Representing Women's Policy Preferences

Supplementary Material

Contents

1. Elite Survey Responses: Summary

The CMB 2022 survey received 867 complete responses, This represents a response rate of 23%. We received at least one response from 89% of the municipalities in the Canadian Municipal Barometer study.

Breakdown: Province

This table compares the proportion of our population from each province to the proportion of our completed responses by each province. In the "difference" column, negative numbers indicate under-representation in our sample relative to the population, and positive numbers indicate over-representation in our sample relative to the population.

Table 1: Provincial Representativeness: Population and Sample

Province	Population	Sample	Difference
AB	0.09	0.11	0.02
BC	0.12	0.09	-0.03
MB	0.03	0.02	-0.01
NB	0.03	0.03	0.00
NL	0.01	0.01	0.00
NS	0.03	0.03	0.00
NWT	0.00	0.00	0.00
ON	0.36	0.32	-0.04
PEI	0.01	0.00	0.00
QC	0.29	0.35	0.05
SK	0.02	0.03	0.00
YT	0.00	0.00	0.00

Breakdown: Gender

This table compares the proportion of women in the sample to the proportion in the survey population. In the "difference" column, negative numbers indicate under-representation in our sample relative to the population, and positive numbers indicate over-representation in our sample relative to the population.

Table 2: Gender Representativeness: Population and Sample

Gender	Population	Sample	Difference
F	0.35	0.41	0.07
M	0.65	0.59	-0.07

Breakdown: Municipal Population Size

This table compares the proportion of politicians in our overall population by each municipal population category, along with their proportion in our sample. In the "difference" column, negative numbers indicate under-representation in our sample relative to the population, and positive numbers indicate over-representation in our sample relative to the population.

Table 3: Population Representativeness: Population and Sample

Pop. Cat.	Population	Sample	Difference	popcat
1	0.30	0.26	-0.05	<15,000
2	0.21	0.19	-0.02	15,000 - 25,000
3	0.16	0.15	-0.01	25,000-50,000
4	0.12	0.12	0.00	50,000-100,000
5	0.14	0.15	0.01	100,000-500,000
6	0.07	0.08	0.01	500,000 +

2. Survey Questions

Exact wording for the public opinion survey questions were as follows:

- It is good for a neighbourhood when it experiences rising property values, even if it means some current residents might have to move out. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
- Municipalities should require that all municipal contractors pay their employees a living wage, even if it means increased costs for the municipality. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
- Municipalities should play a strong role in reducing the effects of climate change, even if it means sacrificing revenues and/or expending financial resources. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
- Municipalities should prioritize keeping taxes low, even if it means low-income residents have access to fewer social services. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)

Exact wording for the politician survey questions were as follows:

- We would like to know a little more about how your constituents think about municipal issues. Imagine a {35 year old / 65 year old} {man/woman} in your municipality. If you had to guess, how would he respond to each of these questions?
  - It is good for a neighbourhood when it experiences rising property values, even if it means some current residents might have to move out. ({She/he} would strongly disagree, {She/he} would somewhat disagree, {She/he} would somewhat Agree, {She/he} would strongly Agree, I don't know what {she/he} would think.) Municipalities should require that all municipal contractors pay their employees a living wage, even if it means increased costs for the municipality. ({She/he} would strongly disagree, {She/he} would somewhat disagree, {She/he} would somewhat Agree, {She/he} would strongly Agree, I don't know what {she/he} would think.) Municipalities should play a strong role in reducing the effects of climate change, even if it means sacrificing revenues and/or expending financial resources. ({She/he} would strongly disagree, {She/he} would somewhat disagree, {She/he} would somewhat Agree, {She/he} would strongly Agree, I don't know what {she/he} would think.)
- Municipalities should prioritize keeping taxes low, even if it means low-income residents have access to fewer social services. ({She/he} would strongly disagree, {She/he} would somewhat disagree, {She/he} would somewhat Agree, {She/he} would strongly Agree, I don't know what {she/he} would think.)
- And what is your opinion on the same issues?
  - It is good for a neighbourhood when it experiences rising property values, even if it means some current residents might have to move out. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
  - Municipalities should require that all municipal contractors pay their employees a living wage, even if it means increased costs for the municipality. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)

  - Municipalities should play a strong role in reducing the effects of climate change, even if it means sacrificing revenues and/or expending financial resources. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
  - Municipalities should prioritize keeping taxes low, even if it means low-income residents have access to fewer social services. (Strongly Disagree, Somewhat Disagree, Somewhat Agree, Strongly Agree, Don't Know)
- In politics people sometimes talk of left and right. Where would you place yourself on a scale from 0 to 10, where 0 means left and 10 means right? (0 (Left), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Right), Don't Know)
- Using the same scale, where would you place the average resident in your municipality? (0 (Left), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Right), Don't Know)

3. Marginal Effects and Treatment Effects

In the table below, we provide full results for logit models for the public opinion data in our analysis. We use these models to extract marginal effects, which we plot in figure 1 in the main text.

Table 4: Models: Public Opinion Data

	(1)	(2)	(3)	(4)
Woman	-0.71^{***}	0.34^{***}	0.55^{***}	-0.46^{***}
	(0.07)	(0.10)	(0.09)	(0.07)
Age	-0.01^{***}	0.002	-0.004^{*}	-0.01^{***}
	(0.002)	(0.003)	(0.003)	(0.002)
Constant	0.80^{***}	1.49^{***}	1.53^{***}	1.04^{***}
	(0.11)	(0.15)	(0.14)	(0.11)
Issue	Gentrification	Living Wage	Climate Change	Taxes
Observations	3,467	3,560	3,605	3,573
Log Likelihood	−2,325.31	−1,491.30	−1,635.16	−2,410.79
Akaike Inf. Crit.	4,656.63	2,988.59	3,276.31	4,827.58
Note:				*p<0.1; **p<0.05; ***p<0.01

For gender effects, calculating marginal effects is straightforward, but marginal effects are slightly more complex when comparing 35-year-old to 65-year-old respondents. To calculate these marginal effects with uncertainty, we implement the logit model in a Bayesian framework, calculate predicted probabilities for the two age categories for each issue, and then summarise the calculated differences across the posterior draws for each model. While this is a convenient procedure for calculating the marginal effects of interest with 95% credible intervals, we emphasize that the Bayesian model produces results that are identical to a standard MLE model. Table 2 demonstrates this, summarizing estimated marginal effects from MLE and Bayesian models for each variable and policy issue.

Table 5: Comparison of Marginal Effects

Issue	Gender (MLE)	Gender (Bayes)	Age (MLE)	Age (Bayes)
Gentrification	-0.17	-0.18	-0.09	-0.09
Living Wage	0.04	0.04	0.01	0.01
Climate Change	0.08	0.08	-0.02	-0.02
Taxes	-0.11	-0.11	-0.09	-0.09

The table below summarizes treatment effects from the survey of politicians.

Table 6: Models: Politician Treatment Effects

	(1)	(2)	(3)	(4)
Woman	-0.23^{***}	0.18^{***}	0.13^{***}	-0.23^{***}
	(0.03)	(0.03)	(0.03)	(0.03)
Age	-0.09^{***}	-0.11^{***}	-0.17^{***}	0.15^{***}
	(0.03)	(0.03)	(0.03)	(0.03)
Constant	0.58^{***}	0.60^{***}	0.72^{***}	0.51^{***}
	(0.03)	(0.03)	(0.03)	(0.03)
Issue	Gentrification	Living Wage	Climate Change	Taxes
Observations	850	842	866	861
Adjusted R^2	0.06	0.05	0.05	0.07
Note:				*p<0.1; **p<0.05; ***p<0.01

4. Citizen Attitudes Model

To assess the accuracy of politicians' predictions of citizen attitudes, we needed to estimate the probability of support for each issue among men and women 35 and 65 years of age. However, we also know that baseline levels of support for each issue are likely to vary across Canadian municipalities and provinces, and this variation should be incorporated, as much as possible, into our public opinion estimates. We therefore begin with a multilevel model of citizen attitudes on each of the four policy issues as a function of the respondent's age and gender, with varying intercepts for municipality and province, as follows:

$$log\frac{p(agree_i)}{1-p(agree_i)} = \theta_0 + \beta_1 Age_i + \beta_2 Gender_i + \alpha^{mun}_{k[i]} + \alpha^{province}_{l[i]}$$

We model municipality and province intercepts as drawn from a normal distribution with mean zero:

$$\alpha^{municipality}_k \sim \mathcal{N}(0, \sigma^2_{municipality})$$
$$\alpha^{province}_k \sim \mathcal{N}(0, \sigma^2_{province})$$

We implement this model in an MLE framework in R using the lme4 package. We then use the model results to predict the probability of agreement with each policy statement among 35-year-old women, 35-year-old men, 65-year-old women, and 65-year-old men in each municipality for which we have responses in the elite survey. This model therefore allows us to predict constituent attitudes among specific demographic groups while also incorporating information, when available, about differences in baseline levels of support on each issue at the municipal and provincial levels.

5. Additional Information: Ethics Protocols

This research project involved human participants. Political elite and general public surveys were approved by [removed for review] Research Ethics Board. In this section, we describe our research procedures in relation to APSA Council's 2020 Principles and Guidance for Human Subjects Research.

None of the researchers involved in this study have any potential or perceived conflicts of interest in relation to this research. Participants in the survey of political elites were not compensated for their participation. Participants in the public opinion surveys were online panel members recruited by Abacus, a commercial survey sample firm. All participants were compensated in keeping with Abacus's recruitment policy. As is customary for commercial sample providers, the exact terms of compensation are proprietary and were not shared with the researchers.

Consent. All participants provided informed consent prior to starting the online surveys, and were free to withdraw from the study at any time by closing their browsers. Informed consent documents were written in accessible language and are in compliance with the Government of Canada's Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS 2 2018).

Deception. This project did not involve deception.

Harm and trauma. Our surveys were assessed by [removed for review] as having minimal risk to participants. The participant pool was not primarily comprised of members of vulnerable or marginalized groups, and we did not anticipate differential benefits or harms for particular groups.

Confidentiality. Confidentiality was guaranteed to all participants. All replication data and code are anonymized to protect the confidentiality of both public and elite respondents.

Impact. Our research collected information on citizen and politician attitudes on policy issues and did not involve intervention in political processes.

Laws and Regulations. Our research complies with applicable laws and regulations on human subjects research in Canada.

Shared responsibility. All members of the research team, including research assistants, were aware of applicable ethics requirements and the necessity of protecting respondents' privacy and confidentiality.

Power. Respondents to public opinion surveys in our study were members of an online panel and their participation in the survey was entirely voluntary. For this reason, we are unaware of power imbalances that may have caused participants to feel compelled to participate. This is all the more true of our politician sample, which consisted of elected representatives; these public figures are in positions of power and are unlikely to have experienced power imbalances in relation to a request to participate in a confidential academic survey.

6. Additional Analysis: Preanalysis Plan

In our pre-registered analysis plan, we specified three possible measures of politicians' perceptual accuracy. We used the simplest of the three measures – a binary score – in the main text. However, recognizing that a binary measure may miss important nuances in politicians' perceptual accuracy, we developed and pre-registered three distinct measures of our outcome variable (perceptual accuracy):

1. Binary measure. Here we use a multilevel logistic regression model (as described above) to predict the most likely response on an agree (1) or disagree (2) scale for each possible combination of age and gender in each municipality for each of the four issue questions. We then scored each politician with a binary correctness measure for each issue: zero for an incorrect response and one for a correct response. Politicians who choose "don't know" receive a score of zero for their response.
2. Continuous correctness, binary outcome. Using the same logit models, we will predict the probability of each response for each of the four combinations of age and gender for each issue question. We will then score each politician based on the probability of their response. Here, too, politicians who choose "don't know" will receive a score of zero for their response. For example:

- Politician X chooses "agree" for individual (A) on issue 1. The probability that individual A agrees with the statement is 0.33. The politician receives 0.33 points for their choice.
- Politician Y chooses "disagree" for individual (B) on issue 2. The probability that individual B disagrees with the statement is 0.05. The politician receives 0.05 points for their choice.

3. Continuous correctness, ordinal outcome. Here we proceed as described above, but build the probabilities using an ordinal logit model, calculating the probability of each distinct choice (strongly agree, somewhat agree, somewhat disagree, strongly disagree) rather than a binary simplification of the choices. We then assign the correctness scores using the same procedure described in the second measure.

In the table below, we show that our findings are substantively identical in direction and statistical significance regardless of the pre-registered measure we employ. Note that "M1" refers to the binary measure, "M2" refers to the continuous correctness and binary outcome measure, and "M3" refers to the continuous correctness and ordinal outcome measure.

	All Politicians			Women			Men		
	M1	M2	M3	M1	M2	M3	M1	M2	M3
Shared Gender	−0.01	−0.01	0.00	0.09**	0.08***	0.04***	−0.07**	−0.07***	−0.03***
	(0.02)	(0.01)	(0.01)	(0.03)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Num.Obs.	2461	2461	2461	966	966	966	1495	1495	1495
Issue FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

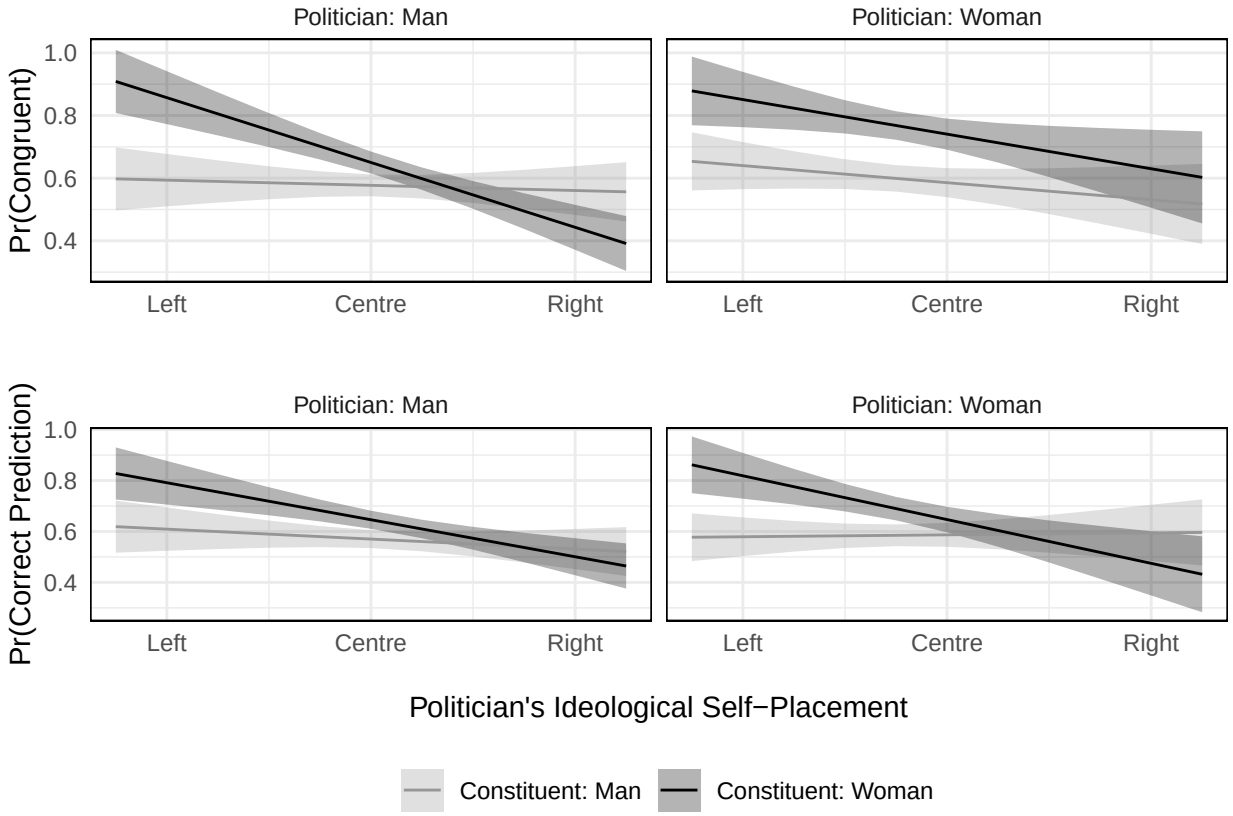
7. Progressive Bias and Perceptual Accuracy

In the main text, we show that a substantial component of politicians' perceptual accuracy is strongly related to projection – that is, politicians' perceptual accuracy increases dramatically when politicians *agree* with the constituent in the vignette. This finding raises the question of why politicians would be more congruent with women in their communities than with men. Given past findings on gender and policy congruence in Europe (Dingler et al. 2019), we suspected that elected politicians' underlying ideological positions are probably an important part of the answer to this question. If politicians tend to be biased to the left or right of their constituents, and if men and women differ systematically in their baseline ideological preferences, then politicians' ideological biases would be associated with gender differences in congruence and perceptual accuracy. More concretely, if Canadian local politicians' policy preferences tend to be slightly to the left of their constituents, and if Canadian women tend, on average, to be more left-leaning than Canadian men, then politicians would be more congruent with and perceptive of women's policy preferences regardless of their own gender.

This connection may appear rather speculative, but we have good reason to believe that this situation may in fact exist in the Canadian context. When asked to place themselves and their constituents on a left-right ideological scale from zero to ten, municipal politicians place themselves, on average, almost one point to the left of their constituents. This is true of both men and women: men place themselves 0.5 points to the left of municipal residents and women place themselves 1.5 points to the left.[1]

Put simply, if local politicians are slightly to the left of their constituents, on average, and if Canadian women are slightly to the left of men, on average, then local politicians are slightly more likely to be congruent with the women than with the men in their communities. We emphasize that there is nothing necessary about this particular relationship – other forms of ideological bias in representation are likely to obtain in other contexts. For example, in a context where politicians tend to hold views to the ideological right of their constituents and women in the population are, on average, more left leaning than men, politicians would do worse at predicting women's policy preferences. What is crucial, in our view, is the underlying mechanism: the connection between congruence and perceptual accuracy.

[1] See Jack Lucas (forthcoming), *Ideology in Canadian Municipal Politics*, Toronto: University of Toronto Press.



We probe the plausibility of this ideological interpretation in figure **??**. The figure summarizes politicians' predicted probability of alignment with their constituents (the panels in the top row) along with their predicted probability of correctly knowing their constituents' attitudes (bottom row), broken down once again by the constituent's gender. Here, too, we summarize the relationships separately for men politicians (in the left panels) and women politicians (in the right panels). All of the predicted probabilities are drawn from models in which congruence and perceptual accuracy are the dependent variables, and the independent variables are the politician's gender, the constituent's gender, the politician's ideological self-placement, and the interaction among all three of these variables. Both models also include issue-specific fixed effects.

The results in the figure support the intuition that ideology may be a component of the gender differences we have uncovered in our main analysis. Men politicians on the ideological left perform much better on both congruence and predictive accuracy when asked about constituents who are women, but this performance difference disappears, and may even reverse, when the politicians are more conservative. Among women politicians, the same relationship holds true: women on the left perform especially well on both congruence and perceptual accuracy when asked about women constituents, and this performance difference once again disappears as the politicians become more ideologically conservative.