# Understanding the Impact of "Gender" in Election Studies 

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## Introduction

Research in political behaviour has for some time pointed to the existence of gender gaps in the political attitudes of men and women (e.g., DeVaus and McAllister 1989; Eichenberg 2003 and 2005; Everitt 1998, 2002; Gidengil 1995; Gidengil et al. 2003; Gilens 1988; Mueller 1986; Norris 1988; Inglehart and Norris 2003; O'Neill 2002; Shaffner 2005; Sapiro and Conover 1993; Shapiro and Mahajan 1986). Men and women often diverge in the salience they attach to as well as their substantive positions on various issue domains, including foreign policy, social welfare spending, and crime and punishment. Recognizing the number of people affected, as well as the size of gender gaps at times, gender has been described as the "fault line of maximum potential cleavage" (Jennings 1988: 9). In this paper, we direct attention to how political scientists have tended to treat gender and sex in this work, both conceptually and operationally. Especially in quantitative analyses, sex and gender tend to be used interchangeably with little attention paid to the important distinctions between them, or to the potential for misleading survey findings to result (e.g., Lovenduski 1998).

In this paper, we use data gathered during four provincial elections in Canada to compare the use of sex and gender variables in attitudinal analyses, ultimately with the hope of better understanding the consequences of the traditional practice of substituting sex for gender in analyses of public opinion. We focus on two advantages to using a true gender variable. First, doing so is consistent with modern conceptions of sex and gender. Measuring gender as a set of traits, attitudes, and values reflects the fact that gender is not dichotomous, but rather "a continuum of norms and behaviours socially constructed, socially perpetuated, and socially alterable" (Mackie 1991: 2). In other words, ditching the practice of substituting sex for gender or being more measured about the effects of using sex as a proxy are good in principle. Enhancing the accuracy and precision of measurement, and encouraging further progress in decoupling sex and gender in the minds of academics, policymakers, and others are worthwhile in themselves. Second, understanding gender as distinct from sex, and assessing attitudes and values accordingly may provide new insight into gender gaps in attitudes and behaviours, which have sometimes been challenging to explain fully. Put simply, taking gender seriously as a variable may offer benefits to explaining male-female gaps in public opinion.

## The Current Practice: Sex as a Proxy for Gender

Many researchers operationalize gender as though it is a dichotomous concept, and use biological sex confidently as a proxy for gender, violating a core maxim about the separateness of biological sex and socially-constructed gender. This is not to say that there is no connection between sex and gender. Indeed, they are linked; gender is the system in which social meaning is assigned to biological sex differences. Rather, our claim is that sex is an inadequate proxy for gender and for our understanding of its effects on political behaviours. First, using sex as a proxy treats male and female bodies as reliable "containers" of the various gender-based traits, values, and roles that define us all, and in this way measures gender indirectly and crudely. Second, this approach also assumes that gender, like sex, is a dichotomy. One is either masculine or feminine in traits/roles/values, but never something more nuanced - say, a mixture of both, androgynous, or somewhere along a spectrum of masculinity/femininity. Greater precision is needed.

Using sex as a proxy for gender may hamper understanding of the gender differences in political behaviour within each sex group. While calls for greater attention to the way race, class, sexual orientation, and other factors intersect with gender to produce novel experiences of and attitudes toward politics are important and complementary to our analyses in this paper (e.g., Gidengil 2007), we are concerned with a different matter. One of the overarching issues is disaggregation - both for intersectional analysis and for the idea of using a true gender variable - in order to avoid homogenizing men and women into categories that may not accurately describe them. If gender is a continuum, rather than a dichotomy, and is socially constructed rather than biologically determined, both men and women can lie at any spot along the spectrum. Women can identify with more or less feminine roles/traits/values, or with masculine roles/traits/values, and the same is true for men, a point that becomes clearer in the next section. As such, using sex as a proxy for gender can produce misleading conclusions about why and among whom gender gaps in political behaviour exist.

## What Type of Gender Measure is Needed?

Research in psychology is instructive, for scholars have developed measurements equipped to capture the complexity of gender as a variable. Multidimensional measures of gender have been used to assess, for example, the gendered nature of alcoholism; self-esteem; performance evaluations; and self-concept and identity (Penick et al. 2006; Aidman and Carroll 2003; Bauer and Baltes 2002; Bem 1974; Spence et al. 1974). Psychologists have found a predictable relationship between gender and behaviour: individuals describing themselves as either 'masculine' or 'feminine' will behave in ways consistent with those stereotypes, while people who consider themselves to be 'androgynous' will behave masculine in one circumstance and feminine in another (Bem 1974, 1975; Vaughter 1983).

Similar problems have plagued both psychology and political science, particularly the ambiguity of the concept of gender, as well as the tendency to think of gender as a dichotomy. The terms masculinity and femininity "have a long history in psychological discourse, but both theoretically and empirically they seem to be among the muddiest concepts in the psychologist's vocabulary" (Constantinople 1973: 387). Many problems stem from the failure to adequately separate sex and gender. Like the notion of sex differences, gender has too often been treated in research as an all or nothing phenomenon - we must all belong to one group or the other, with no middle ground. Problematic for a number of reasons, this approach does not deal well with individuals who do not fit neatly into one of the categories. Additionally, "in those two simple words, 'opposite sexes,' are contained beliefs and expectations that whatever females are, males are not, and whatever males are, females are not" (Nelson and Robinson 2002: 2). In reality, however, there is quite a bit of crossover between "female/feminine" values and "male/masculine" values, shared by members of either biological sex (Bem 1974, 1975; FaustoSterling 1993; Hird 2000; Levey and Silver 2006). In other words, we must "be cautious if we wish to avoid having the word gender take on an either/or meaning as does the word sex. Rather, gender and its components ... vary along a continuum of femininity and masculinity" (Doyle and Paludi 1991: 5).

Bem's pioneering psychological classification system, the Bem Sex Role Inventory (BSRI) (1974, 1975, 1979), has been instrumental in demonstrating the complexity of gender. Her research points to the possible existence of four genders: androgynous individuals ranking
high on both masculinity and femininity, feminine individuals ranking low on masculinity and high on femininity, masculine individuals ranking low on femininity and high on masculinity, and those individuals ranking low on both, labeled "undifferentiated." Bem's Sex Role Inventory (BSRI) consists of sixty adjectives and/or descriptive phrases, divided into three subscales representing masculinity, femininity, and social desirability. Respondents use a seven-point scale to indicate the extent to which each is true of themselves.

Since Bem, a number of other scholars have generated, used, and assessed other psychological instruments to measure aspects of gender (Aidman and Carroll 2003; Ashmore et al. 1995; Bozionelos and Bozionelos 1999; Cohen-Kettenis et al. 2006; Constantinople 1973; Cramer and Westergren 1999; Greenwald and Farnham 2000; Helmreich et al. 1979; Helmreich et al. 1981; Kroska 2000; McHugh and Frieze 1997; Spence and Hahn 1997; Spence and Helmreich 1980; Willemsen and Fischer 1999). In addition to Bem's, the second main scale is the Personal Attributes Questionnaire (PAQ) (Spence, Helmreich, \& Stapp 1974). This scale consists of fifty-five sets of bipolar self-descriptive phrases with each phrase represented by one end of a five-point scale. Similar to the BSRI, respondents are required to rate themselves on each phrase. A third prominent scale is constituted by a subset of 400 questions from the Personality Research Form (PRF) (Berzins, Welling, \& Wetter 1978), a test consisting of true/false measures with twenty-nine items on the masculine scale and twenty-seven on the feminine scale. Respondents indicate which statements reflect themselves, noting either true or false. These tests all seek to determine the extent to which individuals are masculine, feminine, or somewhere in-between, whether androgynous or something else.

These scales and measures are still widely used today, and many scholars in psychology have built on this psychometric work to develop related measures and scales that are more nuanced and focus on slightly different dimensions. Examples of more contemporary scales include the Attitudes Towards Women Scale (ATWS or AWS) (McHugh and Frieze 1997; Spence and Hahn 1997; the Gender-Ideological Identity Scale (GII) (Kroska 2000); and the Gender Identity Questionnaire (GIQ) (Willemsen and Fischer 1999). The use of these types of gender role scales would facilitate a more precise categorization of respondents' genders in political research, permitting more thorough investigation of what exactly it is about gender that can lead to different attitudes and behaviours.

## Data and Measurement

Our new measures of gender were included in a series of web-based surveys conducted during provincial elections in Canada over 2011 and 2012. Interviews with representative samples of voters were conducted in Newfoundland and Labrador (September 7 to October 10, 2011), Ontario (September 7 to October 5, 2011 ), Manitoba (September 7 to October 2, 2011), and Alberta (April 4 to 22, 2012). The surveys were programmed and fielded by the polling firm Harris/Decima (Ottawa). In addition to our new measures of gender - our major variables of interest - the survey instrument included demographic variables, long-term political dispositions, attitudes about specific political issues, and perceptions of party leaders and economic conditions. The total N for the analysis is 4,045 ( 1,002 in NL; 1,008 in ON; 1,014 in MB; and 1,021 in $A B)$.

The survey instrument included the traditional sex variable, asking respondents to indicate whether they were male or female. In addition to this variable, we included three questions intended to measure respondents' self-perceptions of gender. In the middle of the survey, embedded amongst questions about the economy and politics, respondents were asked the following three questions:

1. Gender self-identification - "Now we would like to change the focus from politics for a while, and ask you a few questions about your gender identity-that is, how masculine or feminine you feel you are. Below you will find a continuum that goes from left to right. We would like you to place yourself somewhere along this scale: the far right of the scale reflects a person who feels they are $100 \%$ masculine, while the far left of the scale reflects a person who feels they are $100 \%$ feminine. Where would you place yourself on this continuum? (options $=$ anywhere from -50 to +50 ; or Neither; or Not Sure)"
2. Perceptions of peer placement - "And what about how others perceive you? Using the same continuum, where do you think others would place you? The far right of the scale reflects a person who others feel is $100 \%$ masculine, while the far left of the scale reflects a person who others feel is $100 \%$ feminine. Where do you think others would place you on this continuum? (response options $=$ anywhere from -50 to +50 ; or Neither; or Not Sure)"
3. Strength of identification with gender group - "How closely do you identify with your gender group? Using a scale from 0-100 where 0 means not at all close and 100 means extremely close, how closely do you identify with your gender group? (response options $=$ anywhere from 0-100; or Not sure)"

Our analyses focus primarily on the first question. In terms of evaluating this new measure of gender, several points bear noting. First, obviously, this variable is much less complex, nuanced, and precise than the various gender measures discussed above. Most of the psychology gender measures are rendered from batteries of questions, sometimes as many as 60 or more, that tap into various dimensions of gender identity/traits. As such, they are quite desirable, but there are costs associated with adopting that route, particularly factors such as overly-long surveys, diminished respondent interest, and increasingly lean research budgets. The trade-off in using a more simple measure is less specificity in the various aspects of gender identity. Indeed, our small handful of questions implicitly groups all the traits, values, and roles associated with gender into the labels "masculine" and "feminine" and asks respondents to place themselves on a spectrum from most masculine to most feminine. This brings us to the other main difference between our measures, particularly our gender self-identification measure, and those used by many psychologists. Ours is a subjective measure, which relies on self-placement, while the various indices pioneered by Bem and other psychologists measure gender objectively via a series of questions about attitudes and behaviours, the responses to which are meant to reveal latent gender orientations which are then classified by the researcher. Survey researchers are well-accustomed to debate about the merits of objective versus subjective measures, and while many of the same considerations are relevant here, we have one particular concern at this
stage that is worth flagging. A subjective measure of gender identity may suffer from social desirability effects in that women and men may both feel pressure to choose the "appropriate" answer to the questions. In other words, women may gravitate toward the highly feminine end of the spectrum, and men the highly masculine, because that is what is thought to be a match for their sex. In other words, our measure may artificially inflate the congruence between sex and gender.

The remainder of the paper proceeds in several steps. First, we examine the selfplacement variable itself. Where do respondents tend to place themselves on the scale? Do respondents tend to place themselves on the poles of the continuum, or somewhere in the middle? Do respondents who place themselves in the middle or on the poles share other demographic characteristics, or do they differ? Do gender self-placements tend to overlap neatly or not with respondents' sex? Second, we examine the relationship between gender selfplacement and political attitudes. Do those who place themselves in the middle hold different attitudes from those who place themselves on the poles? How does the distribution of political attitudes across gender groups compare to the distribution across the sexes, the traditional measure used in gender gap research? In other words, to what extent are gender and sex equivalent measures?

## Understanding Gender Self-Placement

Given that it is our intention is to determine the extent to which the new measure of gender self-placement compares to the traditional measure by proxy (sex), we begin by describing the data. The gender self-placement question was rescaled $0-100$, where 0 represents those who are $100 \%$ masculine and 100 represents those who are $100 \%$ feminine. On this 0-100 scale, $35 \%$ of women and $36 \%$ of men identify as being $100 \%$ feminine or masculine, respectively, suggesting that the standard practice in survey research of using sex as a proxy for gender may really only be fully appropriate for roughly one-third of the population. If we adopt a wider range at the "poles" of the spectrum so they include those who place themselves within 10 points of either end ( $0-10$, and $90-100$ ), $73 \%$ of men consider themselves to be highly masculine, while only $44 \%$ of women consider themselves to be highly feminine. This suggests that sex works better as a proxy for gender among male respondents than among women. Slightly more than one third ( $34 \%$ ) of all respondents placed themselves somewhere between 11 and 89 on the 100 point scale, indicating that they did not see themselves on either pole of the gender continuum. Of those placing themselves in this "middle," $40 \%$ are men and $60 \%$ are women. ${ }^{1}$

[^0]Most respondents, whether they place themselves in the middle or on the poles, do so in a way such that their gender maps (albeit at times loosely) onto their sex. Figure 1 shows the distribution of individuals' gender self-placement, by sex. Only about seven percent of the total sample identifies with the gender associated conventionally with the opposite sex, although women constitute a much larger proportion of this group ( 19 men compared to 223 women). Female respondents are less likely than men to identify with the gender role associated with their biological sex (women who place themselves between 0 and 49 on the masculine/feminine scale, compared to men who place themselves between 51 and 100). As Figure 1 illustrates, more women than men identify with the androgynous gender identity (locating themselves at the middle marker), and roughly $5 \%$ of women in the sample identify with the $100 \%$ masculine identity. Only one man identified as $100 \%$ feminine while 103 women identified as being $100 \%$ masculine.
$<$ Figure 1 about here $>$

In addition to our gender self-placement question, we also asked respondents to indicate where others might place them on the same scale, which we again rescaled from 0-100. $38 \%$ of men and women alike believed that others would place them as $100 \%$ on either pole.
Furthermore, $72 \%$ of men and $46 \%$ of women felt that others would place them within 10 points of their respective ends of the spectrum, suggesting that others' impressions of them are also that they are highly masculine or highly feminine. Of those who felt that others would place them somewhere in the middle, $48 \%$ are men and $52 \%$ are women. Upon further examination, $84 \%$ of those who placed themselves in the middle felt that others would also place them there, while $8 \%$ of those who did NOT place themselves in the middle felt others would place them there. Our read on the data is that, for the most part, individuals' perceptions of their own gender map onto (or are projected onto) how they believe others perceive them as well.

We decided to focus our analysis on a comparison of those who placed themselves on the poles (within 10 points of either end) with those who placed themselves "in the middle" (between 11 and 89 on the 100 point scale), leaving aside, for now, respondents who identified strongly with the gender identity associated with the opposite sex. This effectively divided the sample into three groups: male-masculine ( $\mathrm{N}=1,539$ ); "middle" ( $\mathrm{N}=975$ ); and female-feminine $(\mathrm{N}=1,289) .{ }^{2}$ Table 1 shows the number of respondents in each category, by sex.

[^1]$<$ Table 1 about here>

We then ran a series of cross-tabulations between this gender variable and sociodemographic variables in order to better understand the types of people who were placing themselves in the middle. Figure 2 shows a demographic breakdown of those who self-identify somewhere in the middle of the $0-100$ scale (11-89) rather than placing themselves on either end. As the figure shows, there is quite a bit of variation across socio-demographic groups, and some of the trends will not be surprising to readers. Women are likelier to place themselves in the middle than men, Ontarians and Albertans are more likely to place themselves in the middle than are residents of Newfoundland and Labrador and Manitoba. Those under 55 are more likely to claim a 'non-traditional' gender self-identification than are those who are older than 55 , and those who are university or college degree holders are also more likely to place themselves in the middle. Those who are working full time, those who are not members of unions, and those who are married or in a common-law relationship are also all more likely to place themselves in the middle of the gender scale. Those who attend religious services least frequently are most likely to place themselves in the middle, and there is also some variation across income levels. Those who are most affluent (household incomes of \$110,000 a year or more) are most likely to place themselves somewhere in the middle of the scale. The data suggest, therefore, that certain demographic groups are more likely than others to claim a 'nontraditional' gender identity than others. In sum, female, younger, partnered, more affluent, nonreligious, full-time employed, non-union member, post-secondary degree holders are more likely to peg their gender identity somewhere in the middle between masculine and feminine, suggesting that the liberalizing effects of education, youth and other factors may foster looser associations between sex and gender.
$<$ Figure 2 about here $>$

## The Impact of Gender Self-Placement on Attitudes

Traditional gender gap research in Canada points to important attitudinal differences between men and women. Gidengil et al. (2003), for example, meticulously note the differences between men and women's attitudes on a number of political issues. They cross-tabulate issue attitudes with sex, and determine that women are "to the left" of men most of the time on issues related to free enterprise, the welfare system, healthcare, feminism and gender-related issues, moral traditionalism, and crime and punishment. Many of the same questions they examined were also

[^2]included in our provincial election studies, and we examine responses to those questions across the three categories of our new gender self-placement variable. ${ }^{3}$ We began by performing analyses of variance (ANOVAs) on each question, comparing the attitudes of men on the masculine pole (labeled masculine men from here on), all respondents in the "middle", and women on the feminine pole (feminine women from here on). Table 2 shows the average response on each question (coded on a $0-1$ scale where 1 reflects the most "progressive" or "leftleaning" attitude).
$<$ Table 2 about here>

The data presented indicate that there are indeed gender gaps across the three categories of this gender self-identification variable, and the differences are not simply found between respondents who place themselves on the two poles. Across all variables, those who place themselves in the middle and women who place themselves on the feminine pole are more left-leaning than men who place themselves on the masculine pole. On three issues, first in relation to attitudes about healthcare spending and second on two issue attitudes related to feminism and gender (a belief that discrimination makes it difficult for women to get jobs equal to their abilities; and a belief that the lack of women in parliament is a serious problem), feminine women hold the most progressive views. On issues of government intervention and social policy (free enterprise and welfare) as well as the issue of whether women with employed husbands should be laid off before others, those who place themselves in the middle of the gender spectrum hold similar attitudes to feminine females (highly progressive). In contrast, on moral issues as well as ideological self-placement (on the left-right spectrum), those who place themselves in the middle of the gender self-placement scale hold the most left-leaning attitudes, more so even than feminine women.

That a gap exists within sex groups provides some initial support for the claim the use of sex as a proxy for gender misses some key information. However, we are not entirely sure what to make of the differences between the group in the "middle," on the one hand, and the highly feminine women, on the other. It is entirely possible that there is something about the "types" of people who are likely to indicate that they are in the middle that also makes them more likely to be more left-leaning in general, whether they are male or female. Put differently, it may not be that gender motivates the differences, but some other common cause may underpin both progressive political attitudes and gender unconformity, so to speak. Indeed, the fact that young, educated people are more likely to place themselves somewhere in the middle of the gender scale is consistent with this speculation, for this group is known to also be more open to non-traditional lifestyles and to hold progressive attitudes on issues related to LGBT rights, abortion access, and the like (e.g., Anderson and Fetner 2008). But then why are they not the most progressive group on every issue domain? Why are highly feminine women still more left-leaning on healthcare and feminism and gender issues? In order to examine these relationships in greater detail, we ran a series of regression analyses, in which each of the issue variables was regressed on the new gender self-placement variable and the traditional sex
${ }^{3}$ Exact question wording and coding of variables can be found in the appendix.
variable, while controlling for the other socio-demographic variables we identified earlier. We ran thirteen regression analyses in total, and present the (statistically significant) coefficients for both "middle" gender self-placers (new gender variable) as well as women (sex as proxy variable) in Figure 3.4
<Figure 3 about here>

Controlling for all other demographic variables, the two variables of interest (gender and sex) still have effects. In particular, women are more likely than men to hold left-leaning attitudes on almost all issues, consistent with much of the work in this area, with the exception of the idea that we should adapt our view of moral behavior with the times (with a coefficient of -0.027), and a couple of issues for which the results are not statistically significant (that people can find a job if they want, welfare spending, and that traditional family values are not the way to fewer problems). In contrast, in comparison to those who place themselves on the poles of the gender self-identification spectrum, those who place themselves in the middle are more leftleaning on only about half of the issues: left/right ideological self-placement, traditional family values, adaptation of views of moral behavior, same sex marriage, access to abortion, and the proportion of women in parliament, nearly all of them moral and ideological issues. Those who placed themselves in the middle were less likely than those on the poles to believe that the government should spend more on healthcare. The picture painted here is one where it seems likely that masculine men are the most conservative, while women who place themselves in the "middle" are likely to be the most left-leaning, an interpretation which is consistent, actually, with the idea of two overlapping gaps: one according to sex, and one according to the extent to which one self-identifies with traditional gender roles/identities.

We decided to examine this possibility, and re-ran the same ANOVAs as before, this time examining the differences in attitudes across four groups of individuals: "masculine" males, "middle" males, "middle" females, and "feminine" females. The results are presented in Table 3. As the table indicates, it is masculine males who appear to generally hold the least progressive attitudes. Feminine females and middle females tend to be the most left-leaning, and middle males are also left-leaning on a number of issues, or at least not significantly different from middle females or feminine females.
$<$ Table 3 about here>

The data presented in the Table refine the observations made in Figure 2. The only issue for which feminine females are singularly most progressive is healthcare spending. On other issues of free enterprise and welfare, they are not significantly different from those who place themselves in the middle, whether male or female. "Middle" females have the most left-
${ }^{4}$ Full model results available from the authors upon request.
leaning attitudes on abortion and the feminism/gender-related questions (although they are not different from feminine females in their belief that discrimination makes it difficult for women to get jobs equal to their abilities), and they place themselves furthest to the left on the ideological left-right scale. On issues of moral traditionalism (with the exception of abortion), those in the middle (male and female alike) are most progressive.

These data suggest that it is not simply the case that "middle" females are the most leftleaning all the time (although they do tend to hold the most progressive attitudes, whether alongside of feminine females or "middle" males). Keep in mind, however, that in Table 3 we do not control for other socio-demographic characteristics, and therefore the relationships between gender, sex and attitudes may not be as they seem.

We took our analysis one step further and re-ran the regression analyses presented in Figure 3, this time instead of examining the impact of two gender/sex variables on attitudes, we included dummy variables for each of "male middle," "female middle," and "female feminine," comparing the impact of these gender/sex groups to the reference group "male masculine". Figure 4 illustrates the results of these analyses.
<Figure 4 about here>

As the data presented in Figure 4 suggest, when we control for other socio-demographic characteristics, in comparison to masculine males, all three other gender groups are more leftleaning, most of the time. We present only statistically significant coefficients, so blank spaces indicate that the difference between groups is not statistically significant. While all significant coefficients indicate that masculine males are the least left-leaning on all of these issues except for one (feminine females are more right-leaning on the issue of adapting our moral behavior to the times), there is substantial variation across groups and issues: there is no single group that is furthest to the left all the time. Middle males are most to the left on adapting our views of moral behavior and traditional family values, as well as the idea that people can find a job if they really want; while middle females are most to the left on same sex marriage, abortion, the place of women in parliament, and whether or not women with employed husbands should be laid off first; and feminine females are most to the left on healthcare spending, the idea that government is the best way to deal with major economic problems, and the notion that discrimination makes it difficult for women to get jobs equal to their ability. Interestingly, then, and this is tentative for now, it seems that an important difference is emerging between feminine females, who adhere to the gender identity conventionally associated with their sex, and middle females on the issue domains in which they veer most left. It is concerns associated with government intervention and social spending in which feminine females emerge as most progressive among the sex/gender groups, but it is representation and lifestyle/moral issues on which middle females take the left-most position.

Unless we break the groups down like this, however, we miss very important differences that exist between groups. A simple examination of the impact of the traditional sex variable, for example, suggests that there is no significant difference between women and men on the issues of adapting our view of moral behavior, traditional values, and welfare spending, but
indicates that women are further to the left than men on all other issues. ${ }^{5}$ Nuance is lost. Also lost is the opportunity to ask "why." Why are "middle males" the most left-leaning on issues of moral behavior and traditional values? And yet they are not furthest to the left on issues like abortion and same sex marriage. Why are feminine females furthest to the left on healthcare spending, government involvement in the economy, and layoffs? Surely those issues affect "middle females" in the same way? Finally, what is it about women in parliament, abortion, and same sex marriage that separate "middle females" from "feminine females"? It's not about religiosity, or age, or education, or income, or marital status, since we control for all of those variables.

## Discussion and Conclusion

One of the strongest impulses in gender-focused research in recent decades has been to disaggregate, to unpack the groups "men" and "women", and this paper has taken up that call by attempting to disentangle gender and sex in the analysis of political attitudes. As a result, we have been able to detect differences within sex groups according to their self-placements on a spectrum of gender identity from most masculine to most feminine. In other words, men differ from other men and women from other women as a result of differences in gender identification. This is perhaps one reason to pursue greater use of genuine gender variables, rather than sex proxies, in political analyses: doing so reveals more. This does not mean that sex is a poor proxy for gender; actually, it is a fair proxy. Nearly three-quarters of men and nearly half of women identify with the gender pole that "matches" their biological sex. However, it is only fair or satisfactory. It is not optimal. In our analyses the sex proxy used alone would have overlooked or masked the fact that middle males are most progressive on certain issues, as well as the interesting gaps between middle and feminine women, who seem to lean left on different dimensions. The former emerges as most progressive on representation and lifestyle/moral issues, and the latter on more traditional government intervention and social policy issues. Another way of seeing these dimensions is in terms of material versus non-material (strictly speaking) considerations, an observation that deserves further attention moving forward.

In the end, our gender variable does offer an improvement over the traditional practice of using sex proxies alone. The gender variable takes seriously the distinction between sex and gender, which is good in itself. Furthermore, the gender variable used in conjunction with a sex variable, as we've done in this preliminary work with our data, can produce more nuanced, more differentiated findings that offer researchers a clearer picture of where gaps lie in public opinion.
${ }_{5}^{5}$ Data not shown.

## Tables and Figures

Figure 1: Distribution on 100-point Gender Self-Placement Scale, by Sex


Gender self-placement by sex ( 0 for $100 \%$ masculine; 100 for $100 \%$ feminine)

Table 1
Gender Variable: Number of Men vs. Women

|  | Male | Female |
| :--- | :---: | :---: |
| Masculine | 1,339 | 0 |
| Middle | 473 | 502 |
| Feminine | 0 | 1,001 |

Figure 2: Who is "in the middle": Socio-demographic breakdown of non-polar gender identity


Table 2
Differences in attitudes across different gender groups

|  | Masculine | Middle | Feminine |
| :---: | :---: | :---: | :---: |
| Free Enterprise |  |  |  |
| People can find a job if they really want | 0.322 | 0.374 | 0.373 |
| Government involvement is best way to deal with major economic problems | 0.572 | 0.669 | 0.676 |
| Welfare System |  |  |  |
| Social programs do not make people less willing to look |  |  |  |
| after themselves | 0.403 | 0.469 | 0.467 |
| Government should spend more on welfare | 0.393 | 0.436 | 0.452 |
| Health Care |  |  |  |
| Government should spend more on healthcare | 0.792 | 0.822 | 0.9 |
| Feminism © Gender-Related Issues |  |  |  |
| Do not layoff women with employed husbands first | 0.832 | 0.899 | 0.887 |
| Discrimination makes it difficult for women to get jobs equal to their abilities | 0.479 | 0.542 | 0.607 |
| Lack of women in parliament is a serious problem | 0.374 | 0.511 | 0.547 |
| Moral Traditionalism |  |  |  |
| Liberal access to abortion | 0.756 | 0.828 | 0.771 |
| Favour same sex marriage | 0.536 | 0.753 | 0.652 |
| Should adapt our view of moral behaviour | 0.518 | 0.588 | 0.505 |
| Traditional family values would not lead to fewer problems | 0.377 | 0.526 | 0.414 |
| Ideology |  |  |  |
| Left-right self placement | 0.432 | 0.522 | 0.498 |

Data presented are means. ANOVAs performed. Most "progressive" group highlighted in bold. *F-Tests indicate each ANOVA performed is statistically significant. In addition, Bonferroni, Scheffe, and Sidak tests were performed to check statistical significance between sub-groups. Most differences statistically significant at $\mathrm{p}<0.1$, but where more than one group is highlighted, differences between groups are not significant, therefore all bolded are most "progressive").

Figure 3: Impact of Gender and Sex on Issue Attitudes


Table 3
Differences in attitudes across different gender groups (incorporating traditional sex variable)

|  | Male <br> Masculine | Male <br> Middle | Female <br> Middle | Female <br> Feminine |
| :---: | :---: | :---: | :---: | :---: |
| Free Enterprise |  |  |  |  |
| People can find a job if they really want | 0.322 | 0.365 | 0.384 | 0.373 |
| Government involvement is best way to deal with major economic problems | 0.572 | 0.638 | 0.698 | 0.676 |
| Welfare System |  |  |  |  |
| Social programs do not make people less |  |  |  |  |
| willing to look after themselves | 0.403 | 0.451 | 0.486 | 0.467 |
| Government should spend more on welfare | 0.393 | 0.42 | 0.451 | 0.452 |
| Health Care |  |  |  |  |
| Government should spend more on |  |  |  |  |
| healthcare | 0.792 | 0.775 | 0.867 | 0.9 |
| Feminism E® Gender-Related Issues |  |  |  |  |
| Do not layoff women with employed |  |  |  |  |
| Discrimination makes it difficult for women |  |  |  |  |
| to get jobs equal to their abilities <br> Lack of women in parliament is a serious | 0.479 | 0.487 | 0.595 | 0.607 |
| problem | 0.374 | 0.429 | 0.589 | 0.547 |
| Moral Traditionalism |  |  |  |  |
| Liberal access to abortion | 0.756 | 0.811 | 0.843 | 0.771 |
| Favour same sex marriage | 0.536 | 0.726 | 0.777 | 0.652 |
| Should adapt our view of moral behaviour | 0.518 | 0.59 | 0.586 | 0.505 |
| Traditional family values would not lead to fewer problems | 0.377 | 0.528 | 0.524 | 0.414 |
| Ideology |  |  |  |  |
| Left-right self placement | 0.432 | 0.498 | 0.546 | 0.498 |

Data presented are means. ANOVAs performed. Most "progressive" group highlighted in bold. *F-Tests indicate each ANOVA performed is statistically significant. In addition, Bonferroni, Scheffe, and Sidak tests were performed to check statistical significance between sub-groups. Most differences statistically significant at $\mathrm{p}<0.1$, but where more than one group is highlighted, differences between groups are not significant, therefore all bolded are most "progressive").

Figure 4: Impact of combined gender and sex on political attitudes


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[^0]:    ${ }^{1}$ Readers may question our decision to classify those placing themselves within an 80 point spectrum on the 0-100 scale all in the same group. We believe that 11-89 is the most appropriate way to cut the group, because there is probably something fundamentally "different" about saying you are either $100 \%$ masculine, or within ten points of that, and saying you are somewhere within 25 points or 30 points of 100 . While this was an intuition that began when looking at the variance on the gender self-identification questions (as well as the peer-identification question), examination of the relationships between middle self-placement and other demographic characteristics as well as attitudinal variables suggests that the intuition is fairly solid. We also conducted some preliminary analyses defining the middle group from 31-59; as well as from 26 to 74 on the $0-100$ gender scale. As we move closer to the mid-point of the 0-100 scale, the patterns we observe later in our paper regarding "who" it is that places him or herself in the middle, for example, become more pronounced. In the end, how we define the thresholds on the scale is a question that requires further development.

[^1]:    ${ }^{2}$ Recall that there were 242 respondents, mostly women, who "crossed over" to the opposite pole of the gender spectrum from their sex (conventionally understood). We decided to remove those individuals from the analysis completely for now, in order concentrate on the more straightforward differences between individuals attached strongly to the gender identity associated with their sex, on the one hand, and those who veer into the middle of the gender identity spectrum, on the other (this latter group would include those who are moderately masculine, moderately feminine, and androgynous or, as Bem calls it, "undifferentiated"). We have considered grouping the "crossers" with those in the middle of the spectrum for the purpose of statistical analyses on the logic that both are quite different from self-identified $100 \%$ feminine females and $100 \%$ masculine males; in other words, both "crossers" and those in the middle of the gender spectrum are unconventional, to varying degrees, of course. While we suspect that the "crossers" have more in common with the individuals who place themselves in the middle than

[^2]:    they do with those individuals on the poles (and indeed, the data (not shown) support this) we believe that they remain sufficiently different from the individuals in the middle that they might skew the analyses. Moreover, an important motivation for this paper is to weigh in on the inadequacies in measurement and congruence between concepts and measures in gender-based survey research, a purpose which seems inconsistent with combining "crossers" with "middlers" for now.

