are not pushing too hard for change) may result in a group-enhancing bias.

The Present Investigation

Though women are well-suited to management, they are persistently undervalued and derogated by superiors, peers, and subordinates. Moreover, this derogation is also turned inward, as women have been found to endorse neosexist views, and these attitudes have been found to be associated with the perception that women do not possess the traits necessary for successful management. To recapitulate, research on the queen bee phenomenon may help to explain in-group disfavouring bias. For instance, age had been found to be an important correlate of stereotyping of women by women, such that older female professionals have been found to endorse these views to a greater extent. Social identity explanations have been offered to account for the impact of age. However, the correspondence between what has been purported as predicted by social identity theory and what has been tested is speculative, at best.

The present analysis has two foci: the first is to re-test the link between neosexism and stereotyping found by Kocum, Tougas et al. (2006), but in a professional context among female managers. Specifically, the impact of neosexism on perceptions of work competence, potency, and independence will be tested. It is hypothesised that Kocum, Tougas et al.'s findings will be replicated, such that higher neosexism scores will be associated with lower competence, and independence ratings of female managers, as compared to a participant-generated standard. Higher neosexism scores are also hypothesised to be associated with stronger perceptions of female managers' potency.

These trait dimensions represent what researchers (Heilman et al., 1995; Schein,

1973; 1975) have construed as being male stereotypes. The impact of neosexism on a fourth dimension, *Democratic Approach,* will also be tested. If neosexism is related to negative evaluations of female managers, regardless of stereotype content, then higher neosexism scores are expected to be related to lower ratings of democratic approach.

The second focus of this study is to test age and social identity (i.e., PCSE) as additional correlates of intragroup stereotyping. Both their impact as main effects, and as joint effects, will be examined. As pertains to main effects, it is expected that older female managers will underestimate their same-sex colleagues' capacity for management, in the same pattern as hypothesised for neosexism. PCSE is expected to elicit the opposite pattern, with lower scores predicting more in-group favouring bias, that is to say, *higher* competence, independence, and democratic approach scores, and *lower* potency scores for female managers as compared to the prototype. Two joint effects are also proposed. It is expected that older female managers with higher PCSE will elicit the highest levels of stereotyping. The second joint effect, and the final effect proposed, is an interaction between PCSE and neosexism. It is expected that PSCE will augment an in-group favouring bias, such that those female managers with lower PSCE and lower levels of neosexism will elicit the highest level of in-group favouritism.

Method

Recruitment

Participants were female managers working in six large ($N > 500$), medium (N between 50 and 500), and small ($N < 50$) departments of the Federal Public Service and in two Crown Corporations across Canada. Approximately 1500 female managers received an invitation to complete the online survey in the language of their choice, either

English or French (see Appendix for a hard copy version of the questionnaire). In all, 441[4] female managers responded to the survey, yielding a participation rate of approximately 29%, which is representative of the response rate expected for online surveys (Best & Krueger, 2004).

Recruitment of participants took place in four stages. First, letters were sent to twenty deputy ministers and presidents of Canadian federal public service departments and crown corporations, requesting their cooperation and authorisation to survey female managers in their organizations; in all, six federal departments and two crown corporations agreed to participate. Second, bilingual (English and French) recruitment texts were prepared by the researchers, in collaboration with designated authorities from each department and crown corporation, inviting female managers to complete the online survey. Third, departmental authorities compiled lists of female managers and sent an email to each, containing either the recruitment text itself with the link to the online survey, or a notice with a link to an internal online bulletin board where the recruitment text and survey link were posted. A reminder notice was sent as the final step.

Online Questionnaire Procedures

Access to the survey was restricted to participants using the link they received via internal email, or those who accessed it from the electronic bulletin board in their work place. The initial page provided a description of the study, and informed managers that their participation was completely voluntary. Contact information for the researchers was also provided, as well as the offer of providing the results of the study upon request. Managers were also informed that, by clicking "next" and proceeding with the survey, they were consenting to participate in the study. Variables of interest appeared first, and

demographic information (professional, educational, personal information) was collected at the end of the survey. The order of presentation of managerial targets was randomised by department. In all, 268 participants were presented with the *successful managers in general* target first, and 131 participants were presented with the *successful female managers in general* target first. Target order did not affect responses on any of the variables of interest.

Several features of the online questionnaire offered a distinct methodological advantage over the capabilities offered by paper questionnaires. First, item-order was randomised within each page of the survey so as to reduce the potential impact of order effects. Second, the survey was set up in *forward only* mode so that once one page was completed, participants were not permitted to refer back to previous pages of the survey. This feature was particularly useful, as participants were asked to provide trait ratings for two targets using identical measures, and may have been tempted to refer back to their first ratings in providing ratings for the second target.

However, the online version did present an important and unexpected technical difficulty which caused a considerable reduction in sample size. A large number of participants abandoned the survey when they reached a progress bar stating, "Section 1 of the Survey is 100% complete." This progress bar appeared on the page presenting the second target to be rated (i.e., either *successful female managers,* or *successful managers in general*), and participants likely misinterpreted this instruction to mean that the questionnaire, itself, was complete;[5] in a paper version, this misconstrual would not have occurred. As a result, 83 participants completed only a portion of the items of interest and one target rating, with 31 participants having completed ratings for *successful female*

managers only, and 52 having completed ratings of *managers in general* only. Comparisons were done to ensure that the survey was abandoned for purely technical reasons and not due to ratings on items already completed. No significant differences were found between those who abandoned the survey and those who completed it;[6] therefore, the 83 cases were deleted from subsequent analysis.

Characteristics of the Sample

Only questionnaires completed in English were retained, as too few participants completed the French version (n = 42) for an assessment of the validity of items across language to be conducted, particularly the translated trait ratings. Of the remaining 310 participants, most were middle managers (67.5%)[7], with the next highest proportion being senior managers (28.1%), followed by junior managers (4.4%). The average income across all managerial levels was $78,878.59 (*SD* = $13,015.59). Over one third of participants (35.9%) had over 20 years work experience, but a slightly larger proportion (38.6%) had only 3-6 years work experience as managers. For 61.5% of participants, half to all of their work day was reported to be spent on managerial duties, as defined by the official federal public service designation[8]. Most (87.5%) reported having had a female supervisor, with the average number of years having had a female supervisor being 5.18 years (*SD* = 4.33 years).

With respect to education, the majority of participants (54.1%) reported having a college diploma or bachelor's degree, 29.9% a masters degree, and 3.1% a doctorate. In terms of demographic variables, the average age of participants was 44.62 years. Most participants reported that they were married or living in common-law relationships (70.7%), heterosexual (94.1%), and had no children (36.7%), one child (21.1%), or two

children (31.1%). Most participants identified their ethnic group as being Canadian (45.1 %), with the remaining top five groups being Canadian of English-speaking European descent (15.4 %), Francophone (including French Canadian, Québecoise, and French Acadian; 10.8 %)[9], Aboriginal (including First Nations, Métis, Inuk, and Inuit; 7.7 %), and Canadian of non-English-speaking European descent (6.2%). Altogether, 3% of those who indicated their ethnic group reported being Black.

Online Questionnaire Content

All scales that had not been previously validated in a French sample, namely Public Collective Self-Esteem (Luhtanen & Crocker, 1992) and the Scale of Stereotyped Attributes (Heilman et al., 1995), were translated and back-translated in order to reduce the possibility of semantic, conceptual, and normative problems associated with translations of attitude and opinon measures (Behling & Law, 2000). Both translators were bilingual research assistants who were not aware of the hypotheses of the present study; the back-translator had never before seen the original English versions of the scales.

Demographic Variables. Participants were asked to respond to a series of questions pertaining to their professional, educational, and personal background. With regards to employment, they were asked to indicate their management level, the number of years they had worked as a manager, whether or not they had worked for a female manager and for how long. They were also asked to indicate their job classification, which is an acronym representing their employment category and status. In order to facilitate use of these categories as an indicator of status comparable across departments, the annual income levels associated with the acronyms were obtained from the Treasury

Board of Canada (2005, April 4), the department overseeing employment matters for the majority of the Federal Public Service. In terms of education, they were asked to indicate the highest level of education obtained, and personal information requested included age, civil status, sexual orientation, and number of children, if any. The final section of the survey was reserved for participant comments.

Social Identity. The Public Collective Self-Esteem subscale of Luhtanen and Crocker's (1992) Collective Self-Esteem Scale was adapted for the present study. This subscale was designed to capture that aspect of social identity related to perceived-other evaluations. In the present application, with female managers specified as the target group, the scale was used to measure the extent to which female managers perceived that their ingroup was valued by others. Participants were asked to rate the following four statements on a 7-point Likert-type scale, with higher scores indicating a higher degree of agreement with the statement: "Overall, female managers are considered good by others;" "Most people consider female managers, on average, to be more effective than male managers;" "In general, others respect female managers;" and "In general, others think that female managers are unworthy[10]." Luhtanen and Crocker found their scale to be reliable (Cronbach's Alpha = .80). The overall reliability of this measure in the present sample was much lower (Cronbach's Alpha = .60).

Neosexism. The Neosexism Scale (Tougas et al., 1995) was designed to measure the modern manifestation of sexist attitudes. Example items are as follows: "Women shouldn't push themselves where they are not wanted" and "It is difficult to work for a woman boss." Originally comprised of 11 items, the shorter 8-item scale (Kocum, Rye, Kristjansson & Rostaing, 2006) was ulitised in the present sample. Participants were

asked to estimate their degree of agreement with each statement on a Likert-type scale ranging from totally disagree (1) to totally agree (7), with a score of 4 indicating a neutral response. The reliability of the scale in the present study was acceptable but low (Cronbach's Alpha = .66).

Stereotyping and Evaluation. Each participant provided trait ratings for two targets: *successful female managers* and *successful managers in general*. Traits, *per se*, were not used to assess stereotyping. Rather, discrepancy scores were calculated to measure the extent to which a difference was perceived between trait ratings for female managers versus managers in general. Discrepancy scores were calculated by subtracting participants' trait ratings of female managers from their ratings of managers in general[11], each trait having been rated on a scale of 1 (uncharacteristic) to 5 (characteristic). Thus, higher positive discrepancy scores reflected higher stereotyping in the direction of managers in general possessing *more* of the trait, whereas lower negative scores reflected stereotyping in the direction of *female* managers possessing more of the trait. A score of zero indicated no difference between target ratings and, hence, no stereotyping.

Traits used were those included in three of the seven trait subscales developed by Heilman et al. (1995): Work Competence, Activity/Potency, and Independence (see Table 1 for a list of subscales and their associated traits). The remaining subscales—Emotional Stability, Rationality, Concern for Others, and Hostility Toward Others—were omitted because they did not yield significant findings among women in a previous investigation (Kocum, Tougas et al, 2006). A fourth set of traits labelled Democratic Approach was added, reflecting the documented ways in which women have shaped the managerial role, and included the following items: communicates effectively, (Cleveland

et al., 2000), collaborative, empowers and motivates others, democratic (Donnell & Hall, 1980), able to resolve conflicts, diplomatic, fair, and strategic (Duane, 1989).

Cronbach's alpha values for the subscales were found to be adequately reliable in previous studies (Heilman et al., 1995; Kocum, Tougas et al., 2006). In the present study, the reliability of the 5-trait *Competence* subscale was adequate for both ratings of managers (Cronbach's alpha = .69) and female managers (Cronbach's alpha = .65), as was the reliability of the 10-trait *Potency* subscale for managers (Cronbach's alpha = .77) and female managers (Cronbach's alpha = .79). The reliability of the 6-item Independence subscale was only acceptable subsequent to the deletion of the reverse-scored UNCERTAIN and INFLUENCED items, as well as SELF-RELIANT (Cronbach's alphas = .56 and .62 for general and female managers, respectively). Finally, the newly-created 8-trait subscale DEMOCRATIC showed very good reliability (Cronbach's alphas = .82 and .84 for general and female managers, respectively).

Social Desirability. The short form of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) was included to detect the presence of response bias. The reliability of this 13-item version of the scale was adequate (Cronbach's alpha = .75). Correlations between the Social Desirability Scale and Neosexism and Public Collective Self-Esteem were significant, but not high (r = .-.17, $p < .01$ and r = .20, $p < .001$, respectively). Correlations between social desirability and trait ratings were also not high, with the highest correlation with ratings of Democratic Approach for female managers, r = .22, $p < .001$.[12]

Analyses

In order to test the proposed hypotheses, a hierarchical multiple regression strategy was used. Regression analyses were run separately for each dependent variable, and consisted of a test of seven beta weights: The *main effect* type independent variables—Neosexism, Age, and Public Collective Self-Esteem—were entered on the first step; the three two-way interactions—Age x Neosexism, Public Collective Self-Esteem x Neosexism, and Age x Public Collective Self-Esteem—were entered on the second step; and the three-way interaction—Age x Public Collective Self-Esteem x Neosexism—was entered on the third and final step.Beta weights were interpreted from lowest- to highest-order, with the higher-order significant effects qualifying any significant lower-order effects.

Interpretation of the beta weights at both the *main effect* and interaction level in multiple regression interaction models requires some explanation if the weights are to be interpreted accurately, and presented clearly to the reader. To review basic regression, the test of a beta weight in multiple regression represents a test of the impact of a particular variable on Y while all other variables in the regression equation are held constant at zero. However, zero may not be a meaningful value at which to test this effect, as it may not represent an actual value on the scales of interest (e.g., age). Thus, the researcher may wish to *recast* (Aiken & West, 1991) the variables so that a value of zero actually corresponds to a more meaningful value.

For example, to "recast" (Aiken & West, 1991, p. 12) a variable such as age so that zero represents the average age (as opposed to *zero* age), one simply subtracts the mean age from all values for age. This particular form of recasting is called *mean*

centring, because the scores for a variable are repositioned so that their new mean is zero. Mean centring is used for two purposes: 1. to recast variables to a meaningful value; and 2. to reduce the possibility of multicollinearity among predictors when their interactions are entered into regression. Though it makes intuitive sense that variables might be singular if they, and their products, are entered into a regression, the necessity for mean centring for the latter purpose has been questioned. "High levels of collinearity between a product term and its component parts generally will not be problematic for interaction analysis unless the collinearity is so high that it disrupts the computer algorithm designed to isolate the relevant standard errors" (Jaccard & Turrisi, 2003). In fact, the t-tests of the betas are the same whether or not the products of centred variables are used. For the purposes of the present study, independent variables will be centred to render their juxtaposition more meaningful with respect to the betas tested.

Interpretation of the main effect step is relatively straightforward, and is possible from the regular printout offered when the regression is run. Significant interactions, however, require several steps of follow-up: plotting, testing the slopes and, if applicable, testing the differences between the slopes. In order to plot interactions and to test the simple slopes, one needs to recast the moderator(s) at high and low levels in order to test the impact of the focal predictor on Y at a particular level(s) of the moderator(s), and to obtain the predicted values of Y at high and low levels of the focal predictor in these moderated conditions. Obtaining the values for plotting the interactions, as well as testing the slopes, may be done simultaneously using the regression software used to run the main analyses using the computer strategy outlined in detail by Aiken and West (1991) and Jaccard and Turrisi (2003).

In the present analysis, new variables were first created by shifting the distributions of the moderators so that a value of zero would in actual fact reflect one standard deviation above or below the mean. Just as mean centering changes the reference point for the regression effects to the mean, the *pick-a-point* approach to interpreting interactions in regression changes the reference points to high and low values on the moderators. In this sense, the results approximate an ANOVA, with high and low conditions crossing each other. In a two-way interaction, with only one moderator acting on the relationship between X and Y, there would be only two conditions: High and Low. In a three-way interaction, with two moderators acting on the relation between X and Y, there would be four conditions: high on moderator 1 and high on moderator 2; high on moderator 1 and low on moderator 2; low on moderator 1 and high on moderator 2; and low on moderator 1 and low on moderator 2. Just as the effect of X is obtained at the mean of all other independent variables (when they are centred and continuous), the effect of X can also be obtained when the interactions are "centred" at the group of interest. As a final step, differences in slopes can be tested using a new procedure outlined by Dawson and Richter (2006), which essentially divides the difference in slopes by the standard error for the difference. (See Tables 7 and 8 for descriptive statistics for neosexism, public collective self-esteem, and trait dimensions for younger [37 years] and older [52 years] managers.)

Results

Preliminary Analyses and Descriptives

Missingness. SPSS MVA was used to assess the proportions of and possible patterns in the missing data. One case had more than 50% of her data missing, and was

deleted. Six cases were missing ratings for only one of the managerial targets. Those who did not rate *successful female managers* after having rated *successful managers in general* had higher PVO4 scores on average (M = 6.50; SD = .71) than those who rated both targets (M = 4.77; SD = 1.03), Dunnett's T3(248) = 12.83, $p < .001$. Thus, those who rated *successful managers in general* first and chose to skip rating *successful female managers* had a stronger belief that female managers are considered to be good by others as compared to participants who rated both targets. Those missing ratings for *successful managers in general* but not *successful female managers* had lower SD12R scores on average (M = 4.00; SD = 1.00) than those who rated both targets (M = 4.53; SD = 1.43), Dunnett's T3(263) = 30.75, $p < .001$. Thus, those who rated successful female managers first and chose to skip rating managers in general displayed lower social desirability, in that they were more likely to admit that they had ever given up on a task because they thought too little of their ability. Because patterns were found among these six participants, they were retained for the analysis. No other cases had more than 10% missing data.

Of note is that a significant proportion of participants did not indicate their ethnic group (14.8%) or their sexual orientation (34.8%). Patterns were evidenced on several trait ratings for participants missing data on Age, Education, Ethnic Group, Sexual Orientation, and one item from the Public Collective Self-Esteem scale (i.e., PCSE2; see Table 2). The Estimation Maximisation (EM) method in SPSS 14.0 was used to impute the missing data. Allen (2002) cites this method as reasonable when linear models are to be estimated, and data are considered to be missing at random (MAR).

Assumptions

None of the demographic variables was linked to differences on the variables of interest. All independent and dependent variable distributions were examined for aberrations from normality and for outlying cases. The dependent variables were normal in shape, but were highly kurtotic, with most cases centred around zero difference. These distribution shapes were expected because of the low variability of the within-subjects measures, as well as the specificity of the targets to be rated designed to minimise the difference of the category to be rated. The impact of positively kurtotic distributions in regression analysis is that their variance is reduced (Tabachnick & Fidell, 2001), resulting in an increased probability of Type II error. In the case of the difference scores, however, a value of zero is meaningful; thus, the distributions were left intact. There were fewer than 5 outlying cases for each dependent variable, likely an artefact of the kurtotic distributions with their associated low variability. Extreme cases were re-scored to 3.29 standard deviations from the mean so as to retain their position as extreme scores, but to also reduce their undue influence. The independent variables were normally distributed. Public Collective Self-Esteem had one outlying case. Multivariate outliers were checked among the independent variables to determine if this and other cases were multivariately outlying. Indeed, this case appeared as a multivariate outlier, as well, based on a critical chi square of 16.27(3), $p < .001$, and was deleted from the analysis. Once the analysis was run, a residuals check was conducted. The standardised residuals were normally distributed, and errors of prediction were normally distributed around the predicted scores. See Table 3 for the zero-order correlations among independent variables, including interaction terms.

Item Response Analysis on Democratic Approach

Analyses using item response models require that the assumption of unidimensionality of the construct be met. This assumption was tested using a nonlinear principal components analysis in PRELIS, a method recommended as an appropriate assessment of dimensionality for ordinal data in preparation for item response analysis (Hambleton & Rovinelli, 1985; Hattie, 1984, 1985). The first component accounted for 59.03% of the variance in Democratic Approach scores, which was larger than the recommended criterion of 20% (Reckase, 1979). The second component was substantially smaller than the first at 10.45%. The ratio of the first to the second eigenvalues was 4.72:0.84 = 5.62, a value exceeding the recommended 3:1 ratio. Therefore, it was concluded that a unidimensional representation of the data was appropriate. (See Table 4 for the polychoric correlations and descriptive statistics.)

To assess the reliability of Democratic Approach traits, an item response analysis was conducted using the polytomous *graded response model* (GRM; Samejima, 1996) in Multilog 7.03. As the gender neutral of the two target categories, only ratings of managers in general were included in the analysis.[13] Response patterns for each of the eight Democratic Approach traits were compared to the maximum likelihood estimate of the latent trait. All eight items were found to be highly or at least adequately related to the latent trait. Discrimination parameters were adequate, ranging from $\alpha = 1.04$ to $\alpha = 3.70$ (see Table 5). Threshold parameters indicated that all category responses were evenly distributed across trait levels, though most were negative. As can be seen in Figure 1, the ICC for *diplomatic*, higher ratings of Democratic Approach were associated with a higher probability of providing a rating of 5, while lower ratings were associated with a higher

probability of providing a rating of 1 or 2. Of note is that ratings of 5 were most likely for all traits, indicating that many participants viewed this trait as characteristic of managers.

T-Test Comparisons on Trait Ratings

A set of dependent samples t-tests was run to determine whether ratings of female managers' Work Competence, Activity/Potency, Independence, and Democratic Approach ratings differed from those for managers in general. Female managers were viewed as significantly more Active/Potent and Independent than managers in general, $t(307) = 3.13, p < .01$ and $t(307) = 3.74, p < .001$, respectively (see Table 6 for means for all trait dimensions).

Hierarchical Regression Analyses

A series of hierarchical regression analyses was conducted using SPSS 14.0 REGRESSION to assess the extent to which the effect of Neosexism on stereotyping was moderated by Public Collective Self-Esteem and age. Neosexism, Public Collective Self-Esteem, and age were mean centred and were entered together as main effects on the first step. Discrepancy scores for each of the four trait subscales, namely Work Competence, Activity/Potency, Independence, and Democratic Approach were regressed onto Neosexism, Public Collective Self-Esteem and age. The three two-way interactions PCSE x Neosexism, Age x Neosexism, and Age x PCSE, were computed using the mean centred independent variables, and were entered on the second step. The three-way interaction Age x PCSE x Neosexism was entered on the third step and final step. Due to the large number of slopes tested across several dependent variables, a sequential modified Bonferroni adjustment (see Jaccard & Turrisi, 2003; Jaccard & Wan, 1996) was applied to each beta test.

Work Competence

Hierarchical regression. When entered at Step 1, Neosexism, PCSE, and Age did not explain a significant proportion of variance in Work Competence discrepancy scores (see Table 9 for a summary of the results for the complete series of hierarchical regressions), indicating that none of the effects was significant at the average level of the other variables. The addition of the two-way interactions at Step 2, however, yielded a significant increase in the total proportion of variance explained, $F_{\Delta}(6, 301) = 3.36, p < .01, R^2_{\Delta} = 0.06$. Specifically, the Age x PCSE and PCSE x Neosexism interactions were significant. These interactions were qualified by the three-way interaction among Age x CSE x Neosexism entered at Step 3, $F_{\Delta}(7, 300) = 4.29, p < .01, R^2_{\Delta} = 0.03$.

Plotting the interaction and testing the slopes. Precise plotting techniques and signficance tests of slopes were reserved for the follow-up analysis of the signficant three-way interaction among Age x PCSE x Neosexism. However, the signficant two-way interactions were plotted using a simple median split technique (median Age = 45) in order to verify the extent to which the significant two-way interactions supported the proposed hypotheses. As can be seen in Figure 2a, the impact of Age x PCSE was not exactly as expected. For older female managers, the impact of PCSE on Work Competence discrepancy scores was positive, such that higher PCSE (i.e., lower perceived threat) was associated with lower ratings of female managers' competence as compared to the successful managerial prototype. However, older participants with the highest PCSE did not display the most in-group disfavouring bias, as expected. Rather, it was the younger group with low PCSE (i.e., higher perceived threat) who displayed the highest level of in-group disfavouring bias, such that this group perceived female

managers to be less competent as compared to the successful managerial prototype. The PCSE x Neosexism interaction was precisely as expected. Female managers with low neosexism and low PCSE scores exhibited the highest level of in-group favouritism, perceiving female managers as being *more* competent that the successful managerial prototype (see Figure 2b).

In order to further understand the significant Age x PCSE x Neosexism interaction, procedures described by Aiken and West (1991) were used to test the impact of Neosexism on Work Competence discrepancy scores at the four conditions representing high and low levels of Age and PCSE. High and low levels of Age and PCSE were set using the values one standard deviation above and below the mean for each moderator as benchmarks. In the case of Age, the *younger* condition represented female managers who were 37 years of age, while the *older* condition represented female managers who were 52 years old. High and low conditions for PCSE were represented by the scores 4.02 (essentially, the mid- or neutral point of the 7-point scale) and 5.03, respectively.

The Age x PCSE x Neosexism interaction was plotted to provide researchers and readers with a visual depiction of this effect (Figure 2c). Four simple slopes were plotted, representing four conditions moderating the impact of Neosexism on Work Competence discrepancy scores: 1. younger participants lower on PCSE; 2. older participants lower on PCSE; 3. younger participants higher on PCSE; and 4. older participants higher on PCSE. By recasting the independent variables for each of these moderated conditions, simple slope and simple intercept tests were isolated.

As can be seen in the figure, the impact of Neosexism on Work Competence discrepancy scores was strong and positive for younger managers with low PCSE. The opposite was true for younger managers with higher PCSE, whose neosexism scores were negatively related to their Work Competence discrepancy scores. Neosexism appeared to be unrelated to Work Competence discrepancy scores for older managers. A test of the slopes via t-tests corroborated these observations (i.e., the beta for Neosexism at each of the recasted conditions). The slope for younger managers lower in PCSE was significant, $t(300) = 2.94$, $p < .01$, as was the slope for younger managers higher in PCSE, $t(300) = -2.87$, $p < .01$. The other two slopes were non-significant.

Testing the differences between the slopes. The limitation of using slopes tests, alone, to test the joint effect of moderators on the relationship between X and Y is that the differences in slopes cannot be assessed. Significant differences may be missed among the groups. Dawson and Richter (2006) developed a tool for testing the differences between slopes. The objective of the test is to test the difference between all possible pairs of simple slopes by dividing the difference between the simple slopes by the standard error of the difference between the slopes. To simplify calculation, Dawson (2006) has provided an Excel macro which performs the calculations when the betas, variances, and covariances from the analysis are entered.

The slope difference test yielded significant differences. Dawson and Richter recommend a Bonferroni correction be applied when interaction probing occurs post hoc. Thus, after Bonferroni corrections were applied, only the difference between younger managers low versus high on PCSE scores was significant, $t(300) = -3.77$, $p < .001$. Thus,

younger workers have a significantly more negative relation between their neosexism and Work Competence Discrepancy scores when their PCSE scores are high versus low.

Thus, high PSCE acts as a buffer for the impact of sexism on stereotyping for younger workers, but not for older workers. The lower the PCSE for younger workers, the more their sexism leads to stereotyping to the detriment of female managers. The higher their sexism and the lower the PSCE, the less competent they view female managers to be as compared to the ideal standard. For younger managers who believe others do not value female managers, sexism has a significant impact on stereotyping. For younger workers who believe others value female managers, higher sexism actually has the opposite impact on Work Competence discrepancy scores. Thus, the impact of sexism is not all bad. For younger women who believe that others value female managers (e.g., others view female managers as worthwhile), their sexism scores (e.g., it is difficult to work for a woman boss) have a positive impact on the perceptions of women.

Activity/Potency

Hierarchical regression. When entered at Step 1, Neosexism, PCSE, and Age did not explain a significant proportion of variance in Activity/Potency discrepancy scores indicating that when all other independent variables were held constant at their mean, none of the *main effects* was significant. The addition of the two-way interactions at Step 2, however, yielded a significant increase in the total proportion of variance explained, F_{Δ} (3, 301) = 6.60, $p < .001$, $R^2_{\Delta} = 0.06$. Specifically, the Age x PCSE interaction was significant, $\beta = -.22$, $p < .001$, $sr^2 = 0.04$. The CSE x Age x Neosexism interaction entered at the third step was not significant.

Plotting the interaction and testing the slopes. The two-way interaction between Age and PCSE was plotted (Figure 2d). The most prominent slope was that for younger female managers, whose higher PCSE scores were associated with higher Activity/Potency discrepancy ratings. This slope was, in fact, significant, $t(300) = 3.82$, $p < .001$. The opposite was the case for older participants, for whom higher PCSE was associated with lower Activity/Potency discrepancy ratings, $t(300) = -2.0941$, $p < .05$. This slope was not significant, however. It should be noted that the majority of participants had negative scores, such that most participants viewed female managers to be at least somewhat more active/potent than managers in general. Those of average age (i.e., $M = 44.57$ years) had slightly lower ratings of female activity/potency as their PCSE score increased, but this slope was also not significant.

Testing the differences between the slopes. The test of the beta coefficient for the two-way interaction is, in itself, a test of the difference between slopes. Thus, the difference between the slopes for older versus younger managers was significant.

Independence

Hierarchical regression. None of the independent variables was found to have a significant impact on Independence discrepancy scores. Only the three-way interaction Age x PCSE x Neosexism approached significance, $\beta = .12$, $p = .06$, $sr^2 = 0.01$.

Plotting the interaction and testing the slopes. Though the interaction was not significant, it was plotted as it did approach significance (Figure 2e). Similarly to Work Competence, the slope for young managers low in PCSE was prominently positive, indicating that for these managers, higher neosexism scores are strongly associated with lower independence ratings for female managers. The slope, in fact, was significant,

$t(300) = 2.73, p < .01$, though this slope should be interpreted with reservation, as the original three-way interaction was not significant.

Democratic Approach

Hierarchical regression. When Neosexism, PCSE, and Age were entered on Step 1, only the effect of Neosexism approached significance when the Bonferroni correction of $p < .025$ was applied, $\beta = .12, p = .04, sr^2 = 0.01$. The PCSE x Neosexism and Age x PCSE interactions entered at Step 2 were significant, $\beta = -.17, p < .01, sr^2 = 0.03$ and $\beta = .20, p < .01, sr^2 = 0.04$, respectively. These interactions were qualified by the significant three-way interaction among Age x CSE x Neosexism entered at Step 3, $\beta = .29, p < .001, sr^2 = 0.07$.

Plotting the interaction and testing the slopes. The three-way interaction was plotted for Democratic Approach (Figure 2f). PCSE appeared to have the opposite effect for younger versus older managers. Younger managers low in PCSE had a strong and positive relation between their Neosexism scores and Democratic Approach discrepancy scores. This slope was significant, $t(300) = 4.86, p < .001$. Older participants *high* in PCSE had a very similar slope, which approached significance after Bonferroni corrections were made, $t(300) = 2.31, p < .05$. The opposite was true again for younger participants higher in PCSE, whose Neosexism scores were strongly negatively related to their Democratic Approach Discrepancy scores. This slope was also significant, $t(300) = 3.19, p < .01$. The impact of Neosexism on Democratic Approach discrepancy scores for older managers low in PCSE was not notable or significant.

Testing the differences between the slopes. Using Dawson and Richter's (2006) approach to testing the differences between slopes yielded several significant differences.

The slopes between younger managers low PCSE versus high in PCSE were significantly different, $t(300) = -5.13, p < .001$. Two additional differences emerged, namely between older and younger managers high versus low in PSCE, $t(300) = -5.73, p < .001$, and between older participants higher versus low in PCSE, $t(300) = -3.87, p < .001$.

Alternative Hypothesis

It is possible that the effect of age may have been confounded with the effect of status, as status generally increases with age. To test this possibility, the correlation between age and status (as measured by income) was first calculated. It was significant, but not high ($r = .26, p < .001$). Next, all regression analyses were re-run using status in lieu of age. The effect of status was not significant in any of the regression models.

Discussion

In the present investigation neosexism, age, and social identity were expected to be associated with in-group bias. Since a within-groups research design was used, each female manager provided trait ratings for two targets: successful female managers and successful managers in general. Difference scores were calculated (subtracting ratings of successful female managers from the ratings of successful managers in general) to represent discrepancies in trait ratings. Because difference scores were used, two valences of in-group bias could be tested. In-group disfavouring bias was represented by higher Work Competence, Independence, and Democratic Approach discrepancy scores (i.e., scores above zero), and lower Activity/Potency discrepancy scores (i.e., scores below zero). In-group favouring bias was displayed by the reverse pattern in these scores. Lower Work Competence, Independence, and Democratic Approach, and higher Activity/Potency ratings were viewed as indicative of in-group favouring bias.

Democratic Approach ratings were indicative of an assessment of qualifications, whereas the remaining three trait dimensions were indicative of stereotyped judgements.

First, mean differences were tested to determine whether target category, alone, had an impact on trait ratings. Dependent samples t-tests revealed that, overall, female managers rated female managers to be more active/potent and independent than managers in general. Thus, without the presence of other predictors, the target "female manager" was found to elicit stereotypes of a manager who is overly aggressive and dominant, and too decisive. These findings differed substantially from Kocum, Tougas et al's (2006) findings, as Activity/Potency differences were not detected at the main effect level among students, and students overall rated female managers as *less* independent than managers in general. It is possible that two different stereotypes are elicited for women as a function of their work experience. In the case of the students, it is likely the gender role of women as passive that is guiding judgements while, for female managers, it may be the view that women have to be aggressive and self-driven in order to make it in a *man's world.* Either way, for students and professionals, stereotypes are informing the mismatch between their characterisations of female managers, and their perceived standard for managerial success. It should be noted that, on both dimensions, the raw score gap between ratings of female managers and managers in general was not large (see Table 8 for the descriptive statistics for trait dimensions for younger and older managers by target category). Moreover, though female managers were rated as being significantly more potent than managers in general, average ratings were just above the midpoint of the scale (i.e., between *neutral* and *somewhat characteristic*). Thus, female managers are not

rated as being highly aggressive; rather, they are rated as being significantly more aggressive than the managerial prototype.

Aim 1: Neosexism and In-group Bias

At the main effect level, it was hypothesised that higher neosexism scores would be associated with higher in-group disfavouring bias, such that higher neosexism would be associated with lower ratings of female managerial competence and independence as compared to managers in general. It was expected that these discrepancy scores would all be situated above zero (i.e., there would be no in-group favouritism bias associated with lower neosexism scores on these dimensions). Activity/Potency discrepancy scores were expected to be of two valences, such that higher levels of neosexism would elicit views of female managers as more Active/Potent (e.g., aggressive, dominant) than managers in general. Conversely, lower neosexism scores were expected to elicit positive discrepancy scores, such that female managers would be perceived as *less* Active/Potent than the managerial prototype. Finally, it was hypothesised that neosexism would be associated with negative evaluations of women on the newly-created Democratic Approach dimension, such that higher neosexism scores would be associated with lower evaluations of female managers' Democratic Approach.

Results obtained from hierarchical regression analyses showed that, in this managerial sample, neosexism had no direct impact on the application of stereotyped traits (competence, independence, activity/potency), but did have a marginal direct impact on evaluations of Democratic Approach. Higher neosexism was associated with ratings of females as less strategic, democratic, and fair as compared to the managerial standard. Why would attitudes not influence stereotypic judgements in the professional

sample? It is possible that, given their lack of professional experience, females in the student sample of Kocum, Tougas et al. (2006) were more prone to having their attitudes and stereotypes directly influence their judgement. In the work context, the relation between attitudes and sex-typed judgements would prove to be more complex.

Aim 2: Effects of Age and PCSE on In-Group Bias

The natural group sample of female managers allowed us to fulfill the second aim of the present study, namely to test age and social identity as additional correlates of in-group bias. It was predicted that older participants would exhibit more in-group disfavouring bias, and that female managers with lower public collective self-esteem would exhibit a higher in-group *favouring* bias. These effects were expected to significantly impact ratings of female managers on all four managerial trait dimensions. Expected to override these main effects, however, was the hypothesised interaction between these two predictors: Older participants with high public self-esteem were expected to exhibit the highest levels of in-group disfavouring bias.

Surprisingly, age and social identity, as main effects, had no direct impact on any of the trait dimensions. Therefore being older, or perceiving that their group is ill-valued by others, was not enough to augment female managers' in-group disfavouring or favouring bias. The joint effect of age and social identity was not entirely in the direction expected, either. To recapitulate, it was expected that higher levels of public collective self-esteem would elicit higher levels of in-group disfavouring bias, a bias that was expected to follow the same pattern for all workers, but to be more pronounced among older (as compared to younger) managers. In fact, higher public collective self-esteem was associated with higher in-group disfavouring bias *only* for older workers, such that they

viewed female managers to be less competent, less democratic, and more potent than the managerial standard. Rivalling this bias was that of younger female managers, who had the opposite pattern of in-group derogation. For younger female managers, *lower* public collective self-esteem yielded the highest levels of in-group disfavouring bias. In other words, being younger and perceiving that women managers are not valued produced judgements of female managers as having fewer leadership skills, being less able to resolve conflicts, and more being forceful than would be expected from a successful manager.

Why would public collective self-esteem have the opposite impact among older versus younger workers, and why would younger workers' perceptions run counter to what would be predicted under social identity theory? Previous findings using public collective self-esteem (PCSE; Hunter et al., 2004; 2005) have shown lower PCSE to be linked to a higher propensity to protect or favour the in-group. It seems as though older managers resist the scrutiny of the corporate culture, while younger managers endorse it. When faced with threats to collective identity, rather than protect female managers as their in-group, younger female managers translate this negative feedback into in-group derogation. Lower PCSE has been found to elicit higher levels of anxiety (Katz, Swindell, & Farrow, 2004), and it is possible that in a profession as traditionally individualistic as management, it is of little or no value to respond to in-group threats in a collective manner. Older female managers who perceive little threat to their collective self-esteem also share this pattern. Thus, it is clear that perceived context plays a significant role in shaping judgements of managers, and that younger managers are especially impressionable to negative evaluations of their in-group.

The Joint Effect of PCSE and Neosexism

The second two-way interaction hypothesised was that between PCSE and neosexism. It was proposed that those with lower neosexism and PCSE scores would exhibit the most pronounced levels of in-group favouring bias. This effect was significant on two of the four trait dimensions, namely Work Competence and Democratic Approach, and appeared as expected. Those with low neosexism, and who viewed that female managers were not valued by others, exhibited an in-group favouring bias, viewing female managers to be more competent and democratic than the prototypical manager. These findings support Luhtanen and Crocker's (1992) supposition that in-group members more favourable to political action who view their in-group to be threatened will take measures to protect the self-esteem of their group through in-group favouritism.

Exploratory Analyses: The Age x PCSE x Neosexism

Although hypotheses were generally supported, the exploratory aspect of the present study--that is to say, the significant three-way interactions among neosexism, age, and social identity on Work Competence and Democratic Approach dimensions--substantially changed the interpretation of the findings. Though it was found that older workers high in PCSE and younger workers low in PCSE underestimated female managers competence and democratic approach, and lower neosexism elicited overestimations on the same dimensions among female managers low in PCSE, the three-way interaction among age, neosexism, and social identity produced an altogether different picture of the trait evaluations of female managers.

Specifically, age was found to moderate the joint effect of neosexism and PCSE. In fact, in-group bias seemed to all but disappear among older workers when the joint effect of neosexism and PCSE was taken into account. The only effect that remained significant and consistent with theory among older workers was the positive impact of identity and neosexism on in-group bias on the Democratic Approach dimension. Among older workers (i.e., age 52 years), higher neosexism and PCSE were associated with the assessment of female managers as less democratic (e.g., less able to resolve conflicts, less fair, and less strategic). Younger workers high in neosexism and low in PCSE were found to exhibit this same pattern of in-group disfavouring bias on Work Competence, Democratic Approach, and (albeit marginally on) Independence dimensions. In other words, younger female managers with more negative attitudes toward women, and who perceived that female managers are not valued as a group, had higher levels of in-group disfavouring bias. High PCSE among younger workers with negative attitudes toward women had the opposite effect. Instead of underestimating female managers, these managers *overestimated* their qualifications. The only evidence of in-group favouring bias in the face of threatened identity was the dipping below zero of Independence difference scores for younger workers with low PCSE and low neosexism. The triple interaction for this trait dimension was marginal, thus the finding cannot be deemed to be reliable.

It may seem puzzling that high neosexism would be associated with the highest levels of in-group favouring bias under any condition. It may also be tempting to conclude that the consequences of neosexism are not all bad and that, as long as the environment celebrates the achievements of women, women will support their female

colleagues. However, it is possible that as a subtle measure of sexism, neosexism is revealing a pattern of political correctness among younger female managers who are over-compensating their impressions of 1. how valued their group is, and 2. how competent and democratic they view female managers to be. In order to assess this possibility, the impact of social desirability on this effect was tested using the 13-item Marlowe-Crowne Social Desirability Scale (Reynolds, 1982). Social desirability was not significant covariate,[14] however (though it is possible that the analysis was not sensitive enough to detect the covariate interaction, which constituted a quadruple interaction).

Why are younger women's perceptions so volatile, such that those high in neosexism react with opposite bias depending on how much they perceive women are valued? What are the implications for social identity theory? A recent analysis of the impact of PCSE on the quality of interpersonal interactions (Downie, Mageau, Koestner, & Liodden, 2006) was framed under sociometer theory (Leary, 1999), a theory with an altogether different presentation of self-esteem motives as compared to social identity theory. The basic premise of sociometer theory is similar to that of social identity theory, and asserts that individuals constantly monitor their social environment for cues regarding their acceptance or rejection by others. In contrast to social identity theory's self-esteem hypothesis, however, which contends that individuals are motivated to maintain a positive self-esteem, sociometer theory purports that people are motivated to curtail rejection. Downie et al. submit that PCSE, as a measure of how valued one's group is by others, could be considered to be a gauge, or *sociometer,* of social rejection. In this manner, social identity as per the American definition (Cheek, 1989, as cited in Luhtanen

& Crocker, 1992), reflecting one's reputation and popularity, may be guiding evaluations of one's in-group.

Using this interpretation, it is possible that the stress found to be associated with low PCSE (Katz et al., 2004) is actually the stress arising from rejection (or, perhaps, lack of support) by others. It is also perhaps for this reason that, conversely, higher PCSE is associated with general social self-efficacy among students with disabilities (Blake & Rust, 2002), and greater intimacy and quality of interpersonal interactions (Downie et al.). With respect to the present analysis it is possible, therefore, that younger female managers who hold negative attitudes toward women and perceive that female managers are not valued are perhaps avoiding rejection by disfavouring other female managers. In fact, this conjecture is in line with the personal mobility response proposed by social identity theory for group members with threatened identities. It is conceivable that aspiring female professionals would be particularly susceptible to impressions of others and maintaining a positive image, particularly in the management field. Younger female managers higher in neosexism who believe that female managers are valued, unaffected by the stress of rejection, may not have reason to engage in the same sex-typing and negative evaluation of women. However, why would they go so far as to *favour* female managers (when those with lower neosexism scores do not)?

It is possible that these young women "like being girls" (Smith, 1999), and for reasons altogether different than those with lower neosexism. For instance, Smith found that both feminists and anti-feminists had similar levels of Membership Collective Self-Esteem (one of the four subscales of the CSE scale; Luhtanen & Crocker, 1992). Specifically, both women who endorsed strong beliefs to change the status quo, as well as

those who strongly endorsed beliefs to maintain it, viewed themselves to have much to offer to other women. Therefore, women with differing political ideologies toward the advancement of women have been found to take pride in their group membership, but along different lines. It is possible that those who endorse the status quo and feel that they have a lot to offer other women do so, so much so that they overstate their qualifications. After all, these are women in traditionally male spheres of employment. They may feel that, as a group, female managers are the exception to the rule for "women."

One final comment is offered on the paradoxical finding of in-group favouritism among sexist women who view their in-group to be valued by others. Recent research (Barreto & Ellemers, 2005a; 2005b) indicates that females tend not to recognise expressions of modern sexism because those conveying such prejudice are viewed as more likeable than the typical instigators of blatant prejudice. Recognised or not, Barreto and Ellemers (2005a) have found that being in the presence of expressed modern prejudice heightens women's anxiety. Thus, young female managers who report high public collective self-esteem may be ignoring the modern prejudice to which they are likely exposed. In addition, their "benevolent stereotyping," in combination with their negative attitudes toward women, may be contributing to the perpetuation of the derogation of their sex in the workplace, as it is likely going unchallenged because their trait evaluations are positive, and their negative attitudes are self-directed.

Thus, the queen bee phenomenon was not confirmed insofar as it assumes older women in a traditionally male profession will engage in more intragroup derogation than will younger women. In fact, younger females were found to exhibit higher levels of in-group disfavouring bias. Why do these results differ from those found by Ellemers et al.

(2004) and Lortie-Lussier and Rinfret (2002)? In Ellemers et al.'s study, female professors were evaluating graduate students; thus, there was a status difference between perceivers and targets. It is possible that this bias would be attenuated if they were to rate female colleagues, who had obviously crossed a threshold into the same status category. Although Lortie-Lussier and Rinfret found the highest levels of negative attitudes toward female managers among the oldest managers in their sample, female managers in the next age bracket down (i.e., female managers aged 46 to 50 years) had the most favourable attitudes. One of the obvious limitations of the present study is that we have no qualitative data to explain why age is such an important moderator of the impact of attitudes and identity on in-group bias. Focus groups with younger and older workers might provide insights into the experiences of younger versus older women to help elucidate the significantly different expressions of their gender belief systems.

Concluding Remarks

> *When we were growing up, many of us could not see ourselves beyond the age of twenty-one. We had no image of our own future, of ourselves as women.* (Friedan, 1963, p. 69)

Over forty years ago, Betty Friedan's (1963) book, *The Feminine Mystique,* signalled a crisis in the identity of women. Friedan argued that "the feminine mystique [i.e., the predominant view of post-industrial North American women as wives and mothers and nothing else] permits, even encourages, women to ignore the question of their identity" (Friedan, 1963, p. 71). By identity, Friedan was referring to the "private image" (1963; p. 72) or imagined sense of self beyond the socially prescribed social role of housewife and mother. According to Friedan, breaking out of this normative role in the

1950s and 1960s was stressful for two reasons. First was the lack of variety in the roles occupied, and the spheres populated, by women. Although there was increasing encouragement of women to feel as free as and equal to men, there were few exemplars to prepare them for the challenge of assuming their role as women in male domains. Second, Friedan suggested, was that women were experiencing stress arising from the simple "growing pains" associated with attaining levels of personal growth hitherto *verboten* or unnecessary within the scope of the housewife/mother role.

In some respects, times have changed since Friedan wrote her social *exposé*. Certainly in contemporary Canada, both the public (i.e., social) and private images of women include a career component. Recent figures indicate that women constitute 47% of the Canadian workers, with a labour force participation rate of 62% (Statistics Canada, 2003). In other respects, however, it is apparent that substantial inequities still exist for working women. According to latest employment equity report to parliament (Human Resources and Social Development Canada, 2006), though women constitute 32.7% of workers in the executive (or basic-level management) category, there is still a significant need to bolster their numbers in higher-level management positions. Women remain minority workers in virtually all occupations of the highest remuneration and power (Statistics Canada, 2001); this paucity of women at upper echelons continues to be cited by professional women as stifling to their career progress (Catalyst, 2002; 2005). Furthermore, as targets of prejudicial scrutiny by superiors, colleagues, and subordinates (Chung, Marshall, & Gordon, 2001; Schein, 2001; Sinclair & Kunda, 2000), it is doubtful that women in the contemporary workplace have the support they need to work through the growing pains to which Friedan alludes. Finally (and perhaps most lamentably),

women continue to have difficulty imagining themselves in influential professional roles (Killeen, López-Zafra, & Eagly, 2006).

How do women react to this heavy scrutiny—that which is self-directed and that dispatched by others? The present study showed that female managers overall held the view of female managers as overly potent and independent. It also showed that younger workers are particularly vulnerable to impressions of women, especially if they endorse sexist views. Given that there is a tendency for women to avoid labels of feminism, or endorsement of the political action associated with being feminist (Renzetti, 1987), it is not surprising that some young women--particularly those new in management careers where individualism is valued--would avoid endorsing attitudes of social change. Perhaps these young women perceive two versions of the status quo: 1. one that has already changed for the better; and 2. one that never required changing. Either way, it is evident that the success of any employment equity program is contingent upon a communication strategy which includes messages emphasising not only the value of women to the organisation (to target women), but also of the necessity to commit to and meet equity goals (to target all workers).

Recent evidence (Downie et al, 2006) suggests that those low in public collective self-esteem are particularly susceptible to how their in-group is evaluated. These researchers also found that interacting with people who positively evaluate one's group enhances the quality of the interaction and feelings of personal acceptance. Thus, it is especially important for young women, who have received mixed messages about women in the past, to be educated as to the merits and contributions of women to the organisation. It is also important that they be truly valued, and that successfully meeting

equity goals forms part of the superordinate identity (Pratkanis & Turner, 1999) of the organisation--a common goal to be worked toward in cooperation (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994). Doing so may enhance the feeling of acceptance for women of all ages, and may serve to interrupt one loop in the cycle of discrimination.

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Footnotes

[1] The word "syndrome" is used in the original literature, but has been replaced here by "Phenomenon" so as to avoid proliferating a pathologisation of women.

[2] The first corollary presents elevated self-esteem as a consequence of intergroup discrimination.

[2] A fourth dimension, Membership Esteem, was also included, but was not directly related to social identity theory, as Luhtanen and Crocker (1992) note on p. 305.

[3] Six participants explicitly stated that they were not managers, and were deleted from the survey.

[4] This conclusion was drawn after having spoken with participants who contacted the researchers regarding this problem.

[5]Comparisons were made between those who abandoned the survey and those who completed it. T-tests were conducted to test the difference between the two groups (abandoned vs. completed) on all variables that were completed before the appearance of the "100% complete" progress bar. None of the t-tests was significant.

[5] Proportions were based on the total number of participants who reported information for the specific variable.

[7] According to the current Federal Public Service definition, a manager is an employee who forms part of a management team and is accountable for exercising delegated authority over human and financial resources to accomplish the objectives of the organization in the Public Service of Canada. In addition to being responsible for program delivery, Managers lead people, recognize and reward achievement, manage change and promote the corporate values, ethics and culture of the organization.

[8] It must be noted that, including the 42 surveys completed by Francophones, the proportion of Francophones participating in the overall survey was 24%.

[9] This final item was reverse-scored.

[10] Differences between standardised scores were also calculated, yielding no differences in the analyses. True difference scores were retained to facilitate interpretation.

[11] Barger (2002) warns against using the Marlowe-Crowne scale as an indicator of social desirability because of its unclear factor structure, as well as the possibility that the items do not actually reflect response biases, but rather values that may or may not require adjustment.

[12] An item response analysis on trait ratings of female managers yielded very similar results.

[13] The Social Desirability x Age x PCSE x Neosexism interaction was entered as a covariate interaction, as per the suggestion of Hull, Tedlie, and Lehn, 1992.

Table 1

Trait Dimensions and Associated Traits

Work Competence	Activity/ Potency	Independence	Democratic Approach
Competent	Dominant	Independent	Strategic
Well-informed	Confident	Desires responsibility	Diplomatic
Analytic ability	Firm	~~Self-reliant~~	Empowers and motivates
Leadership ability	High need for power	~~Uncertain*~~	others
Skilled in business	Passive*	~~Easily influenced*~~	Collaborative
matters	Forceful	Decisive	Good communicator
	Aggressive		Democratic
	Competitive		Fair
	Ambitious		Able to resolve conflicts
	Vigorous		

Note. Stricken items were deleted from the analysis.

Table 2
Missing Data Pattern Analysis

Variables with missing data	% Missing	Variables affected	*M* missing / *M* present	*t*(df)
Age	7.7%	Dominant	2.22 / 2.78	2.60(26.5)*
		Independent	3.35 / 3.85	2.10(18.1)*
		Strategic	4.87 / 4.70	-2.10(32)*
PCSE2	4.2%	Independent	3.35 / 3.86	2.30(25.2)*
		FForceful	2.40 / 3.03	2.80(16.5)*
		FIndependent	3.67 / 4.09	2.20(16.1)*
Education	7.1%	Independent	3.33 / 3.86	2.10(2.1)*
		Strategic	4.90 / 4.70	-2.80(31)**
		FResponsibility	4.50 / 4.15	-2.50(24)*
Ethnic Group	14.8%	Dominant	2.39 / 2.80	2.50(66.9)*
		UncertainR	4.37 / 4.62	2.30(60.8)*
		FForceful	2.64 / 3.06	2.70(63.1)**
Sexual	34.8%	Competent	4.73 / 4.85	2.00(167.89)*
Orientation		Leader	4.77 / 4.91	2.40(138.9)*
		Business	3.90 / 4.12	2.30(202.8)*
		Confident	4.63 / 4.78	2.40(224)*
		Ambitious	3.94 / 3.68	-2.50(225)*
		FConfident	4.57 / 4.73	2.30(195.4)*

Note. *$p < .05$. **$p < .01$.

Table 3

Correlations Among Independent Variables

	2.	3.	4.	5.	6.	7.
1. Neosexism	-.25**	-.15*	-.02	.03	.01	.15**
2. PCSE	-	.09	-.19**	.01	.03	-.18**
3. Age		-	.01	-.07	.09	-.24**
4. PCSE x Neosexism			-	.11	-.17**	-.01
5. Age x Neosexism				-	-.25**	.16**
6. Age x PCSE					-	-.35**
7. Age x PCSE x Neosexism						-

Note. Neo = Neosexism; PCSE = Public Collective Self-Esteem. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4

Polychoric Correlations and Descriptive Statistics for Democratic Approach Traits

	1.	2.	3.	4.	5.	6.	7.	8.
1. Strategic	-	.38	.38	.29	.47	.21	.43	.36
2. Diplomatic		-	.60	.60	.49	.34	.50	.49
3. Empowers and motivates others			-	.78	.76	.50	.74	.71
4. Collaborative				-	.50	.45	.56	.53
5. Good communicator					-	.55	.73	.63
6. Democratic						-	.58	.40
7. Fair							-	.58
8. Able to resolve conflicts								-
M	4.71	4.34	4.73	4.36	4.89	3.96	4.59	4.66
SD	0.54	0.74	0.61	0.75	0.38	0.84	0.74	0.59

Table 5

IRT Parameters for Democratic Approach Items

Item	α^a	$b1^b$	*b*2	*b*3	*b*4
1. Strategic	1.04	-5.27	-4.58	-2.86	0.27
2. Diplomatic	1.82	-3.83	-2.58	-1.28	0.41
3. Empowers and motivates others	3.70	-3.08	-2.16	-1.30	-0.46
4. Collaborative	2.73	-4.94	-1.94	-1.16	0.19
5. Good communicator	2.62	-5.34	-3.37	-2.02	-1.14
6. Democratic	1.64	-3.29	-2.49	-0.71	0.99
7. Fair	2.60	-3.03	-2.53	-1.26	-0.22
8. Able to resolve conflicts	2.02	-5.86	-2.79	-1.90	-0.25

Note. a = slope; b = threshold parameters

Table 6

Mean Ratings for Trait Dimensions

Trait Dimension	Successful Female Managers	Successful Managers in General
Work Competence	4.58	4.57
Activity/Potency**	3.52	3.45
Independence***	4.26	4.15
Democratic Approach	4.52	4.53

Table 7

Descriptive Statistics for Neosexism and Public Collective Self-Esteem for Younger (37 Years) and Older (52 Years) Managers

	Younger	Older
Neosexism	2.59 (0.66)	2.17 (0.70)
Public Collective Self-Esteem	4.50 (1.00)	4.65 (0.56)

Note. Mean (Standard Deviation).

Table 8

Descriptive Statistics for Trait Dimensions for Younger (37 Years) and Older (52 Years) Managers by Target Category

Trait Dimension	Successful Female Managers		Successful Managers in General	
	Younger	Older	Younger	Older
Work Competence	4.49 (0.72)	4.61 (0.43)	4.65 (0.34)	4.46 (0.83)
Activity/Potency	3.29 (0.65)	3.40 (0.38)	3.17 (0.55)	3.32 (0.62)
Independence	4.18 (0.66)	4.17 (0.39)	3.94 (0.59)	4.00 (0.98)
Democratic Approach	4.34 (0.69)	4.51 (0.48)	4.51 (0.31)	4.36 (0.87)

Note. Mean (Standard Deviation).

Table 9

Hierarchical Regressions for Stereotype Subscales (N=308)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	R^2, ΔR^2
Work Competence	Step 1	Neosexism	.06	.04	.031	.00	.01
		Age	-.05	-.05	.003	.00	
		PCSE	-.05	-.04	.029	.00	
	Step 2	Age x Neosexism	-.02	.03	.004	.00	.06**
		PCSE x Neosexism	-.18	-.17**	.042	.03	
		Age x PCSE	.17	.16**	.004	.02	
	Step 3	Age x PCSE x Neosexism	.13	.19**	.006	.03	.03***
Activity/Potency	Step 1	Neosexism	-.09	-.07	.034	.00	.02
		Age	.08	.07	.003	.00	
		PCSE	.08	.06	.032	.00	
	Step 2	Age x Neosexism	-.03	-.09	.004	.01	.06***
		PCSE x Neosexism	.11	.10	.046	.01	
		Age x PCSE	-.21	-.22***	.005	.04	
	Step 3	Age x PCSE x Neosexism	.03	.01	.007	.00	.00

Table 9 (Continued)

Hierarchical Regressions for Stereotype Subscales (N=308)

Dependent Variable		Predictor Variable	*r*	B	β SE	sr^2	R^2/ ΔR^2
Independence	Step 1	Neosexism	.10	.09	.05	.01	.01
		Age	-.06	-.04	.00	.00	
		PCSE	-.03	.00	.04	.00	
	Step 2	Age x Neosexism	-.06	-.05	.006	.00	.01
		PCSE x Neosexism	-.08	-.08	.065	.00	
		Age x PCSE	.05	.03	007	.00	
	Step 3	Age x PCSE x Neosexism	.10	.12[a]	.010	.01	.01
Democratic Approach	Step 1	Neosexism	.12	.12[a]	.030	.01	.02
		Age	-.02	.00	.003	.00	
		PCSE	-.02	.01	.029	.00	
	Step 2	Age x Neosexism	-.04	.02	.004	.00	.08***
		PCSE x Neosexism	-.20	-.17**	.041	.03	
		Age x PCSE	.23	.20***	.004	.04	
	Step 3	Age x PCSE x Neosexism	.19	.29***	.006	.07	.07***

Note. *p < .05. **p < .01. ***p < .001. a Effect is marginal. Betas meeting the adjusted Bonferroni alpha criterion are underlined.

Figure Captions

Figure 1. Item characteristic curve (ICC) for *diplomatic.*

Figure 2a. Impact of Age x PCSE on Work Competence discrepancy scores.

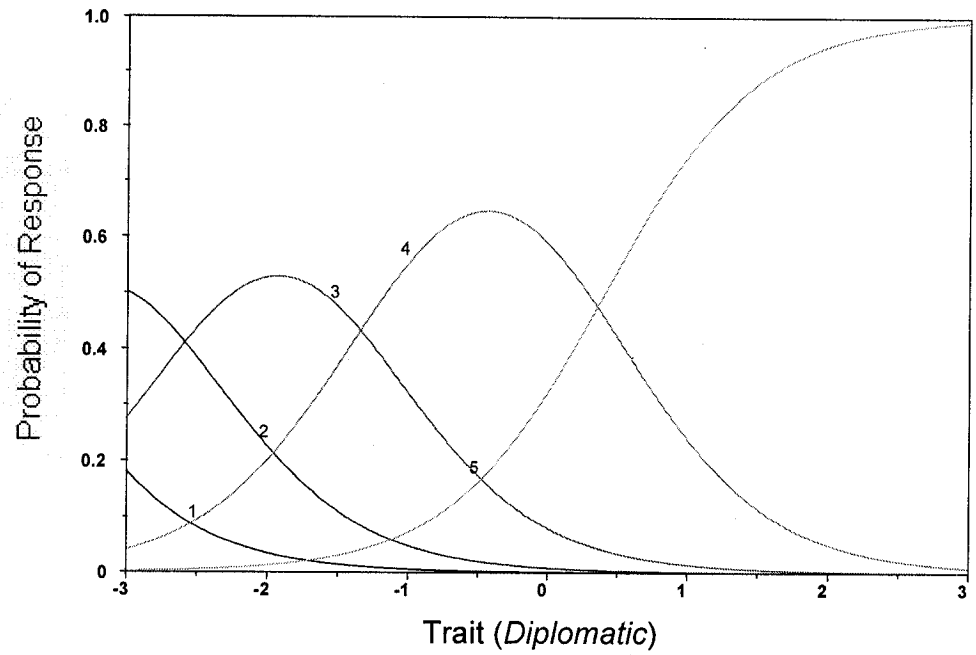
Figure 2b. Impact of Neosexism x PCSE on Work Competence discrepancy scores.

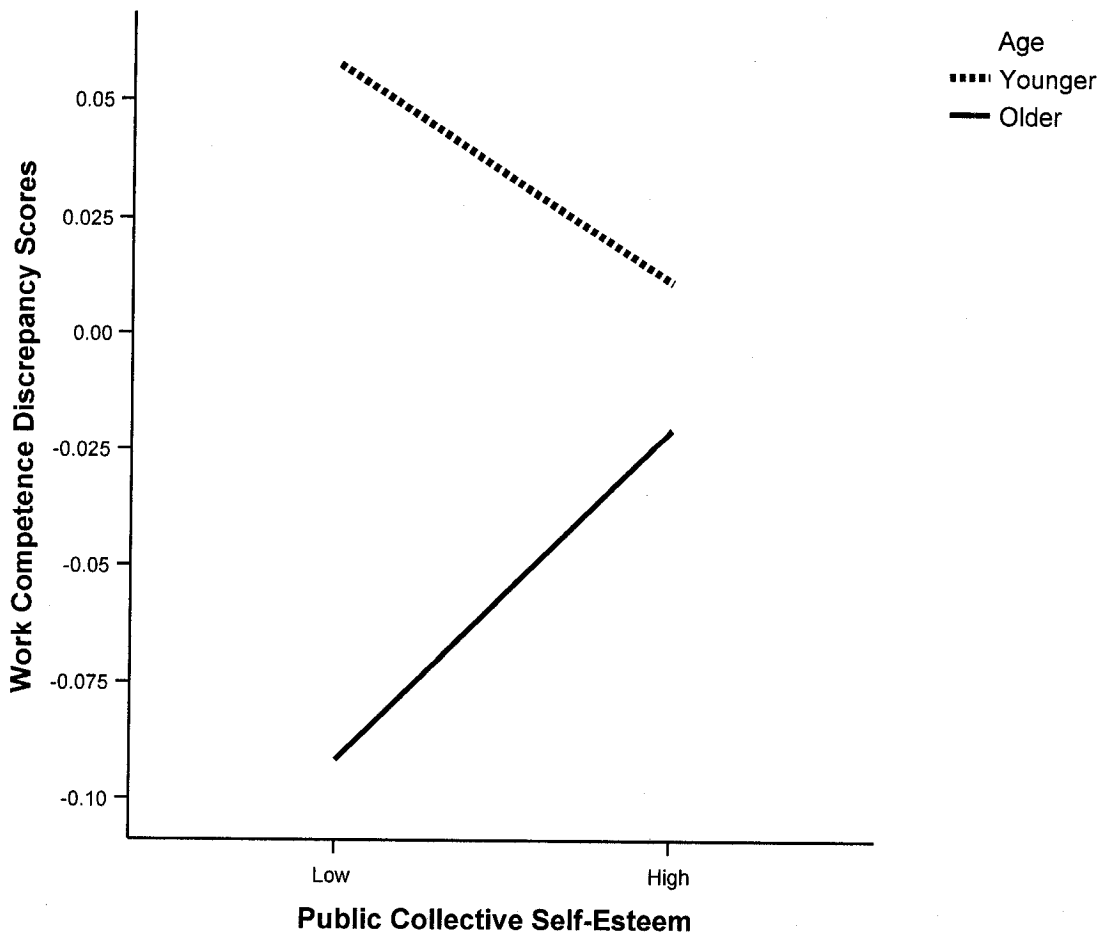
Figure 2c. Impact of Age x PCSE x Neosexism on Work Competence discrepancy scores.

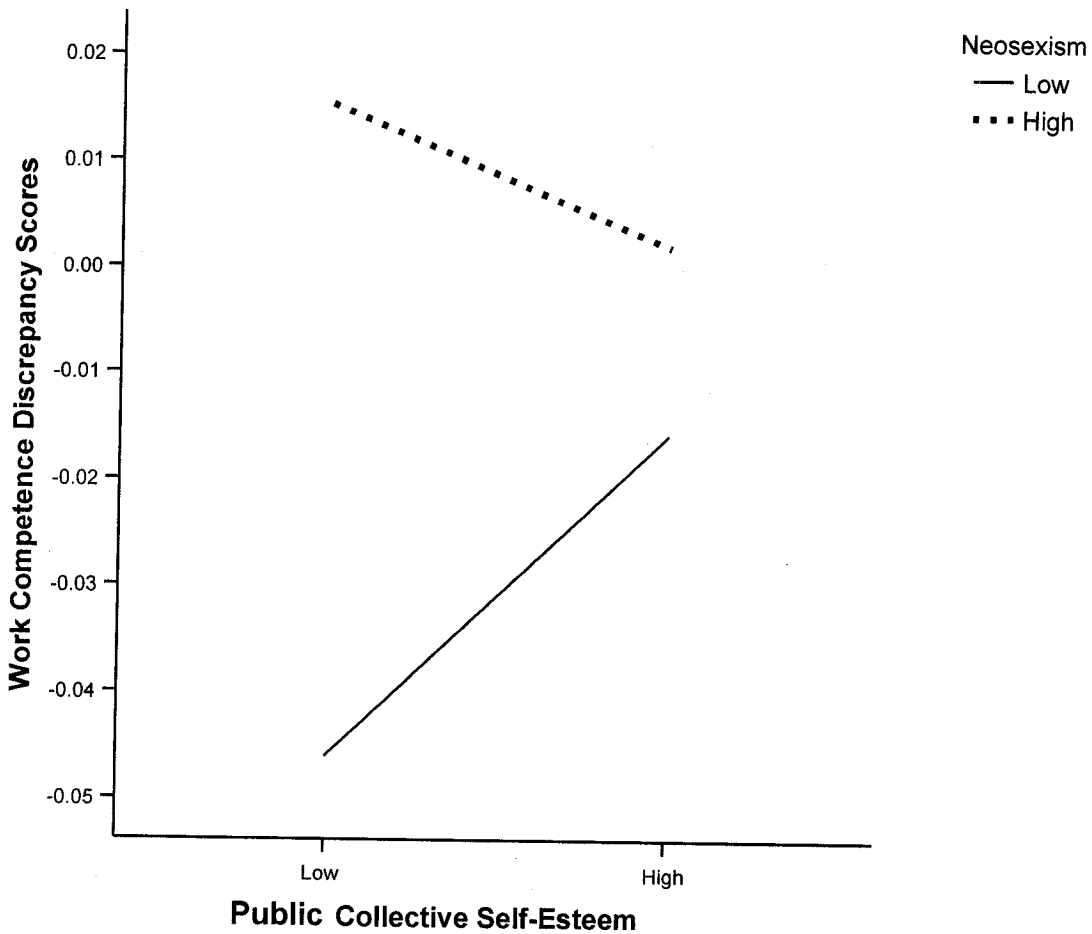
Figure 2d. Impact of Age and PCSE on Activity/Potency discrepancy scores.

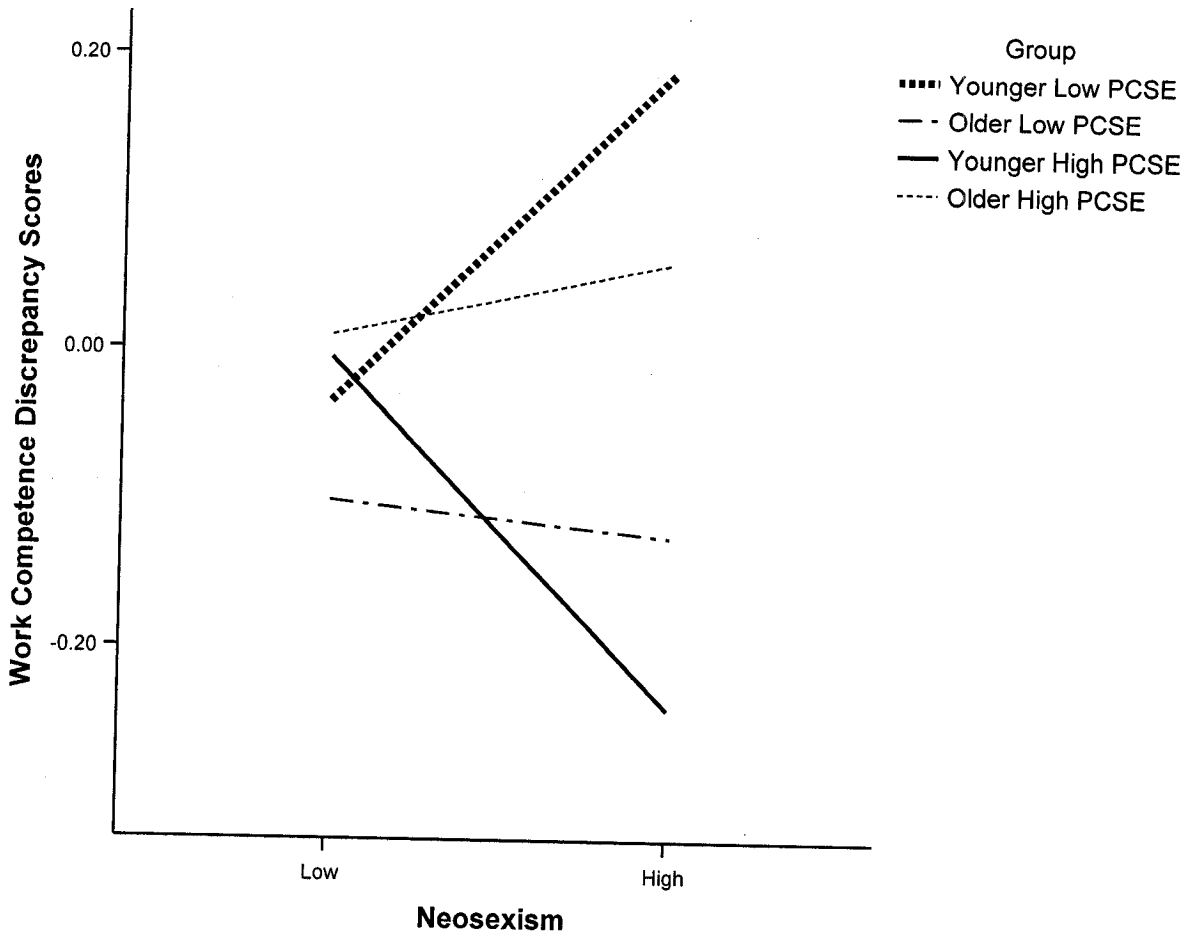
Figure 2e. Impact of Age x PCSE x Neosexism on Independence discrepancy scores.

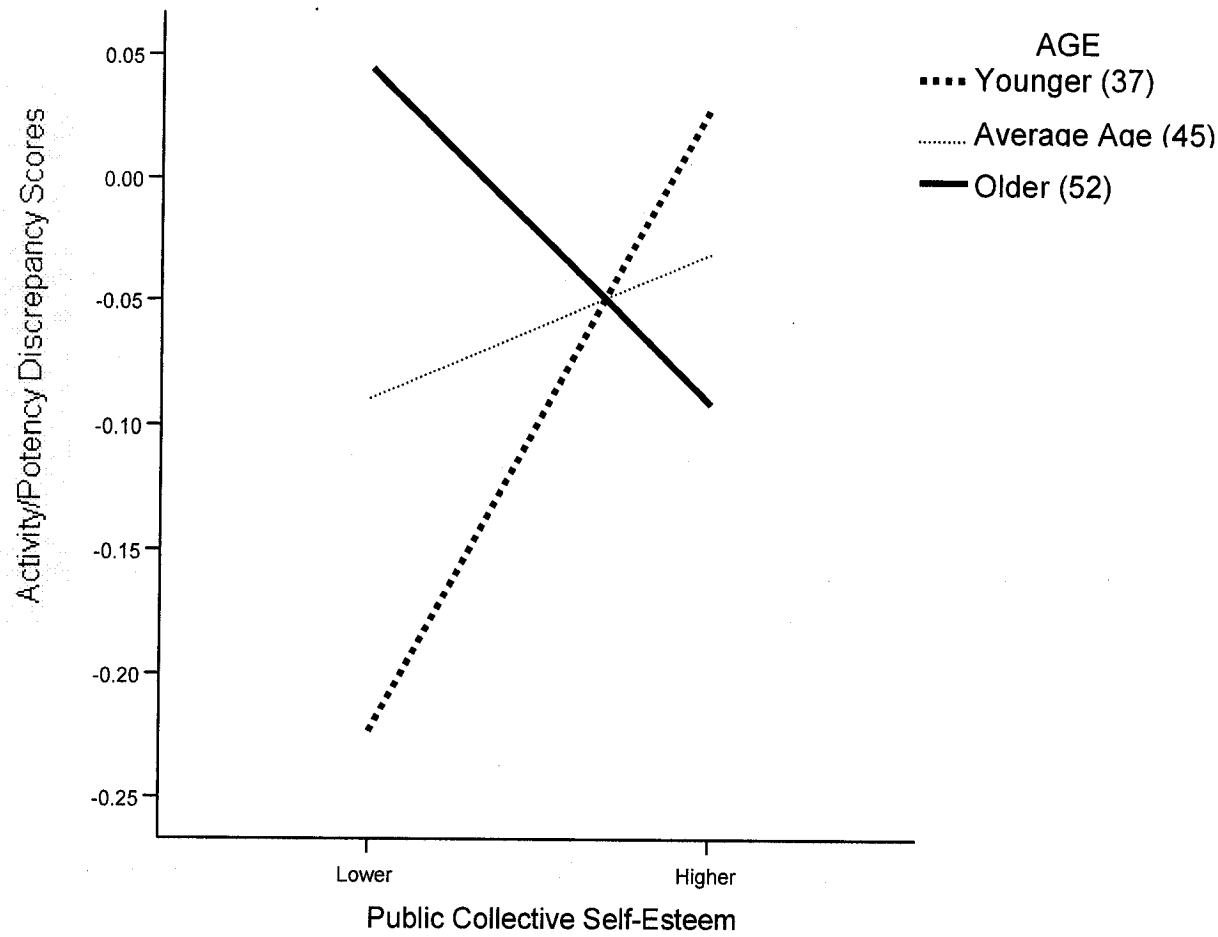
Figure 2f. Impact of Age x PCSE x Neosexism on Democratic Approach discrepancy scores.

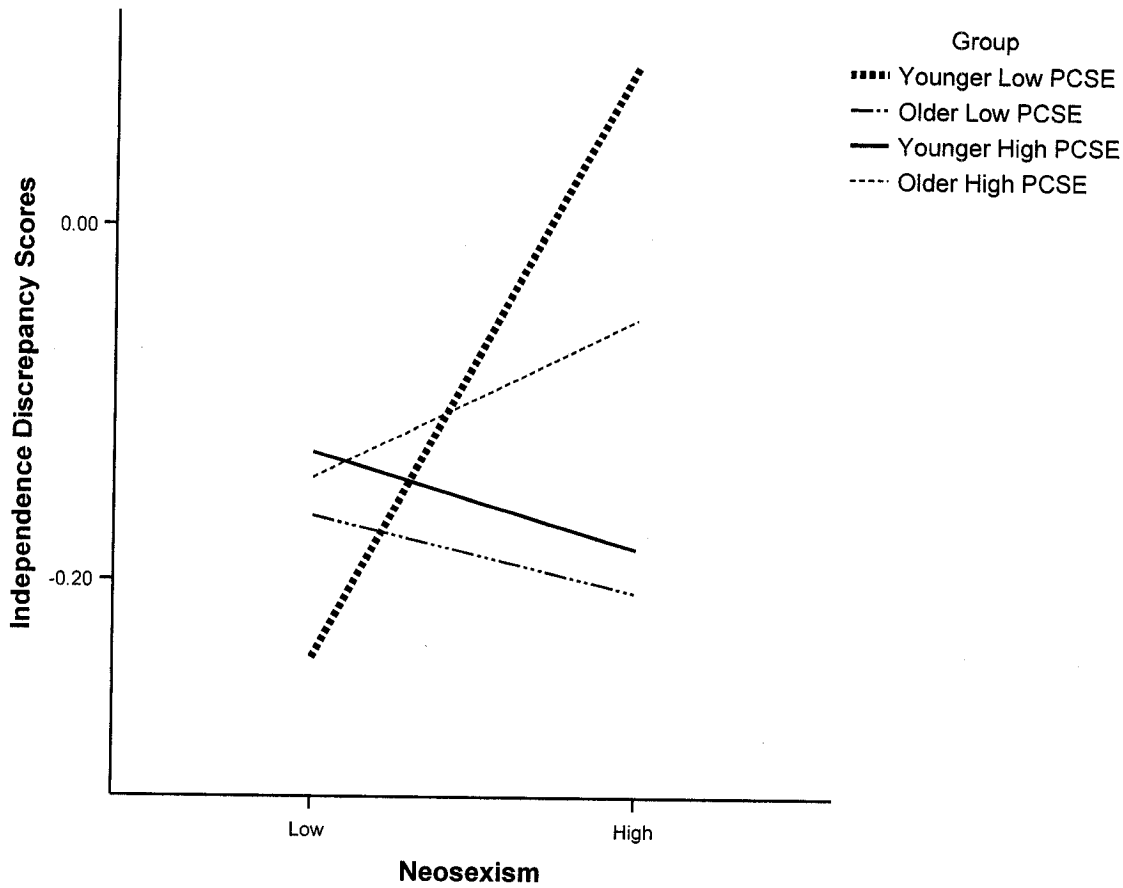

1.0
0.8
0.6
0.4
0.2
0
Probability of Response
-3
-2
-1
0
1
2
3
Trait (*Diplomatic*)
1
2
3
4
5

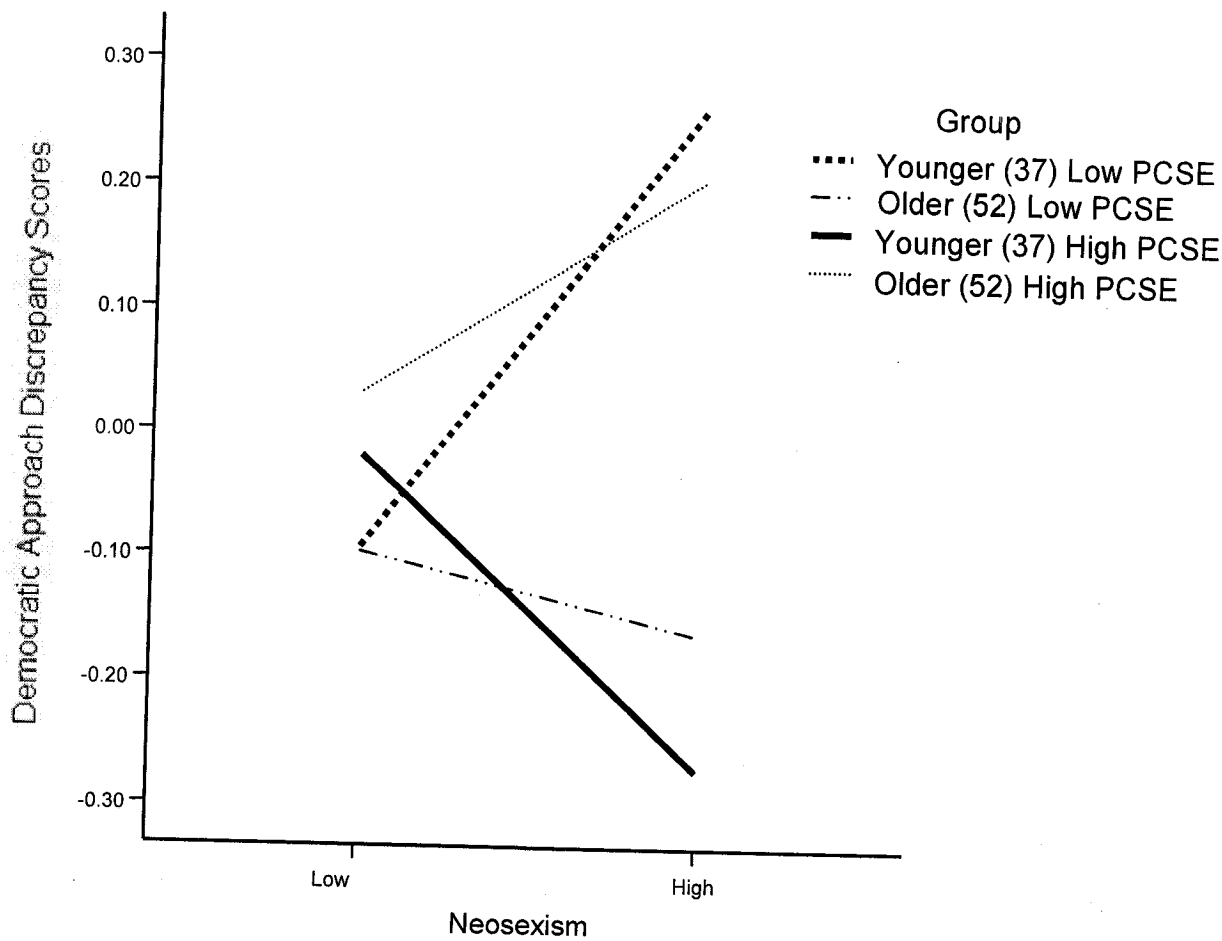

Age
Younger
Older
0.05
0.025
0.00
-0.025
-0.05
-0.075
-0.10
Work Competence Discrepancy Scores
Low
High
Public Collective Self-Esteem


Neosexism
Low
High
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
Work Competence Discrepancy Scores
Low
High
Public Collective Self-Esteem


Work Competence Discrepancy Scores
0.20
0.00
-0.20
Low
High
Neosexism
Group
Younger Low PCSE
Older Low PCSE
Younger High PCSE
Older High PCSE


AGE
Younger (37)
Average Age (45)
Older (52)
Activity/Potency Discrepancy Scores
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
Lower
Higher
Public Collective Self-Esteem


Group
Younger Low PCSE
Older Low PCSE
Younger High PCSE
Older High PCSE
Independence Discrepancy Scores
0.00
-0.20
Low
High
Neosexism


Democratic Approach Discrepancy Scores
0.30
0.20
0.10
0.00
-0.10
-0.20
-0.30
Low
High
Neosexism
Group
Younger (37) Low PCSE
Older (52) Low PCSE
Younger (37) High PCSE
Older (52) High PCSE

Appendix

Leadership Survey 2006

Leadership Survey

Women Leaders in the Federal Public Service 2006

La VERSION FRANÇAISE se trouve au verso

Please respond to the following questions in the spaces provided. Once you have completed a page, it is important that you proceed to the next page without referring back or making changes to any previous pages. Please include any additional comments in the space reserved for that purpose at the end of the questionnaire.

Thank-you.

MANAGERIAL CHARACTERISTICS A

You will find on this page a list of descriptive terms normally used to characterise people. Some are positive, others are negative, and some are neither positive nor negative.

*We ask that you use this list to characterise **successful managers**. To make your judgment, it may help you to imagine that you are about to meet a person for the first time, and the only thing you know about them is that they are a successful manager. Evaluate each word or phrase, on a scale of 1 to 5, to the extent to which it characterises successful managers.*

1 Uncharacteristic	2 Somewhat Uncharacteristic	3 Neither Characteristic nor Uncharacteristic	4 Somewhat Characteristic	5 Characteristic

Competent	1	2	3	4	5
Well-informed	1	2	3	4	5
Analytic ability	1	2	3	4	5
Leadership ability	1	2	3	4	5
Skilled in business matters	1	2	3	4	5
Dominant	1	2	3	4	5
Confident	1	2	3	4	5
Firm	1	2	3	4	5
High need for power	1	2	3	4	5
Passive	1	2	3	4	5
Forceful	1	2	3	4	5
Aggressive	1	2	3	4	5
Competitive	1	2	3	4	5
Ambitious	1	2	3	4	5
Vigorous	1	2	3	4	5
Independent	1	2	3	4	5
Desires responsibility	1	2	3	4	5
Self-reliant	1	2	3	4	5
Uncertain	1	2	3	4	5
Easily influenced	1	2	3	4	5
Decisive	1	2	3	4	5
Empowers others	1	2	3	4	5
Consultative	1	2	3	4	5
Diplomatic	1	2	3	4	5
Collaborative	1	2	3	4	5
Strategic	1	2	3	4	5
Listens effectively	1	2	3	4	5
Good communicator	1	2	3	4	5
Democratic	1	2	3	4	5
Fair	1	2	3	4	5
Motivates others	1	2	3	4	5
Able to resolve conflicts	1	2	3	4	5

Thank-you. Please proceed to the next page.

WORKING RELATIONSHIPS

We ask that you think of your work context. Using the scale provided, indicate the extent to which the following statements reflect your work relationships. Please be as spontaneous and honest as possible, and keep in mind that there are no right or wrong answers.

1 Totally Disagree	2 Strongly Disagree	3 Disagree	4 Neither Agree nor Disagree	5 Agree	6 Strongly Agree	7 Totally Agree

1.	I identify with my fellow employees.	1	2	3	4	5	6	7
2.	I identify with other female managers.	1	2	3	4	5	6	7
3.	I defend subordinates when I feel they have been unfairly criticised.	1	2	3	4	5	6	7
4.	I often spend time with male managers.	1	2	3	4	5	6	7
5.	I'm always willing to admit when I make a mistake.	1	2	3	4	5	6	7
6.	I have never been irked when people expressed ideas very different from my own.	1	2	3	4	5	6	7
7.	I am like other female managers.	1	2	3	4	5	6	7
8.	There have been occasions when I took advantage of someone.	1	2	3	4	5	6	7
9.	In comparison with my male colleagues, I am more often left out of certain activities.	1	2	3	4	5	6	7
10.	I feel that, in my work place, I am encouraged to identify with female managers.	1	2	3	4	5	6	7
11.	I have a clear sense of being a female manager, and what it means for me.	1	2	3	4	5	6	7
12.	I like meeting and getting to know male managers.	1	2	3	4	5	6	7
13.	I have only little respect for my coworkers within the organization.	1	2	3	4	5	6	7
14.	I think a lot about how my life is affected by being a female manager.	1	2	3	4	5	6	7
15.	It is difficult to work for a woman boss.	1	2	3	4	5	6	7
16.	There have been times when I felt like rebelling against people in authority even though I knew they were right.	1	2	3	4	5	6	7
17.	In general, being a female manager is an important part of my self-image.	1	2	3	4	5	6	7
18.	I am sometimes irritated by people who ask favours of me.	1	2	3	4	5	6	7
19.	Overall, female managers have very little to do with how I feel about myself.	1	2	3	4	5	6	7
20.	I have never deliberately said something that hurt someone's feelings.	1	2	3	4	5	6	7
21.	Female managers are unimportant to my sense of what kind of person I am.	1	2	3	4	5	6	7

Thank-you. Please proceed to the next page.

WORKING RELATIONSHIPS (Continued)

1 Totally Disagree	2 Strongly Disagree	3 Disagree	4 Neither Agree nor Disagree	5 Agree	6 Strongly Agree	7 Totally Agree

22. There have been times when I was quite jealous of the good fortune of male managers.	1	2	3	4	5	6	7
23. I would like to continue working with female managers.	1	2	3	4	5	6	7
24. Being appreciated by my colleagues is not part of my standards of personal success.	1	2	3	4	5	6	7
25. I cooperate with other female managers.	1	2	3	4	5	6	7
26. I think and act like others in my organization.	1	2	3	4	5	6	7
27. I am active in organizations or social groups that include mostly female managers.	1	2	3	4	5	6	7
28. I sometimes try to get even rather than to forgive and forget.	1	2	3	4	5	6	7
29. I feel a strong attachment toward female managers.	1	2	3	4	5	6	7
30. I have spent time trying to find out more about the history and workforce contribution of female managers.	1	2	3	4	5	6	7
31. I work hard to improve the prestige and status of female managers.	1	2	3	4	5	6	7
32. I am always courteous, even to people who are disagreeable.	1	2	3	4	5	6	7
33. In comparison with my male colleagues, I am more often mocked and the target of sarcastic remarks.	1	2	3	4	5	6	7
34. In comparison with my male colleagues, my abilities are more often questioned.	1	2	3	4	5	6	7
35. I defend female managers when I feel they have been unfairly criticised.	1	2	3	4	5	6	7
36. I would rather work with male managers than with female managers.	1	2	3	4	5	6	7
37. Being well evaluated by my bosses is an important criterion of personal satisfaction.	1	2	3	4	5	6	7
38. There have been times when I was quite jealous of the good fortune of other female managers.	1	2	3	4	5	6	7
39. In order not to appear sexist, many men are inclined to overcompensate women	1	2	3	4	5	6	7
40. I am helpful to other female managers.	1	2	3	4	5	6	7
41. I enjoy being around male managers.	1	2	3	4	5	6	7
42. In all honesty, I would rather be a male manager.	1	2	3	4	5	6	7
43. I often regret that I am not a male manager.	1	2	3	4	5	6	7
44. I often feel I'm of no help to other female managers.	1	2	3	4	5	6	7
45. It is easy to work for a woman boss.	1	2	3	4	5	6	7
46. I would rather work with female managers than with male managers.	1	2	3	4	5	6	7

Thank-you. Please proceed to the next page.

WORKING RELATIONSHIPS (Continued)

1 Totally Disagree	2 Strongly Disagree	3 Disagree	4 Neither Agree nor Disagree	5 Agree	6 Strongly Agree	7 Totally Agree

47. Discrimination against women in the labour force is no longer a problem in Canada	1	2	3	4	5	6	7
48. It is easy to work for a male boss.	1	2	3	4	5	6	7
49. Women shouldn't push themselves where they are not wanted.	1	2	3	4	5	6	7
50. Women will make progress by being patient and not pushing too hard for change.	1	2	3	4	5	6	7
51. Due to social pressures, managers frequently have to hire under-qualified women.	1	2	3	4	5	6	7
52. In a fair employment system, men and women would be considered equal.	1	2	3	4	5	6	7
53. Women's requests in terms of equality between the sexes are simply exaggerated.	1	2	3	4	5	6	7
54. Over the past few years, women have gotten more from government than they deserve.	1	2	3	4	5	6	7
55. In all honesty, I relate better to male managers than I do to female managers.	1	2	3	4	5	6	7
56. Universities are wrong to admit women into costly programs such as medicine, when in fact a large number will leave their jobs after a few years to raise their children.	1	2	3	4	5	6	7
57. In terms of job assignments, I am treated the same way as my male colleagues.	1	2	3	4	5	6	7
58. Most people consider female managers, on average, to be more effective than male managers.	1	2	3	4	5	6	7
59. I consider the present employment system to be unfair to women	1	2	3	4	5	6	7
60. I defend male managers when I feel they have been unfairly criticised.	1	2	3	4	5	6	7
61. The way others behave toward me has nothing to do with my work.	1	2	3	4	5	6	7
62. I have little respect for female managers.	1	2	3	4	5	6	7
63. I feel I don't have much to offer to other female managers.	1	2	3	4	5	6	7
64. I feel good about female managers, as a group.	1	2	3	4	5	6	7
65. There have been times when I was quite jealous of the good fortune of others.	1	2	3	4	5	6	7
66. I am helpful to male managers.	1	2	3	4	5	6	7
67. I feel that, in my work place, I am encouraged to identify with male managers.	1	2	3	4	5	6	7
68. Female managers, as a group, are an important reflection of who I am.	1	2	3	4	5	6	7

Thank-you. Please proceed to the next page.

MANAGERIAL CHARACTERISTICS B

You will find on this page a list of descriptive terms normally used to characterise people. Some are positive, others are negative, and some are neither positive nor negative.

*We ask that you use this list to characterise **successful female managers**. To make your judgment, it may help you to imagine that you are about to meet a person for the first time, and the only thing you know about them is that she is a successful female manager. Evaluate each word or phrase, on a scale of 1 to 5, to the extent to which it characterises successful female managers.*

1 Uncharacteristic	2 Somewhat Uncharacteristic	3 Neither Characteristic nor Uncharacteristic	4 Somewhat Characteristic	5 Characteristic

Competent	1	2	3	4	5
Well-informed	1	2	3	4	5
Analytic ability	1	2	3	4	5
Leadership ability	1	2	3	4	5
Skilled in business matters	1	2	3	4	5
Dominant	1	2	3	4	5
Confident	1	2	3	4	5
Firm	1	2	3	4	5
High need for power	1	2	3	4	5
Passive	1	2	3	4	5
Forceful	1	2	3	4	5
Aggressive	1	2	3	4	5
Competitive	1	2	3	4	5
Ambitious	1	2	3	4	5
Vigorous	1	2	3	4	5
Independent	1	2	3	4	5
Desires responsibility	1	2	3	4	5
Self-reliant	1	2	3	4	5
Uncertain	1	2	3	4	5
Easily influenced	1	2	3	4	5
Decisive	1	2	3	4	5
Empowers others	1	2	3	4	5
Consultative	1	2	3	4	5
Diplomatic	1	2	3	4	5
Collaborative	1	2	3	4	5
Strategic	1	2	3	4	5
Listens effectively	1	2	3	4	5
Good communicator	1	2	3	4	5
Democratic	1	2	3	4	5
Fair	1	2	3	4	5
Motivates others	1	2	3	4	5
Able to resolve conflicts	1	2	3	4	5

Thank-you. Please proceed to the next page.

JOB SATISFACTION

The following statements pertain to your job satisfaction as a female manager. Using the rating scale provided, please rate the extent to which you agree or disagree with each statement. Please be as spontaneous and honest as possible, and keep in mind that there are no right or wrong answers.

1 Totally Disagree	2 Strongly Disagree	3 Disagree	4 Neither Agree nor Disagree	5 Agree	6 Strongly Agree	7 Totally Agree

1.	I am a good manager.	1	2	3	4	5	6	7
2.	In general, I feel good about being in my current profession.	1	2	3	4	5	6	7
3.	All in all, I really like my job.	1	2	3	4	5	6	7
4.	I dislike being a female manager.	1	2	3	4	5	6	7
5.	It is sometimes hard for me to go on with my work if I am not encouraged.	1	2	3	4	5	6	7
6.	I sometimes feel resentful when I don't get my way.							
7.	On a few occasions, I have given up doing something because I thought too little of my ability.	1	2	3	4	5	6	7
8.	In general, I'm glad to be a female manager.	1	2	3	4	5	6	7
9.	I feel good about being a female manager.	1	2	3	4	5	6	7
10.	I have a lot of pride in being a female manager.	1	2	3	4	5	6	7
11.	I am proud of the accomplishments of female managers.	1	2	3	4	5	6	7
12.	Overall, I often feel that female managers are not worthwhile.	1	2	3	4	5	6	7
13.	In general, others think that female managers are unworthy.	1	2	3	4	5	6	7
14.	Overall, female managers are considered good by others.	1	2	3	4	5	6	7
15.	I would rather not refer to myself as a female manager.	1	2	3	4	5	6	7
16.	In general, I feel good about being involved with my department.	1	2	3	4	5	6	7
17.	Looking at the work I produce, there is nothing to be proud of.	1	2	3	4	5	6	7
18.	I often regret being in my current profession.	1	2	3	4	5	6	7
19.	I think I have good qualities for my present job.	1	2	3	4	5	6	7
20.	I have what it takes to be a good manager.	1	2	3	4	5	6	7
21.	I would rather be in another organization.	1	2	3	4	5	6	7
22.	I think I have good qualities for management.	1	2	3	4	5	6	7
23.	I am generally satisfied about myself.	1	2	3	4	5	6	7
24.	As a manager, I feel like a failure.	1	2	3	4	5	6	7
25.	I think I contribute to the good reputation of the department.	1	2	3	4	5	6	7
26.	When I look at the employees within the organization I work for there is little to be proud of.	1	2	3	4	5	6	7
27.	In general, others respect female managers.	1	2	3	4	5	6	7
28.	All in all, I am proud of my accomplishments.	1	2	3	4	5	6	7
29.	I feel pressure to perform better than my female colleagues.	1	2	3	4	5	6	7

Thank-you. Please proceed to the next page.

JOB SATISFACTION (Continued)

1 Totally Disagree	2 Strongly Disagree	3 Disagree	4 Neither Agree nor Disagree	5 Agree	6 Strongly Agree	7 Totally Agree

30. I would rather belong to another occupational group.	1	2	3	4	5	6	7
31. The feedback I receive concerning my work is not a good indicator of my performance.	1	2	3	4	5	6	7
32. Attitudes toward me are biased and discriminatory.	1	2	3	4	5	6	7
33. The judgments passed on my work are biased and discriminatory.	1	2	3	4	5	6	7
34. My work is evaluated fairly and reasonably.	1	2	3	4	5	6	7
35. The judgments passed on me faithfully reflect who I am.	1	2	3	4	5	6	7
36. Performance appraisals are a fair measure of my abilities.	1	2	3	4	5	6	7
37. Being a good manager is an important part of my self-image.	1	2	3	4	5	6	7
38. Performance appraisals have a significant impact on me.	1	2	3	4	5	6	7
39. Being successful in the Federal Public Service is not one of the most important things in my life.	1	2	3	4	5	6	7
40. Being good or not according to Federal Public Service standards doesn't concern me.	1	2	3	4	5	6	7
41. I do not give the best of myself in my profession.	1	2	3	4	5	6	7
42. My participation in my department is limited to the minimum required.	1	2	3	4	5	6	7
43. I constantly try to improve myself.	1	2	3	4	5	6	7
44. I like to participate in the social activities of my department.	1	2	3	4	5	6	7
45. At times, I think about a career change.	1	2	3	4	5	6	
46. I am often stressed at work.	1	2	3	4	5	6	7
47. The thought of making a mistake stresses me out.	1	2	3	4	5	6	7
48. I feel pressure to perform better than my male colleagues.	1	2	3	4	5	6	7
49. At work, I feel like no one really understands me.	1	2	3	4	5	6	7
50. Attitudes toward me reflect a positive image of myself.	1	2	3	4	5	6	7
51. I think that female managers, as a group, have a lot to be proud of.	1	2	3	4	5	6	7

Thank-you. Please proceed to the next page.

MANAGERIAL CHARACTERISTICS C

You will find on this page a list of descriptive terms normally used to characterise people. Some are positive, others are negative, and some are neither positive nor negative.

*We ask that you use this list to characterise **yourself as a manager**. Evaluate each word or phrase, on a scale of 1 to 5, to the extent to which it characterises you as a manager.*

1 Uncharacteristic	2 Somewhat Uncharacteristic	3 Neither Characteristic nor Uncharacteristic	4 Somewhat Characteristic	5 Characteristic

Competent	1	2	3	4	5
Well-informed	1	2	3	4	5
Analytic ability	1	2	3	4	5
Leadership ability	1	2	3	4	5
Skilled in business matters	1	2	3	4	5
Dominant	1	2	3	4	5
Confident	1	2	3	4	5
Firm	1	2	3	4	5
High need for power	1	2	3	4	5
Passive	1	2	3	4	5
Forceful	1	2	3	4	5
Aggressive	1	2	3	4	5
Competitive	1	2	3	4	5
Ambitious	1	2	3	4	5
Vigorous	1	2	3	4	5
Independent	1	2	3	4	5
Desires responsibility	1	2	3	4	5
Self-reliant	1	2	3	4	5
Uncertain	1	2	3	4	5
Easily influenced	1	2	3	4	5
Decisive	1	2	3	4	5
Empowers others	1	2	3	4	5
Consultative	1	2	3	4	5
Diplomatic	1	2	3	4	5
Collaborative	1	2	3	4	5
Strategic	1	2	3	4	5
Listens effectively	1	2	3	4	5
Good communicator	1	2	3	4	5
Democratic	1	2	3	4	5
Fair	1	2	3	4	5
Motivates others	1	2	3	4	5
Able to resolve conflicts	1	2	3	4	5

Of these traits, please list **five traits** that best characterise you in your **personal and/or home life**:

_____ , _____ , _____

_____ , _____

Thank-you. Please proceed to the next page.

PROFESSIONAL INFORMATION

Job Classification and Level (e.g., PM5, EX1): _____ Position (please check one): ☐ Junior Officer

☐ Middle Manager

☐ Senior Manager

☐ Other (please specify): _____

Please describe your job functions: _____

_____

Length of service in the Federal Public Service: _____ years

Work experience under a female supervisor (Yes or No)?_____ (If Yes, how many years? _____ years)

Management:
According to the current Federal Public Service definition, a manager is an employee who forms part of a management team and is accountable for exercising delegated authority over human and financial resources to accomplish the objectives of the organization in the Public Service of Canada. In addition to being responsible for program delivery, Managers lead people, recognize and reward achievement, manage change and promote the corporate values, ethics and culture of the organization.

What proportion of your work week is spent on managerial work, as per the above definition?

☐ less than 10% ☐ 10-25% ☐ 25-50% ☐ 50-75% ☐ 75-100%

How many years have you performed the work detailed in the above definition (regardless of your official designation)? ☐ fewer than 2 years ☐ 3-6 years ☐ 7-10 years ☐ 11-15 years ☐ 16-20 ☐ more than 20 years

EDUCATIONAL INFORMATION

High School diploma completed? ☐ Yes ☐ No

Post-Secondary not completed in the subject area of: _____

Post-Secondary completed in the subject area of: _____

Graduate Studies: Masters degree in: _____

Doctorate in: _____

Other: _____

SOCIO-DEMOGRAPHIC INFORMATION

Age: _____ Sex: n/a (females only) Civil Status: ☐ Single

☐ Married / Common-law

☐ Divorced

☐ Widowed

Sexual Orientation: _____

Ethnic Group:
In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Canadian, Canadian of Irish descent, Francophone, Aboriginal or First Nations, Black or African Canadian, Canadian of Asian descent, Lebanese Canadian, and many others. In terms of ethnic group, how would you describe yourself? _____

_____

Do you have children? ☐ Yes ☐ No (*If Yes, how many?* _____)

Thank-you. Please proceed to the next page.

ADDITIONAL REMARKS

Estimated number of female managers in your department: _____

Estimated number of male managers in your department: _____

In your words, what is the purpose of the present study?

Are you facing any challenges or obstacles in your career progress? Please list and describe them:

If you have any additional comments concerning the questions you have been asked, or about the present study in general, we invite you to provide them here:

Thank-you for having taken the time to complete this survey.
Your participation is greatly appreciated.

Étude sur le << leadership >>

Femmes << leaders >> dans la Fonction publique fédérale 2006

For the ENGLISH VERSION, please flip over

Veuillez répondre aux questions suivantes dans les espaces prévus. Après avoir complété une page, nous vous demandons de passer à la page suivante sans retourner en arrière ou faire des changements aux pages précédentes. Si vous avez des commentaires supplémentaires, veuillez les ajouter dans l'espace prévu à la fin du questionnaire.

Merci.

TERMES DESCRIPTIFS DES GESTIONNAIRES A

Vous trouverez sur cette page une liste de termes descriptifs généralement utilisés pour caractériser les personnes. Certains d'entre eux ont une connotation positive, d'autres négative, et d'autres ne sont ni positifs ni négatifs.

Nous vous demandons d'utiliser cette liste pour caractériser les ***gestionnaires qui réussissent****. Pour établir votre jugement, cela pourrait vous aider d'imaginer que vous aller rencontrer une personne pour la première fois, et l'unique renseignement que vous avez est que cette personne travaille comme gestionnaire et a du succès. Évaluez chaque mot ou phrase, sur une échelle de 1 à 5, selon qu'il ou elle est fort caractéristique ou non des gestionnaires qui ont du succès.*

1	2	3	4	5
Non caractéristique	**Légèrement non caractéristique**	**Ni caractéristique ni non caractéristique**	**Légèrement caractéristique**	**Caractéristique**

Compétence	1	2	3	4	5
Connaissance	1	2	3	4	5
Sens analytique	1	2	3	4	5
Aptitude au leadership	1	2	3	4	5
Habileté en affaire	1	2	3	4	5
Dominance	1	2	3	4	5
Confiance en soi	1	2	3	4	5
Fermeté	1	2	3	4	5
Grand besoin de pouvoir	1	2	3	4	5
Passivité	1	2	3	4	5
Agit avec force	1	2	3	4	5
Agressivité	1	2	3	4	5
Compétition	1	2	3	4	5
Ambition	1	2	3	4	5
Vigueur	1	2	3	4	5
Indépendance	1	2	3	4	5
Veut de la responsabilité	1	2	3	4	5
Se fie à soi-même	1	2	3	4	5
Incertitude	1	2	3	4	5
Influençable	1	2	3	4	5
Prend des décisions	1	2	3	4	5
Diplomatique	1	2	3	4	5
Collaboration	1	2	3	4	5
Stratégique	1	2	3	4	5
Écoute efficacement	1	2	3	4	5
Communique efficacement	1	2	3	4	5
Démocratique	1	2	3	4	5
Juste	1	2	3	4	5
Motive les autres	1	2	3	4	5
Habile à résoudre des conflits	1	2	3	4	5

Merci. Veuillez procéder à la prochaine page.

RELATIONS DE TRAVAIL

Nous vous demandons de penser à votre situation de travail. En utilisant l'échelle fournie, indiquez à quel point les énoncés suivants correspondent à vos relations de travail. Veuillez être aussi spontanée et honnête que possible tout en sachant qu'il n'y a aucune bonne ou mauvaise réponse.

1 Tout à fait en désaccord	2 Fortement en désaccord	3 En désaccord	4 Ni en accord ni en désaccord	5 En accord	6 Fortement en accord	7 Tout à fait en accord

1.	Je m'identifie à mes collègues de travail.	1	2	3	4	5	6	7
2.	Je m'identifie aux autres femmes gestionnaires.	1	2	3	4	5	6	7
3.	Je défends les subalternes quand je pense qu'ils ont été injustement critiqués.	1	2	3	4	5	6	7
4.	Je passe souvent du temps avec des hommes gestionnaires.	1	2	3	4	5	6	7
5.	Je suis toujours prête à admettre que j'ai fais une erreur.	1	2	3	4	5	6	7
6.	Ça ne m'a jamais fâchée quand les gens ont exprimé des idées très différentes des miennes.	1	2	3	4	5	6	7
7.	Je suis comme les autres femmes gestionnaires.	1	2	3	4	5	6	7
8.	Il est déjà arrivé que je profite de quelqu'un.	1	2	3	4	5	6	7
9.	Comparativement à mes collègues masculins, je me sens mis à l'écart de certaines activités.	1	2	3	4	5	6	7
10.	Dans mon lieu de travail, je suis encouragée à m'identifier aux femmes gestionnaires.	1	2	3	4	5	6	7
11.	Je suis consciente d'être une femme gestionnaire et je sais ce que cela signifie pour moi.	1	2	3	4	5	6	7
12.	J'aime rencontrer et faire la connaissance d'hommes gestionnaires.	1	2	3	4	5	6	7
13.	Je n'ai que peu de respect pour mes collègues dans l'organisation.	1	2	3	4	5	6	7
14.	Je pense beaucoup à la manière dont ma vie est influencée par le fait que je suis une femme gestionnaire.	1	2	3	4	5	6	7
15.	Il est difficile de travailler sous les ordres d'une femme.	1	2	3	4	5	6	7
16.	Il est déjà arrivé que je veuille me rebeller contre des figures d'autorité malgré le fait que je sache que ces personnes avaient raison.	1	2	3	4	5	6	7
17.	En général, être une femme gestionnaire reflète une grande partie de l'image que j'ai de moi-même.	1	2	3	4	5	6	7
18.	Je suis parfois irritée par des gens qui me demandent de leur rendre des services.	1	2	3	4	5	6	7
19.	Globalement, les femmes gestionnaires n'ont pas grand chose à voir avec ce que je pense de moi.	1	2	3	4	5	6	7
20.	Je n'ai jamais dit quelque chose expressément dans le but de blesser quelqu'un.	1	2	3	4	5	6	7
21.	Les femmes gestionnaires n'apportent rien à ce que je suis en tant que personne.	1	2	3	4	5	6	7

Merci. Veuillez procéder à la prochaine page.

RELATIONS DE TRAVAIL (suite)

1 Tout à fait en désaccord	2 Fortement en désaccord	3 En désaccord	4 Ni en accord ni en désaccord	5 En accord	6 Fortement en accord	7 Tout à fait en accord

22.	Il est déjà arrivé que je sois jalouse de la bonne fortune des hommes gestionnaires.	1	2	3	4	5	6	7
23.	Je souhaiterais continuer à travailler avec des femmes gestionnaires.	1	2	3	4	5	6	7
24.	Être appréciée de mes collègues de travail ne fait pas partie de mes critères de réussite personnelle.	1	2	3	4	5	6	7
25.	Je coopère avec les autres femmes gestionnaires.	1	2	3	4	5	6	7
26.	Je pense et agis comme les autres dans mon organisation.	1	2	3	4	5	6	7
27.	Je suis active dans les organisations où les groupes sociaux sont composés d'une majorité de femmes.	1	2	3	4	5	6	7
28.	Parfois, j'essaie de me venger plutôt que de pardonner et d'oublier.	1	2	3	4	5	6	7
29.	Je me sens fortement liée aux femmes gestionnaires.	1	2	3	4	5	6	7
30.	J'ai passé du temps à essayer de trouver plus d'informations à propos de la contribution des femmes gestionnaires à l'histoire et au milieu du travail.	1	2	3	4	5	6	7
31.	Je travaille fort pour améliorer le prestige et le statut des femmes gestionnaires.	1	2	3	4	5	6	7
32.	Je fais toujours preuve de courtoisie, même envers les gens qui sont désagréable.	1	2	3	4	5	6	7
33.	Comparativement à mes collègues masculins, je suis plus souvent l'objet de moqueries et la cible de remarques sarcastiques.	1	2	3	4	5	6	7
34.	Comparativement à mes collègues masculins, on met plus en doute mes capacités.	1	2	3	4	5	6	7
35.	Je défends les femmes gestionnaires quand je pense qu'elles ont été injustement critiquées.	1	2	3	4	5	6	7
36.	Je préfèrerais travailler avec des hommes gestionnaires qu'avec des femmes gestionnaires.	1	2	3	4	5	6	7
37.	Être bien évaluée par mes patrons est un critère important de satisfaction personnelle.	1	2	3	4	5	6	7
38.	Il est déjà arrivé que je sois jalouse de la bonne fortune des autres femmes gestionnaires.	1	2	3	4	5	6	7
39.	Pour ne pas paraître sexistes, beaucoup d'hommes sont portés à donner des passe-droits aux femmes.	1	2	3	4	5	6	7
40.	Je suis utile aux autres femmes gestionnaires.	1	2	3	4	5	6	7
41.	J'aime bien être parmi des hommes gestionnaires.	1	2	3	4	5	6	7
42.	En toute honnêteté, je préfèrerais être un homme gestionnaire.	1	2	3	4	5	6	7
43.	Je regrette souvent de ne pas être un homme gestionnaire.	1	2	3	4	5	6	7
44.	Je ressens souvent que je suis inutile aux autres femmes gestionnaires.	1	2	3	4	5	6	7
45.	Il est facile de travailler sous les ordres d'une femme.	1	2	3	4	5	6	7
46.	Je préfèrerais travailler avec des femmes gestionnaires plutôt qu'avec des hommes gestionnaires.	1	2	3	4	5	6	7

Merci. Veuillez procéder à la prochaine page.

RELATIONS DE TRAVAIL (suite)

1 Tout à fait en désaccord	2 Fortement en désaccord	3 En désaccord	4 Ni en accord ni en Désaccord	5 En accord	6 Fortement en accord	7 Tout à fait en accord

47.	La discrimination envers les femmes sur le marché du travail est une chose du passé au Canada.	1	2	3	4	5	6	7
48.	Il est facile de travailler sous les ordres d'un homme.	1	2	3	4	5	6	7
49.	Les femmes ne devraient pas essayer de percer là où on ne les veut pas.	1	2	3	4	5	6	7
50.	Les femmes feront plus de progrès en étant patientes et en ne revendiquant pas trop de changements.	1	2	3	4	5	6	7
51.	À cause de pressions sociales, les cadres doivent souvent engager des femmes qui ne sont pas qualifiées.	1	2	3	4	5	6	7
52.	Dans un système d'emploi juste, les hommes et les femmes devraient être considérés comme égaux.	1	2	3	4	5	6	7
53.	Les demandes des femmes en termes d'égalité entre les sexes sont tout simplement exagérées.	1	2	3	4	5	6	7
54.	Au cours des dernières années, les femmes ont obtenu des gouvernements plus que ce qu'elles méritent.	1	2	3	4	5	6	7
55.	En toute honnêteté, je m'associe mieux avec des hommes gestionnaires qu'avec des femmes gestionnaires.	1	2	3	4	5	6	7
56.	Les universités ont tort d'admettre autant de femmes dans les programmes coûteux comme la médecine alors qu'un grand nombre quitteront leur emploi après quelques années pour élever leurs enfants.	1	2	3	4	5	6	7
57.	En ce qui a trait à l'attribution des tâches, je me sens traitée de la même façon que mes collègues masculins.	1	2	3	4	5	6	7
58.	La plupart des personnes considèrent les femmes gestionnaires, en moyenne, plus efficaces que les hommes gestionnaires.	1	2	3	4	5	6	7
59.	Je considère le système d'emploi actuel comme injuste à l'endroit des femmes.	1	2	3	4	5	6	7
60.	Je défends les hommes gestionnaires quand je pense qu'ils ont été injustement critiqués.	1	2	3	4	5	6	7
61.	Les comportements de certains à mon égard n'ont rien à voir avec le travail que je fais.	1	2	3	4	5	6	7
62.	J'ai peu de respect pour les femmes gestionnaires.	1	2	3	4	5	6	7
63.	Je pense que je n'ai pas grand-chose à offrir aux autres femmes gestionnaires.	1	2	3	4	5	6	7
64.	J'apprécie les femmes gestionnaires, en tant que groupe.	1	2	3	4	5	6	7
65.	Il est déjà arrivé que je sois jalouse de la bonne fortune des autres.	1	2	3	4	5	6	7
66.	Je suis utile aux hommes gestionnaires.	1	2	3	4	5	6	7
67.	Dans mon lieu de travail, je suis encouragée à m'identifier aux hommes gestionnaires.	1	2	3	4	5	6	7
68.	Les femmes gestionnaires, en tant que groupe, reflètent de façon importante ce que je suis.	1	2	3	4	5	6	7

Merci. Veuillez procéder à la prochaine page.

TERMES DESCRIPTIFS DES GESTIONNAIRES B

Vous trouverez sur cette page une liste de termes descriptifs généralement utilisés pour caractériser les personnes. Certains d'entre eux ont une connotation positive, d'autres négative, et d'autres ne sont ni positifs ni négatifs.

Nous vous demandons d'utiliser cette liste pour caractériser les ***femmes gestionnaires qui réussissent****. Pour faire votre jugement, cela pourrait vous aider d'imaginer que vous aller rencontrer une personne pour la première fois, et l'unique renseignement que vous avez sur cette personne est qu'elle travaille comme gestionnaire et a du succès. Évaluez chaque mot ou phrase, sur une échelle de 1 à 5, selon qu'il ou elle est fort caractéristique ou non d'une femme gestionnaire qui a du succès.*

1	2	3	4	5
Non caractéristique	**Légèrement non caractéristique**	**Ni caractéristique ni non caractéristique**	**Légèrement caractéristique**	**Caractéristique**

Compétence	1	2	3	4	5
Connaissance	1	2	3	4	5
Sens analytique	1	2	3	4	5
Aptitude au leadership	1	2	3	4	5
Habileté en affaire	1	2	3	4	5
Dominance	1	2	3	4	5
Confiance en soi	1	2	3	4	5
Fermeté	1	2	3	4	5
Grand besoin de pouvoir	1	2	3	4	5
Passivité	1	2	3	4	5
Agit avec force	1	2	3	4	5
Agressivité	1	2	3	4	5
Compétition	1	2	3	4	5
Ambition	1	2	3	4	5
Vigueur	1	2	3	4	5
Indépendance	1	2	3	4	5
Veut de la responsabilité	1	2	3	4	5
Se fie à soi-même	1	2	3	4	5
Incertitude	1	2	3	4	5
Influençable	1	2	3	4	5
Prend des décisions	1	2	3	4	5
Diplomatique	1	2	3	4	5
Collaboration	1	2	3	4	5
Stratégique	1	2	3	4	5
Écoute efficacement	1	2	3	4	5
Communique efficacement	1	2	3	4	5
Démocratique	1	2	3	4	5
Juste	1	2	3	4	5
Motive les autres	1	2	3	4	5
Habile à résoudre des conflits	1	2	3	4	5

Merci. Veuillez procéder à la prochaine page.

SATISFACTION PROFESSIONELLE

Les phrases suivantes concernent votre satisfaction professionnelle en tant que femme gestionnaire. En utilisant l'échelle fournie, indiquez à quel point les énoncés suivants correspondent à votre niveau de satisfaction professionnelle. Veuillez être aussi spontanée et honnête que possible tout en sachant qu'il n'y a aucune bonne ou mauvaise réponse.

1 Tout à fait en désaccord	2 Fortement en désaccord	3 En Disaccord	4 Ni en accord ni en Désaccord	5 En accord	6 Fortement en accord	7 Tout à fait en accord

1.	Je suis une bonne gestionnaire.	1	2	3	4	5	6	7
2.	En général, je me sens bien dans ma profession actuelle.	1	2	3	4	5	6	7
3.	Tout compte fait, j'aime beaucoup mon emploi	1	2	3	4	5	6	7
4.	Je n'apprécie pas être une femme gestionnaire.	1	2	3	4	5	6	7
5.	C'est parfois difficile pour moi de poursuivre mon travail si je ne suis pas encouragée.	1	2	3	4	5	6	7
6.	J'ai parfois de la rancune lorsque je n'ai pas le dernier mot.	1	2	3	4	5	6	7
7.	J'ai à quelques occasions abandonné ce que je faisais parce que j'avais une opinion trop faible de mes habiletés.	1	2	3	4	5	6	7
8.	En général, je suis contente d'être une femme gestionnaire.	1	2	3	4	5	6	7
9.	Je me sens bien en tant que femme gestionnaire.	1	2	3	4	5	6	7
10.	Je suis très fière d'être une femme gestionnaire.	1	2	3	4	5	6	7
11.	Je suis fière des accomplissements des femmes gestionnaires.	1	2	3	4	5	6	7
12.	En général, je trouve souvent que les femmes gestionnaires ne sont pas méritoires.	1	2	3	4	5	6	7
13.	En général, les autres pensent que les femmes gestionnaires ne sont pas méritoires.	1	2	3	4	5	6	7
14.	En général, les femmes gestionnaires sont bien considérées par les autres.	1	2	3	4	5	6	7
15.	Je préfère ne pas référé à moi-même en tant que femme gestionnaire.	1	2	3	4	5	6	7
16.	En général, je me sens bien impliquée dans mon département.	1	2	3	4	5	6	7
17.	Il n'y a pas de quoi être fière du travail que je réalise.	1	2	3	4	5	6	7
18.	Je regrette souvent d'exercerma profession actuelle.	1	2	3	4	5	6	7
19.	Je pense avoir de bonnes qualités pour ma profession actuelle.	1	2	3	4	5	6	7
20.	J'ai les qualités nécessaires pour être une bonne gestionnaire.	1	2	3	4	5	6	7
21.	Je préfèrerais travailler dans une autre organisation.	1	2	3	4	5	6	7
22.	Je pense avoir de bonnes qualités pour la gestion.	1	2	3	4	5	6	7
23.	Je suis généralement satisfaite de moi-même.	1	2	3	4	5	6	7
24.	En tant que gestionnaire, j'ai l'impression d'être un échec.	1	2	3	4	5	6	7
25.	Je pense que je contribue à la bonne réputation de mon département.	1	2	3	4	5	6	7
26.	Lorsque je considère les employés de l'organisation pour laquelle je travaille, il n'y a pas vraiment de quoi être fière.	1	2	3	4	5	6	7
27.	En général, les gens respectent les femmes gestionnaires.	1	2	3	4	5	6	7
28.	Tout compte fait, je suis fière de mes accomplissements.	1	2	3	4	5	6	7
29.	Je ressens de la pression à faire mieux que mes collègues féminines.	1	2	3	4	5	6	7

Merci. Veuillez procéder à la prochaine page.

SATISFACTION PROFESSIONNELLE (suite)

1 Tout à fait en désaccord	2 Fortement en désaccord	3 En désaccord	4 Ni en accord ni en Désaccord	5 En accord	6 Fortement en accord	7 Tout à fait en accord

30. Je préférerais appartenir à un autre groupe occupationnel.	1	2	3	4	5	6	7
31. Le *feed-back* que je reçois à propos de mon travail n'est pas un bon indicateur de mes compétences.	1	2	3	4	5	6	7
32. Les attitudes à mon égard sont biaisées et discriminatoires.	1	2	3	4	5	6	7
33. Les jugements qu'on porte sur mon travail sont biaisés et discriminatoires.	1	2	3	4	5	6	7
34. Mon travail est évalué de façon juste et raisonnable.	1	2	3	4	5	6	7
35. Les jugements qu'on pose sur moi reflètent fidèlement ce que je suis.	1	2	3	4	5	6	7
36. Les appréciations (évaluations) de rendement rendent justice à mes capacités.	1	2	3	4	5	6	7
37. Être une bonne gestionnaire est un aspect important de l'image que j'ai de moi-même.	1	2	3	4	5	6	7
38. Les appréciations (évaluations) de rendement ont un impact important sur moi.	1	2	3	4	5	6	7
39. Réussir à la Fonction publique fédérale ne fait pas partie des choses les plus importantes dans ma vie.	1	2	3	4	5	6	7
40. Que je sois bonne ou pas selon les critères établis dans la Fonction publique fédérale ne me dérange pas.	1	2	3	4	5	6	7
41. Je ne donne pas le meilleur de moi-même dans ma profession.	1	2	3	4	5	6	7
42. Mon implication dans mon unité de travail s'arrête au minimum demandé.	1	2	3	4	5	6	7
43. Je cherche constamment à me perfectionner.	1	2	3	4	5	6	7
44. J'aime participer aux activités sociales de mon unité de travail.	1	2	3	4	5	6	7
45. Parfois, je pense à changer de carrière.	1	2	3	4	5	6	7
46. Je suis souvent stressée au travail.	1	2	3	4	5	6	7
47. L'idée de commettre une erreur me stresse .	1	2	3	4	5	6	7
48. Je ressens de la pression à faire mieux que mes collègues masculins.	1	2	3	4	5	6	7
49. Au travail, personne ne me comprend vraiment.	1	2	3	4	5	6	7
50. Les attitudes par rapport à moi reflètent une image positive de moi-même.	1	2	3	4	5	6	7
51. Je pense que les femmes gestionnaires, en tant que groupe, ont plusieurs raisons d' être fières.	1	2	3	4	5	6	7

Merci. Veuillez procéder à la prochaine page.

TERMES DESCRIPTIFS DES GESTIONNAIRES C

Vous trouverez sur cette page une liste de termes descriptifs généralement utilisés pour caractériser les personnes. Certains d'entre eux ont une connotation positive, d'autres négative, et d'autres ne sont ni positifs ni négatifs.

*Nous vous demandons d'utiliser cette liste pour **vous** caractériser **en tant que gestionnaire**. Evaluez chaque mot ou phrase, sur une échelle de 1 à 5, selon qu'il ou elle **vous** caractérise ou non **en tant que gestionnaire**.*

1 Non caractéristique	2 Légèrement non caractéristique	3 Ni caractéristique ni non caractéristique	4 Légèrement caractéristique	5 Caractéristique

Compétence	1	2	3	4	5
Connaissance	1	2	3	4	5
Sens analytique	1	2	3	4	5
Aptitude au leadership	1	2	3	4	5
Habileté en affaire	1	2	3	4	5
Dominance	1	2	3	4	5
Confiance en soi	1	2	3	4	5
Fermeté	1	2	3	4	5
Grand besoin de pouvoir	1	2	3	4	5
Passivité	1	2	3	4	5
Agit avec force	1	2	3	4	5
Agressivité	1	2	3	4	5
Compétition	1	2	3	4	5
Ambition	1	2	3	4	5
Vigueur	1	2	3	4	5
Indépendance	1	2	3	4	5
Veut de la responsabilité	1	2	3	4	5
Se fie à soi-même	1	2	3	4	5
Incertitude	1	2	3	4	5
Influençable	1	2	3	4	5
Prend des décisions	1	2	3	4	5
Diplomatique	1	2	3	4	5
Collaboration	1	2	3	4	5
Stratégique	1	2	3	4	5
Écoute efficacement	1	2	3	4	5
Communique efficacement	1	2	3	4	5
Démocratique	1	2	3	4	5
Juste	1	2	3	4	5
Motive les autres	1	2	3	4	5
Habile à résoudre des conflits	1	2	3	4	5

De ces mots ou phrases, veuillez en énumérer **cinq** qui vous caractérisent le mieux dans votre **vie personnelle et/ou à la maison** :

_____ , _____ , _____

_____ , _____

Merci. Veuillez procéder à la prochaine page.

PROFIL PROFESSIONNEL

Classification d'emploi et niveau (par ex., PM5, EX1) : _____

Position hiérarchique (veuillez sélectionner un) :

☐ cadre junior
☐ cadre intermédiaire
☐ cadre supérieur
☐ autre (svp spécifiez) : _____

Nature de l'emploi : _____

Ancienneté à la Fonction publique fédérale : _____ ans

Expérience de travail avec une femme en tant que superviseure : ☐ Oui ☐ Non
Si *oui*, précisez le nombre d'année : _____ ans

La gestion :
Selon la nouvelle définition de la fonction publique du Canada, un gestionnaire est un employé qui fait partie intégrante d'une équipe de gestion et qui est chargé d'exercer les pouvoirs lui ayant été délégués en matière de ressources humaines et financières de manière à réaliser les objectifs de l'organisation au sein de la fonction publique du Canada. En plus d'assurer l'exécution des programmes, les gestionnaires dirigent du personnel, reconnaissent et récompensent les accomplissements, gèrent le changement et prônent les valeurs, l'éthique et la culture de l'organisation.

Quelle proportion de votre semaine de travail passez-vous a faire du travail de gestion, tel que défini ci-dessus?

☐ moins que 10% ☐ 10-25% ☐ 25-50% ☐ 50-75% ☐ 75-100%

Pendant combien d'années avez-vous effectué le travail décrit dans la définition ci-dessus (et ce, peu importe le titre officiel que vous portiez)?

☐ moins de 2 ans ☐ 3-6 ans ☐ 7-10 ans ☐ 11-15 ans ☐ 16-20 ans ☐ plus de 20 ans

PROFIL SCOLAIRE

Secondaire complété ? ☐ Oui ☐ Non
Post-secondaire non complété en (discipline): _____

Post-secondaire complété en (discipline): _____
Études supérieures:
maîtrise en (discipline): _____
doctorat en (discipline): _____

Autres: _____

PROFIL SOCIODÉMOGRAPHIQUE

Âge: _____ Sexe: *non applicable (femmes seulement)* État civil: ☐ Célibataire
☐ Mariée/Conjointe de fait
☐ Divorcée
☐ Séparée
☐ Veuve

Orientation sexuelle : _____

Groupe ethnique :
Dans ce pays, les gens proviennent de plusieurs pays différents et de diverses cultures. Plusieurs mots peuvent décrire les différents milieux ou les groupes ethniques d'où les gens proviennent. Quelques exemples de noms de groupes ethniques sont : canadienne, canadienne d'origine irlandaise, francophone, autochtone ou premières nations, africaine canadienne ou noire, canadienne d'origine asiatique, libanaise canadienne, et de beaucoup d'autres. En termes de groupe ethnique, comment vous décririez-vous?_____

Avez-vous des enfants? ☐ Oui ☐ Non (Si O*ui*, combien? ____)

Merci. Veuillez procéder à la prochaine page.

AUTRES COMMENTAIRES

Nombre estimé des femmes gestionnaires dans votre département : ____
Nombre estimé des hommes gestionnaires dans votre département : ____

Selon vous, quel est le but de cette étude?

Rencontrez-vous des défis ou des obstacles dans votre progression de carrière ? Veuillez les écrire et décrire ci-dessous :

Si vous avez des commentaires à ajouter au sujet des questions qui vous ont été posées, ou au sujet de l'étude en général, nous vous invitons à les écrire ci-dessous :

Nous vous remercions d'avoir pris le temps de participer à cette étude.

Merci. Veuillez procéder à la prochaine page.

Chapter 5:

General Discussion and Transferring Knowledge Beyond the Academe

General Discussion

Recent research programs investigating stereotypes, prejudice, and discrimination have shifted their focus from the instigators of these debilitating social perceptions and behaviours to their victims (e.g., Marx & Stapel, 2006; Matheson & Cole, 2004). Though researchers are making an effort to understand the role women are playing in their own subordination, such as correlates of the tendency for women fail to recognise sexism, thus leaving it unchallenged (e.g., Barreto & Ellemers, 2005a; 2005b), research continues to position women as passive players. The set of three studies presented in this dissertation has recognised women as active agents in their subordination, and examines the impact of women's negative attitudes towards women, as well as their context, on their intragroup judgements. Women, particularly those in leadership positions, are in positions of decision and evaluation over the careers of other women. Therefore, it is important to understand if, when, and how they may be applying commonly held gender stereotypes and negative judgements to members of their own sex.

The three components of the gender belief system as outlined by Deaux and Lafrance (1998), namely stereotypes, attitudes, and identity, were examined from the perspective of women. As a first step, this gynecocentric account assessed a popular measure of contemporary sexism, providing an updated, valid, and reliable version of the Neosexism Scale (Tougas et al., 1995). This revised tool permitted us to assess subtle sexism among women more precisely in the subsequent two studies. In Study 2, the relation between neosexism and stereotyping of female manager targets was assessed among students enrolled in a business school. Female managers were chosen as the target group to be rated, as they exist at the crossroads between gender and occupational roles

where prejudice is most likely elicited (Eagly, 2004). Study 3 sought to replicate the link between attitudes and stereotyping found among women in Study 2. The investigation was also extended to include age and identity as additional predictors of stereotyping, both as main effects in interaction with each other and with neosexism. Also in Study 3, an additional trait dimension was developed as a criterion for evaluation.

Summary of Findings for Studies 1, 2, and 3

Study 1 of this thesis presented an analysis of the reliability and cross-sex validity of the Neosexism Scale (Tougas et al., 1995). A measure of subtle sexism widely used since its inception over 10 years ago, the Neosexism Scale was originally developed to assess contemporary sexism among men. Given that the scale would be used in Studies 2 and 3 to assess *women's* intragroup derogation, it was imperative to first ensure that this scale would measure women's attitudes reliably, and with equivalent accuracy across sexes.

Neosexism Scale responses from introductory psychology students (279 females, 247 males) were analysed under the rubric of modern test theory in three stages. First, dimensionality of the scale was tested in PRELIS via principal components analysis using the polychoric correlation matrix. Second, differential item functioning (DIF) in responses between females and males was assessed in SPSS using an ordinal logistic regression procedure developed by Zumbo (1999). Third, an item response analysis was conducted in Multilog on pooled females' and males' responses. The scale was verified as being unidimensional, and DIF analyses revealed no presence of variant functioning for any of the items across sex. Item response analysis, however, revealed that three items were poorly related to neosexism, the latent construct, and deletion of these items was

recommended. The remaining eight items constituted the revised valid and reliable Neosexism Scale, to be used in the subsequent two studies.

The purpose of Study 2 was to challenge the assertion, of Schein's program of research in particular (reviewed in Schein, 2001), that males are the exclusive agents of sex-typing in contemporary America. Using her descriptive index of 92 traits, Schein has tracked females' and males' perceptions of female managers over the past several decades. She has discovered that time has had little impact on males' perceptions, as there continues to be a mismatch in the traits they attribute to managers and those they ascribe to females. Females' ratings of females and managers, on the other hand, have been found to have become equivalent (Brenner et al., 1989; Deal & Stevenson, 1998) since they were first assessed in 1975. Hence, Schein (2001) has concluded that women have become egalitarian in their perceptions.

Study 2 argued that the *Think manager, think male* hypothesis is still very much alive among women. Evidence presented in support of this contention was threefold: First, though scarce, contemporary evidence of sex-typing among women was presented. An example was the finding that higher neosexism among female managers was linked to their view of male managers as more competent and qualified than female managers (Tougas et al., 1999). Building on this evidence, the second challenge was to the utility of sex as a predictor of sex-typing. Rather than sex of participant, attitudes towards women were argued to be a better predictor of stereotyping, as supported by findings that attitudes supplanted sex to predict support for affirmative action programs (Konrad & Hartmann, 2001; Konrad & Spitz, 2003), and partially supplanted sex in judgements of sexual harassment cases (O'Connor, Gutek, Stockdale, Geer, & Melançon, 2004). Third,

Schein's methodology was questioned, namely the comparison of "manager" to "female" categories, with the latter target likely eliciting among males stereotypes not associated with professional women (Heilman, Block, Martell, & Simon, 1989). Also suggested to be prone to error was her use of intraclass correlational analyses to assess correspondence between categories on all 92 traits, without distinguishing possible content areas where differences might be more pronounced. Thus, equivalent traits in one content area possibly masked differences in others.

Canadian business students (106 females, 117 males) evaluated three target categories of higher specificity, namely successful female managers, successful male managers, or successful managers in general (in a between-groups design), on seven dimensions based on traits in Schein's index (Heilman, Block, & Martell, 1995): Work Competence, Activity/Potency, Rationality, Emotional Stability, Independence, Hostility Toward Others, and Concern for Others. Contrary to expectations, neosexism did not supplant the effect of sex, as sex did not emerge as a significant predictor at the main effect level. Rather, both female and male raters perceived successful female managers to be less rational (e.g., unsteady, inconsistent) and less independent (e.g., indecisive, easily influenced) than successful managers in general. Neosexism did have an impact, however, such that higher neosexism scores (among both females and males) predicted perceptions of female managers as less competent (e.g., possessing less leadership ability, less business skill) and less independent (e.g., indecisive, not self-reliant) than a participant-defined managerial standard. Therefore, it could be concluded that for perceptions of competence and independence, attitudes made a difference; sex of participant was inconsequential.

The only reliable sex difference to emerge in Study 2 was its joint effect with neosexism. Female business students with higher neosexism perceived female managers to be more potent (e.g., aggressive, dominant) than the managerial standard, while male business students with higher neosexism held the opposite perception of female managers as less potent than a typical successful manager; this view was shared by females lower in neosexism. In sum, the ostensible disappearance of sex-typing among women was disconfirmed in Study 2, at least in this Canadian sample. Findings not only provided evidence of sex-typing among women, but also highlighted the content of stereotypes specifically influenced by attitudes, and uniquely held by women.

There were two aims in Study 3. The first was to re-assess, in a managerial sample, the link between women's attitudes and sex-typing found in Study 2. Higher neosexism, therefore, was expected to be associated with ratings of female managers as less competent and independent,[1] and more active/potent than managers in general. Lower neosexism was expected to elicit an in-group favouring bias, such that female managers would be viewed to be *less* active/potent than the managerial prototype. As an extension of Study 2, an additional dimension for evaluation was included, *Democratic Approach.* The inclusion of this trait grouping, comprised of characteristics most valued in contemporary managers (e.g., strategic, collaborative, fair), permitted an assessment of the extent to which negative attitudes towards women elicited negative evaluations of female managers, not just sex-typed judgements.

The second aim of Study 3 was to test the impact of demographics and context to help elucidate the conditions under which stereotyping is more likely to occur. Two correlates of intragroup derogation, age and social identity (i.e., public collective self-

esteem), were added to the predictive model. Based on previous conjectures of a queen bee phenomenon, or intragroup derogation found among older female professionals (Lortie-Lussier & Rinfret, 2002), exacerbated among those who identified less with women (Ellemers et al., 2004), age and identity were expected to have both a direct and joint impact on stereotyping and negative evaluations of female managers. Identity and neosexism were expected to jointly predict in-group favouring bias, based on Luhtanen and Crocker's (1992) supposition that women who feel their in-group is threatened and have a propensity to support political action will likely take the strongest measures to protect their in-group identity.

Responses of 308 female managers working in the Canadian Federal Public Service and Crown Corporations were analysed. Contrary to expectations neosexism, age, and social identity had no direct impact on stereotyping. Only higher neosexism was marginally associated with more disfavourable evaluations of female managers on the democratic approach dimension. Where differences emerged was in the joint impacts. The joint impact of public self-esteem and neosexism was significant, and in the direction expected. Managers lower in neosexism and lower in public collective self-esteem exhibited the highest levels of in-group favouring bias on Work Competence (i.e., a stereotypic) and Democratic Approach (i.e., evaluative) dimensions. The queen bee hypothesis was not supported, however. Although older managers with high public collective self-esteem exhibited higher levels of in-group disfavouring bias on Work Competence, Democratic Approach, and Activity/Potency dimensions, it was the *younger* managers with low public collective self-esteem who exhibited the highest levels of in-group disfavouring bias.

With the inclusion of neosexism, the link between attitudes and stereotyping all but disappeared for older managers. Younger managers' perceptions were shown to be volatile, particularly at high levels of neosexism. Younger managers with higher neosexism who perceived that female managers are not well-evaluated by others exhibited an in-group disfavouring, while managers of the same age and neosexism level who perceived that female managers were well-evaluated by others exhibited an in-group favouring bias. In fact, with the inclusion of age, in-group favouring bias among managers with low neosexism abated. Thus, Study 3 showed us that social identity, as measured by our perceptions of how our in-group is evaluated by others, is a significant moderator of young female managers' sex-typed judgements and evaluations of their same-sex colleagues, particularly if they are prone to endorsing neosexist attitudes and beliefs. It also showed us that when age is taken into account, perceived view of others has no impact on ingroup bias among professionals low in neosexism.

Theoretical Contributions and Future Directions

When women's intragroup derogation in the workplace is considered anecdotally, the image of the q*ueen bee* (Staines, Tavris, & Jayaratne, 1974) may come to mind. The queen bee has been purported to be a woman of seniority in a male-dominated context, who expends efforts to maintain her unique status by sabotaging or undermining the aspirations of younger female professionals and/or peers. This woman is anti-feminist, and views herself to be an exception to the rule that women are less competent and less committed to their careers than are men. As has been said of most stereotypes, it seems that the queen bee is more myth than reality. Taken together, this set of three studies provides evidence that women of all ages, both students and professionals, endorse

neosexist beliefs and attitudes, and apply stereotyped and negative appraisals of women in leadership roles. Moreover, it is younger women with negative attitudes towards women who are most susceptible to making disfavouring appraisals, particularly if they perceive that others hold women in low regard.

Of course, age cannot be construed as a *cause* of in-group bias. Further investigation should explore the factors associated with age that would elicit unstable, impressionable reactions among younger managers. Status, as measured by earnings (which increase with position in the Federal Public Service hierarchy), was ruled out as an alternative explanation. Another correlate for consideration might be number of mobility attempts. Applications for promotion are conceivably more numerous as one ages, and have been found to be associated with lower neosexism among women (Tougas et al., 1999). A high and stable personal identity might also be associated with age, as it is conceivable that the longer one is in a profession, the less influence evaluations of others may have.

An important finding in understanding the impact of the gender belief system was that neosexism not only predicted stereotyped judgements, but also negative evaluations of female managers. Among female students, higher neosexism predicted perceptions of less competence, independence, and more activity/potency. Among younger female managers who perceived others to devalue their in-group, higher neosexism predicted not only less competence and independence, but less of a democratic approach. This suggests that negative attitudes towards women are not only related to the view of the world in gender-segregated terms, but also to an undervaluing of female managers' abilities in general. This finding is especially ironic, given that the traits characterising the

democratic approach have been credited as women's contribution to the management profession. A closer examination of the motivations driving these negative attitudes among women is needed, particularly since these attitudes have a greater impact among young and up-and-coming leaders.

To review, researchers using public collective self-esteem as a measure of social identity have found that, when in-group identity is threatened (i.e., when public collective self-esteem is low), individuals have a tendency to favour their in-group. Conversely, it has also been documented that higher levels of public self-esteem are associated with enhanced negative evaluations of one's in-group. Among female managers, however, public collective self-esteem did not act as a simple moderator of in-group bias. Older managers higher in public collective self-esteem were found to display in-group disfavouring bias, as expected. However, among younger managers with higher neosexism, the effect of social identity was opposite to that expected. This finding suggests that women are not a homogeneous group with a singular identity.

Negative attitudes were found to give rise to not only sex-typed judgements, but also to negative evaluations of female managers. Corollary 2 of social identity's self-esteem hypothesis was both supported and challenged, as older women who viewed that their in-group was well-valued, and who held negative attitudes towards women, were more likely to express in-group disfavouring bias. Anomalous findings were among younger managers. Threat to in-group does not always predict in-group protective strategies, nor does lack of threat necessarily predict in-group disfavouring bias. On two of the arguably most important dimension of management, Work Competence and Democratic Approach, young women's perceptions were found to be particularly volatile.

This suggests that women's experiences and perceptions are highly complex, and warrant further investigation. There is no singular collective reaction of women.

Female managers in the present sample had varied attitudes towards their in-group and, depending on their age, reported different reactions to affronts to their in-group. Younger, neosexist managers with low public collective self-esteem tended to distance themselves from their in-group, as did older, neosexist managers with higher public collective self-esteem. Younger, neosexist managers with high public collective self-esteem favoured their in-group. This in-group bias, either favouring or disfavouring, was not exhibited by women low in neosexism. Thus, contrary to what social identity theory would predict, a higher regard for one's in-group was not associated with in-group favouritism in the face of a threatened social identity. In other words, it seems that women with a higher regard toward women are not susceptible to others' views of their in-group. This finding is suggestive of the possibility that women with lower neosexism are simply discounting the opinions of others. If the only consequence of this possible discounting were egalitarian perceptions, then further investigation of this possible correlate might not be warranted. However, this strategy of disengagement has been associated with lower self-esteem among workers (Tougas, Rinfret, Beaton, & de la Sablonnière, 2005); thus, its role in explaining the lack of in-group favouring bias among women with both lower neosexism and lower public collective-self esteem is recommended.

The lack of in-group favouring bias among women low in neosexism, regardless of age and threat to in-group, deserves further discussion. It is clear from the findings in Study 3 that having a more positive attitude towards women is not associated with an

overestimation of the qualifications of women. In other words, by supporting equity programs and other strategies for improving the status of women (the reverse connotation of Neosexism Scale items), women do not seem to be at risk of compromising basic equity principles, even when they view their group is devalued. On the contrary; it may be women opposed to feminism who are predisposed to holding biased views of either kind (i.e., favouring or disfavouring). At the root of this bias could be a higher social dominance orientation, or a preference for inequality among social groups (Pratto, Sidanius, & Stallworth, & Malle, 1994). Such an orientation is possible, even probable, in a vocation such as management, in which position in the hierarchy is directly equated with social and monetary power. This perception might be stronger among newer, younger managers just forming their identities. When they clarified the definition of neosexism to mean a "resistance to role modifications and support of a differential view of men and women," Tougas and colleagues (1999, p. 1496) were not referring to a differential view *favouring* women. Nonetheless, the link between higher neosexism and higher in-group favouritism among younger women who (are perhaps motivated to) see no threat to their in-group requires further investigation to be fully understood.

In Study 1, modern test theory methodology was presented as an approach superior to classical test theory in assessing the validity and reliability of measurement instruments. It was recommended that IRT could be used to develop banks of items matched on difficulty and discrimination in order to test identity change, for example. Such measures are particularly vulnerable to carryover effects. Therefore, having parallel tests--identical psychometrically, but comprised of different items--would be extremely useful, and could further our understanding of identity processes. In fact, a study has

examined identity change using Luhtanen and Crocker's (1992) collective self-esteem scale. In testing the impact of threat to in-group on social identity, Houston and Andreopoulou (2003) administered half of the collective self-esteem scale (by dividing each factor in half) prior to a threat manipulation, and half of the scale post manipulation. An IRT analysis on scale items would ensure that items administered in the pre and post conditions were balanced in calibration.

Working Women in Canada: Conclusions

> Working outside the home stirs in the woman the desire to be emancipated. She loses interest in life at home. We are on our way to destroying the family, of jeapardising that which we hold most dear. (Auger & Lamothe, 1981, p. 128)[2]

Most papers addressing women and work seem to follow the same recipe for their introductions. They open with a brief history dating back to the 1970s, when Human Rights Legislation was introduced prohibiting sex discrimination in the work place. Statistics are reported from that time up until the most recent available, demonstrating that women have come far, but not far enough. The papers in this thesis are no exception. However, I wish to end this thesis by going backwards.

It is well known that, during World War II, Canadian women were recruited into many traditionally male industries (e.g., welding, electronics, drafting, industrial chemistry) in order to compensate for the shortage of male labourers. In fact, by 1944, one third of Canadian women over the age of 15 had worked either part- or full-time. To accommodate the needs of working women, a large proportion of whom were married, a nationally-funded childcare program was instituted. With workers in such high demand, unions flourished, as did women's participation in organised labour. Not permitted to join

the armed forces, Canadian women even established and trained their own army corps, and lobbied the government for official recognition. In their chronology of women's workforce participation, Prentice, Bourne, Brandt, Light, Mitchinson, & Black (1988) point out that, contrary to the stereotyped image of the North American domestic housewife of the 1950s, the numbers of working women were actually increasing during that decade, in spite of legislation introduced to pressure women to return to the home after the war (e.g., tax penalties for households with working women, cancellation of the childcare program).

These historic details not only serve to foster/bolster pride in the accomplishments of Canadian women, but also to draw attention to the fact that working women's freedom and opportunity in Canada have been and continue to be shaped and limited by government policies. The quotation opening this section was part of a speech given by a member of the Quebec Assembly in 1942 in reaction to increased numbers of women entering the workforce during World War II. A short time later, the federal childcare program was abolished. Some policy changes have been beneficial and long-lasting, such as the lifting of the ban on married women in the Federal Public Service in 1955 (and in the Foreign Service in 1970). Equity programs have also endured, though they have consistently failed to meet their targets since they were developed in the mid-1980s (Human Resources and Service Development Canada, 2006).

In its most recent report to parliament, *Employment Equity in the Federal Public Service* (2006), Human Resources and Social Development Canada notes that employment equity targets have still not been met. Highlighted is the continued lack of equal representation of women in management positions. The world is also watching. In a

recent report (UN Economic and Social Council, 2006), the United Nations Committee on Economic, Social and Cultural Rights sharply criticised Canada for the poverty level of its female citizens, in spite of the country's high overall standard of living. This committee was also highly critical of the Canadian government's lack of response to recommendations for ameliorations it made over a decade ago.

If equality is to form a substantive part of Canadian identity, the "progress myth" (Condor, 1989, p. 34) that things will simply get better over time must be replaced with a well-funded, stable, and long-term commitment to equity. It is obvious that attempts to bolster numbers and meet quotas have not been adequate, and innovation is necessary if we are to establish workplace equality for all designated groups. Equity program have not had overwhelming and universal support from either majority or minority group members (Beaton & Tougas, 2001; Garcia, Branscombe, Desmarais, & Gee, 2006). As this thesis has demonstrated, even members of equity-seeking groups can devalue their group, and this in-group *disfavouring* bias has been shown to depend on how valued one's group is perceived to be by others.

It is hoped that the new knowledge discovered in this project will be of interest and value to the scientific community. But, it is the ultimate hope that this knowledge will help to inform equity policy in order to improve the programs established under the *Employment Equity Act*. If equity is to be a successful innovation, knowledge transfer programs akin to those currently being developed and enhanced in the health care sector (for a systematic review, see Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004) must be established by the federal government. Partnerships among policy makers from the appropriate government departments and agencies, multidisciplinary academic

teams (e.g., researchers in communications, management, social psychology, law, political science), labour unions, and other stakeholders, would ensure that equity programs are well-conceived, well-received, and effectively implemented.

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General Footnotes

[1] Though the impact on independence was marginal due to the application of a Bonferroni correction, it was also tested.

[2] This quotation is a longer version of that cited by Prentice, Bourne, Brandt, Light, Mitchinson, and Black (1988, p. 344). Author's translation of original text: Le travail de la femme hors de son foyer crée chez elle un désir d'émancipation. Elle perd le goût de vivre au foyer. On est en train de détruire la famille, de saboter ce que nous avons de plus précieux.