Mind the (Gender) Gap: Analysing Statistical Relationships between Gender and Political Ideology

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12. April 2024

Contents

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Acknowledgements

We are grateful to Ruth Dassonneville for her invaluable assistance and support in navigating her dataset and adapting it to align with our research objectives.

Abstract

(100 - 250 words)

1 Introduction

There is a growing body of literature in political science that aims to examine the increasing levels of political polarization worldwide. McCoy and Somer (2019) theorize that this polarization of the electorate often builds on existing social and political cleavages and their associated political grievances and crisis of representation (McCoy and Somer 2019, 237, p. 240). In this context of polarization, the debate on the impact of gender as a social cleavage on political ideology has heated up again. Reputed news publications such as The Economist and Financial Times have recently reported of a growing ideological divide between men and women in the 18-30 age range, with men being much more likely to self-identify as conservative when compared to women. In contrast, other political scientists have dismissed the claim of growling ideological gaps, stating that the divergence in ideology might not be largely steady, or at least not as dramatic as posited.[1]

In light of the contradicting viewpoints on this increasingly relevant issue, we aim to investigate this question: what is the relationship between gender and ideological self-identification? To this end, we use Ruth Dassonneville (2021)'s dataset to replicate her original investigation into the relationship between gender and ideology. We anticipate that the feminist mobilization in the late twentieth century made women's issues more cuturally salient for women and caused women to self-identify as more ideologicaly liberal than men on average. However, whereas Dassonneville investigated the ideological gender gap over time, our analysis will be strictly limited to examining the gendered gap of political ideology in the twenty-first century, as it so exists.

Besides the attempted replication of her analysis, this essay will also analyse the influence of regime-type on the relationship between gender and ideology to examine whether the type of regime influences the size of the gendered ideological gap. We employ regression analysis on Dassonneville's dataset and create several linear models to map the relationship between gender and ideology, and the potential moderating effects of time, age, country, and regime-type.

In section 2, we briefly discuss the existing literature on the gender gap in political ideology. We then describe the data we are using for this replication as well as the operationalization of our key variables in section 3. In section 4, we discuss our findings after which we conclude with a summary of our findings, and discussion of the limitations of our scope of study as well as potential avenues for further research in section 5. *Insert brief sum of findings.*

2 Literature Review

The study of the relationship between gender and ideology in the late twentieth century found that while women tended to be more ideologically conservative compared to men before 1980, the post-1980 era has seen a slow and sustained reversal in the ideological gender gap. There are multiple causal explanations that have been posited for this reversal.

While structural factors such as age, greater religiosity, and low participation in the workforce explained ideological conservatism in women pre-1980s, increase in female participation in the labor force and secularity in general saw a great convergence in the gendered ideology divide in a process that Inglehart and Norris have termed as gender de-alignment (Giger 2009; Inglehart and Norris 2000; Shorrocks 2018; Vaus and McAllister 1989). Inglehart and Norris (2000) found the "modern gender gap", where women are more ideologically liberal than men, to have occurred primarily in postindustrial societies and not in developing or postcommunist societies. The scholarship on this modern gendered ideological gap agrees that structural factors no longer account for this ideological gap. Controlling for socioeconomic disadvantage found that it could not explain the gap in ideology.

Some authors have posited that sociopolitical socialization plays a role in accounting for the ideological divide between men and women such that women are more likely to be socialized to be less individualistic

[1] See "Why young men and women are drifting apart," *The Economist* (13 March 2024); John Burn-Murdoch, "A new global gender divide is emerging," *Financial Times* (26 January 2024); Zack Beauchamp, "Are men and women growing apart politically? Not so fast." *Vox* (13 March 2024); for discussions on gendered ideology gap in recent news media.

and thus have gendered moral values that lead to liberal ideology (Gidengil et al. 2003). Empirically, however, a consistent gender gap on economic 'compassion' issues is not found to exist (Helen, Thomas, and Wilcox 1994). Furthermore, in postindustrial societies, regardless of family political ideology and political socialization, young women are consistently found to be more ideologically liberal than young men in similar contexts (Ditmars 2023).

The last, and most convincing explanation for the gendered ideology gap is the salience of sociocultural factors. Feminist mobilization in the late twentieth and twenty-first century has led to the increased salience of women's issues. Ditmars (2023) terms this increased salience of contextually relevant issues in a certain time period as "period forces". Many authors in the discipline believe that feminist mobilization caused a cultural trend shift and value reorientation which made women's issues more salient in the collective female cultural consciousness and thus caused women to realign to left-leaning parties and ideological positions, which tend to represent feminist issues (Gidengil et al. 2003; Giger 2009; Inglehart and Norris 2000). Dassonneville further maps the shift of this gendered ideological gap over time in a longitudinal study and finds that the ideological shift was most dramatic between 1980 and 1995 (Dassonneville 2021, 229).

Feminist mobilization in the recent past has brought women's issues such as gender equality, equal representation and access to reproductive rights to the forefront of women's consciousness. We argue that this cultural salience of women's issues in their consciousness makes them more inclined towards 'liberal' parties and ideologies which are more likely to represent these issues. Here, we expect gender to act as a proxy for the salience of certain specific sociocultural factors and policy issues which have greater relevance and impact for women rather than men. While the scholarship surrounding the existence and reversal of the gender gap is vast, the scholarship has yet to examine how long the gendered ideological gaps caused by such culturally salient issues persist.

Considering the increasing levels of political polarization worldwide, figuring out the impact of gender and gender-related sociocultural factors on ideological polarization is an issue that requires more attention than it is being afforded at present. This is further compounded by the ongoing autocratization wave has slowly been eroding liberal democracy in postindustrial societies. As sociopolitical factors are an intrinsic part of the cultural context of a country, the regime-type of a country must play a significant role in the gendered ideology gap. We identify the lack of investigation into this relationship as a gap in the literature that we hope to mitigate in some way in this essay.

Aiming to replicate Dassonneville's work with a limited the longitudinal element, our hypotheses are as follows:

H1: In the twenty-first century, women are more likely to self-identify as ideologically liberal than men.

H2: This gender-ideology relationship is likely to strengthen over time in the period of analysis from 2004 to 2018.

H3: The type of regime has an impact on the gendered ideological gap.

However, the existence of the traditional gender ideology gap pre-1980 means that we must consider that age could act as a mitigating variable in the ideological gap and might need to be controlled for.

3 Research Design & Data

description of the empirical approach to test the proposed hypotheses, data description, incl. descriptive statistics and plots (700 - 1000 words)

3.1 Data

To test the effect of gender on ideology, this paper uses the replication **data** for Dassonneville (2021)'s article (Dassonneville 2020). This dataset was constructed by combining the data from the Eurobarometer surveys, the Latinobarometro, the European Social Survey, the World Values Study, the Comparative Study

of Electoral Systems and national election studies. Our sample consists of 36 OECD countries rated at least partially free by Freedom House and our temporal scope extends from 2004 (first data on Latvia) to 2018. The data is organised in a country-year format, which allows us to conduct a cross-sectional, longitudinal, and comparative analysis of the impact of gender on ideology over time and across countries.

3.2 Variables

Outcome Variable

As the outcome variable, this research uses the `ideology_st` variable included in the data set. All surveys included in this data set include a question on respondents' ideological self-placement on a left-right scale[2]. However, the surveys partially measure ideology in different ways, with differing numbers of answer categories and differences in the provision of a middle option. Thus, Dassonneville (2021) harmonised all scales to a 1-10 scale with 1 representing the most left and 10 representing the most right (Dassonneville 2021). As ideology is the variable of interest, we remove all observations with missing ideology values from the data set.

Predictor Variables

`Female` is the main predictor variable. It is measured on a binary scale, with 0 representing men, and 1 representing women. As gender acts as the proxy for sociocultural factors and is the main predictor variable of interest, we remove all observations with missing gender values from the data set.[3]

We use the variable `Year` to examine whether there is a time-trend in the effect of gender on ideology. As we are interested in the years 2004 until 2018, we remove all prior data from the data set.

As the effect of gender on ideology may change with age, the variable `Age` represents respondents' age at the time of the survey and ranges from 16 to 100. It is measured by subtracting respondents' year of birth from the year in which the survey was taken. Depending on the exact date of a birthday or the survey implementation in a given year, the measured age may be one year above or below respondents' actual age. However, as this is only a marginal deviation, we do not assume this to introduce a substantive bias.

`Country` refers to the country in which the survey way implemented. The data set includes observations from 36 countries. As we are interested in analysing OECD countries, we include data on the United Kingdom but exclude data on Great Britain and Northern Ireland from our analysis. Moreover, while some surveys on Germany measured attitudes in East and West Germany separately, we do not have sufficient temporal coverage to maintain this distinction in our analysis and, hence, analyse Germany as a unitary case. On average, there are 4.0046194×10^4 observations per country and 2669.7462963 observations per country-year. Table X lists the countries included in the data set, as well as the years for which data is available for each country.

[2] Across surveys, the wording for this item is very similar. The item is usually phrased along the following line: "In political matters people talk of"the left" and "the right". How would you place your views on this scale?"(European-Social-Survey 2020; GESIS-Leibniz-Institut-für-Sozialwissenschaften n.d.; World-Values-Survey 2021)

[3] In the surveys used for this data set, gender was often directly coded by interviewers, rather than inquired from respondents themselves: "In political matters people talk of"the left" and "the right". How would you place your views on this scale?"(European-Social-Survey 2004; World-Values-Survey 2021)

	Years
Australia	2004 2007 2010 2013 2016
Austria	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Belgium	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Czech Republic	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Denmark	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Estonia	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Finland	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
France	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Germany	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
United Kingdom	2004 2011 2012 2013 2014 2015 2016 2017
Greece	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Hungary	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
Iceland	2005 2007 2009 2010 2011 2013 2014
Ireland	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Italy	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018
Latvia	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Lithuania	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Luxembourg	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
The Netherlands	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Norway	2004 2005 2006 2008 2009 2010 2012 2013 2014 2016
Poland	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Portugal	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Slovakia	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Slovenia	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Spain	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Sweden	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Switzerland	2004 2005 2006 2007 2008 2010 2011 2012 2014 2016
Turkey	2004 2005 2006 2007 2008 2009 2010 2011 2012 2014 2015 2016 2017
Israel	2006 2008 2010 2012 2013 2014 2015 2016
Chile	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2015 2017
Mexico	2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2015
New Zealand	2004 2005 2008 2011 2014
Japan	2005 2007 2010 2013
United States	2004 2006 2008 2011 2012 2016
South Korea	2004 2008 2010 2012 2016
Canada	2004 2008 2011 2015

The cultural and political setting matters for our hypothesised relationship between gender and ideology. As this setting may differ across regime types, we introduce a new `regime` variable. We code this variable using V-dem's Regimes-of-the-World index (Coppedge et al. 2023). This index codes countries as liberal democracies (3), electoral democracies (2), electoral autocracies (1), or closed autocracies (0). The regime variable in our data is created by manually coding each country-year as one of these regime types. Our data only includes regime levels 1 to 3 (there are no closed autocracies). As we are focusing on OECD countries, 93.57% of observations in our data set are from liberal democracies, with only 3.85% of observations from electoral democracies and 2.58% of observations from electoral autocracies.

Control Variables

As gender is randomly biologically assigned, there are very few potential confounding variables that may influence both gender and ideological self-identification. One of the few potential confounders is the country-specific cultural and ideological context. In certain countries, it may be common practice to abort based on fetuses sex. Parents not following this practice may both be more likely to give birth to e.g., female children and, at the same time, have e.g., more left attitudes which they transfer to their children. However, the authors are not aware of such practices in any of the countries included in the sample of 36 OECD countries.

Table 2: Variables - Descriptive Statistics

	Minimum	Maximum	Mean	Median	SD	NA's
Ideology	1	10	5.43	5	2.15	0
Female	0	1	0.53	1	0.50	0
Year	2004	2018	2010.22	2010	3.99	0
Age	16	100	48.96	49	17.83	0
Regime	0	2	1.91	2	0.37	0

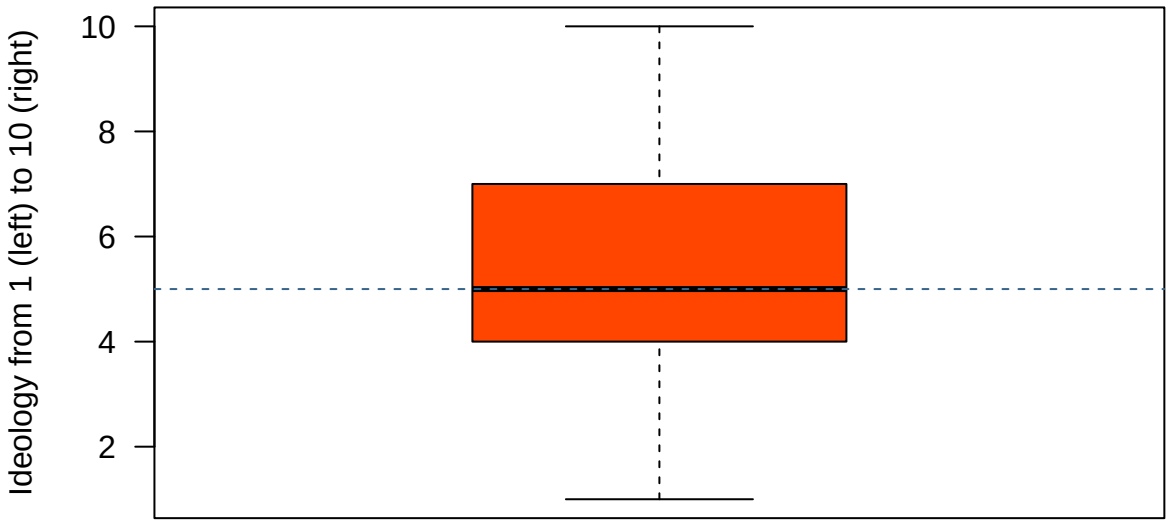
Hence, we do not include further control variables.

Name	Description
`ideology_st`	Respondent's ideological self-placement standardised on a scale from from 1 (left) to 10 (right)
`female`	Binary variable: 0 (Man) or 1 (Woman)
`year`	Year in which the survey was implemented, from 2004 to 2018
`age`	Respondent's age at the time of the survey
`country`	Name of the OECD country of the respondent
`regime`	Regime type of the country of the respondent: 3 = liberal democracy, 2 = electoral democracy, 1 = electoral autocracy, 0 = closed autocracy

3.3 Data Visualization

Before running the regression analyses, we have plotted ideology self-identification by gender, time, and country for the dataset in order to visually map the relationship between gender and ideology. Data visualizations in Figures 1 - 6 all seem to support our hypotheses **H1** and **H2**, which state that women tend to identify as more ideologically liberal than men, and that this gendered ideological gap increases over time.

Figure 1. Distribution of Ideology



It is clear from Figure 1 that, on average, people rarely tend towards ideological extremes. The bulk of the data being between 4 and 7 on the ideological scale shows that any ideological gap between genders cannot be hugely polarized. However, to show that gender does have some effect on ideological self-identification, Figure 2 maps the distribution of ideology by gender for the year 2018. Here, we see that women occupy a larger range of ideological identification than men, occupying the space between approximately 3.5 - 8.5 where men's ideological self identification is clustered between approximately 4.5 - 7. This greater ideological range could be a moderating effect of age: as previously mentioned in the literature review, the traditional gendered ideological gap shows that women tended to vote more conservatively on average pre-1980s, which could still persist among female population above a certain age.

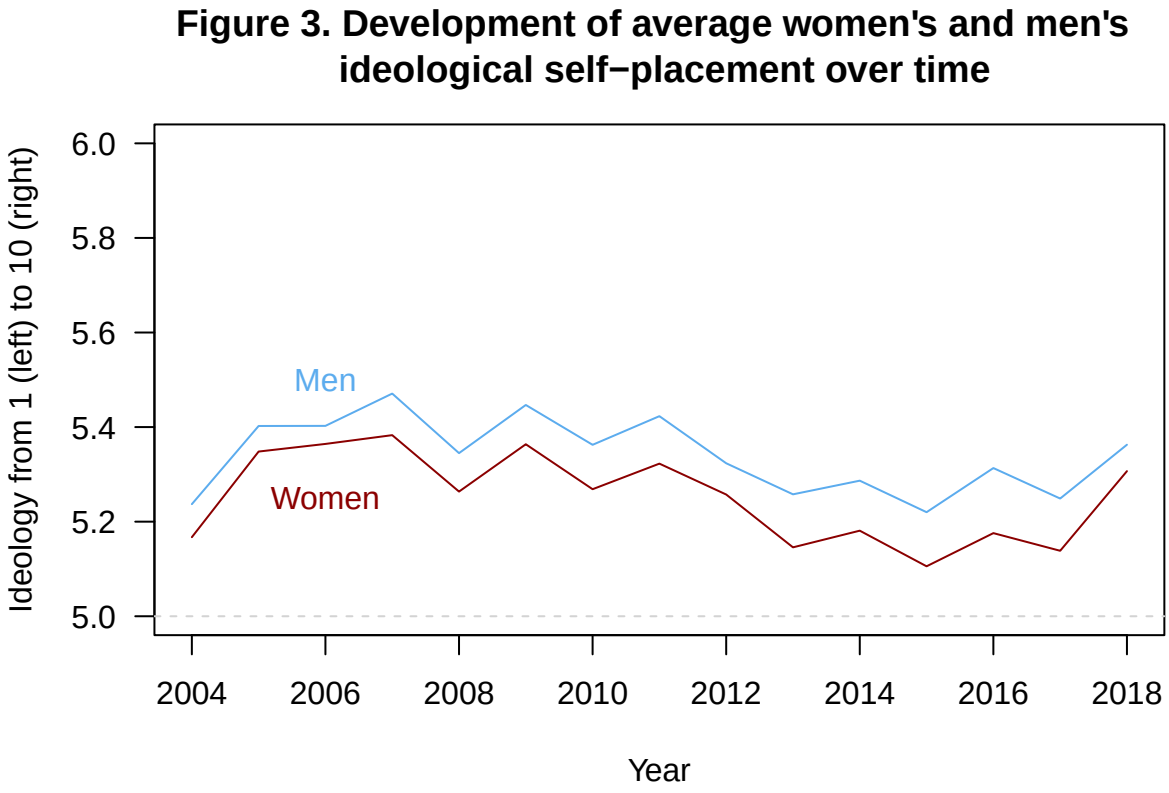
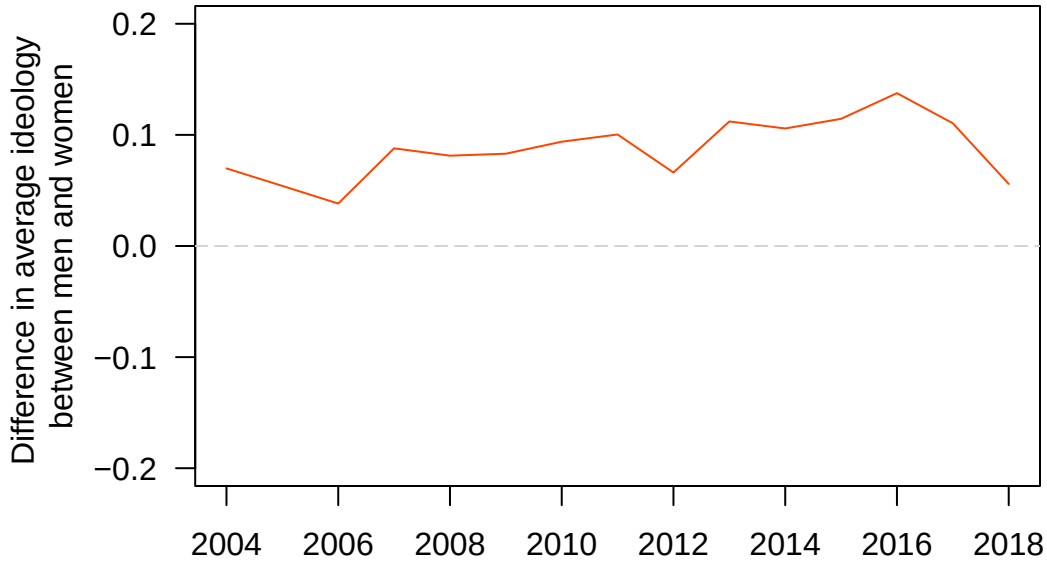


Figure 3 explicitly shows that there is a distinct difference between how men and women self-identify ideologically which remains steady over time. In fact, we can see that the average ideological gap between men and women widened between 2004 and 2017, showing that there is a time trend effect to the gendered ideology gap. Due to the lack of data for the year 2018 (the dataset only contains data from two countries - Italy and Hungary - for 2018), we assume that the narrowing of the gap is not significantly representative of the average relationship between gender and ideology in postindustrial societies for that year.

Figure 4. Development of difference in average men's and women's ideological self−placement over time



Note: Values over 0.0 mean that males are more right−wing.

Providing support for **H1**, Figure 4 shows more clearly that over the period of 2004-2018, women have self-identified as more ideologically liberal than men on average. Furthermore, the average gap between men and women's ideological positioning also seems to have widened between 2004 and 2017. This means that, not only do women tend to be more ideologically liberal than men on average, they also tend to be more ideologically liberal by a *greater degree* over time.

As our predictor variable `gender` is acting as a proxy for sociocultural factors, the observable time trend has fascinating implications for the cultural salience of issues affecting women. The increasing ideological gap seems to indicate that the cultural salience of these issues are not only sustained over time, but that their importance is actually increasing over time in the twenty-first century. However, Figures 3 and 4 show the average time trend for 36 OECD countries. This time trend may not present equally for every country, which is why, in Figures 5 and 6, we break down the relationship between gender and ideology over time by country.

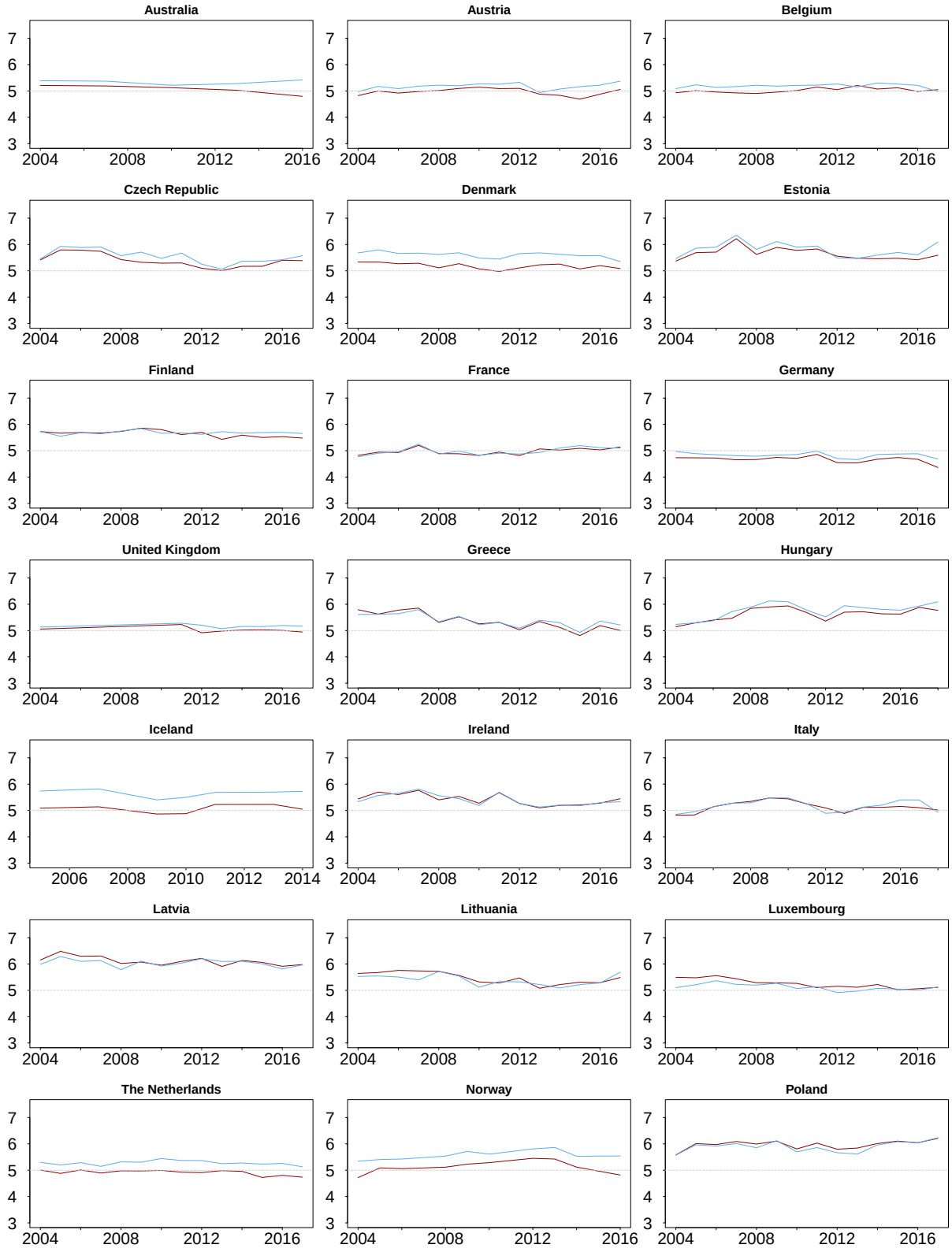
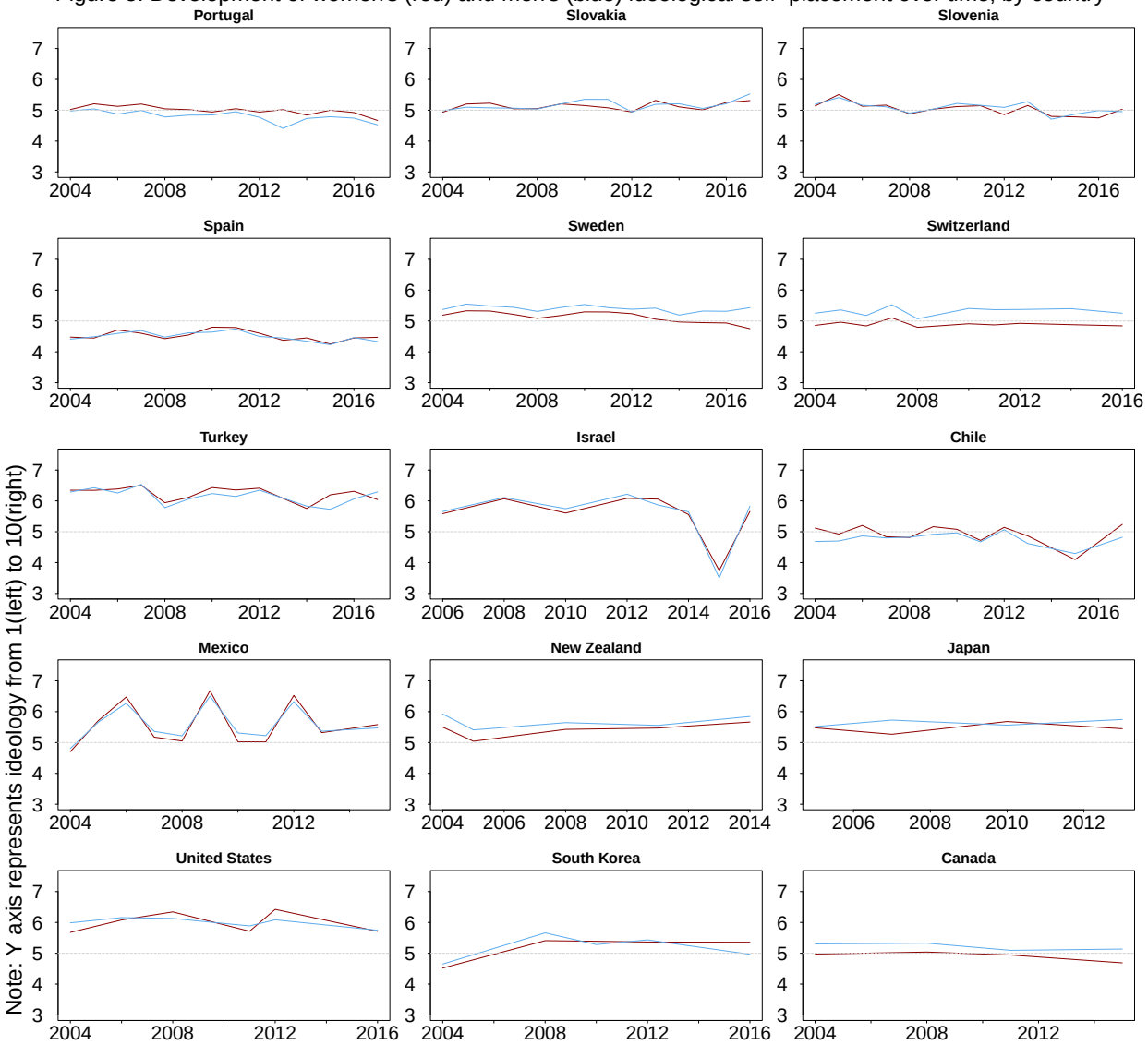

Australia
Austria
Belgium
Czech Republic
Denmark
Estonia
Finland
France
Germany
United Kingdom
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Lithuania
Luxembourg
The Netherlands
Norway
Poland

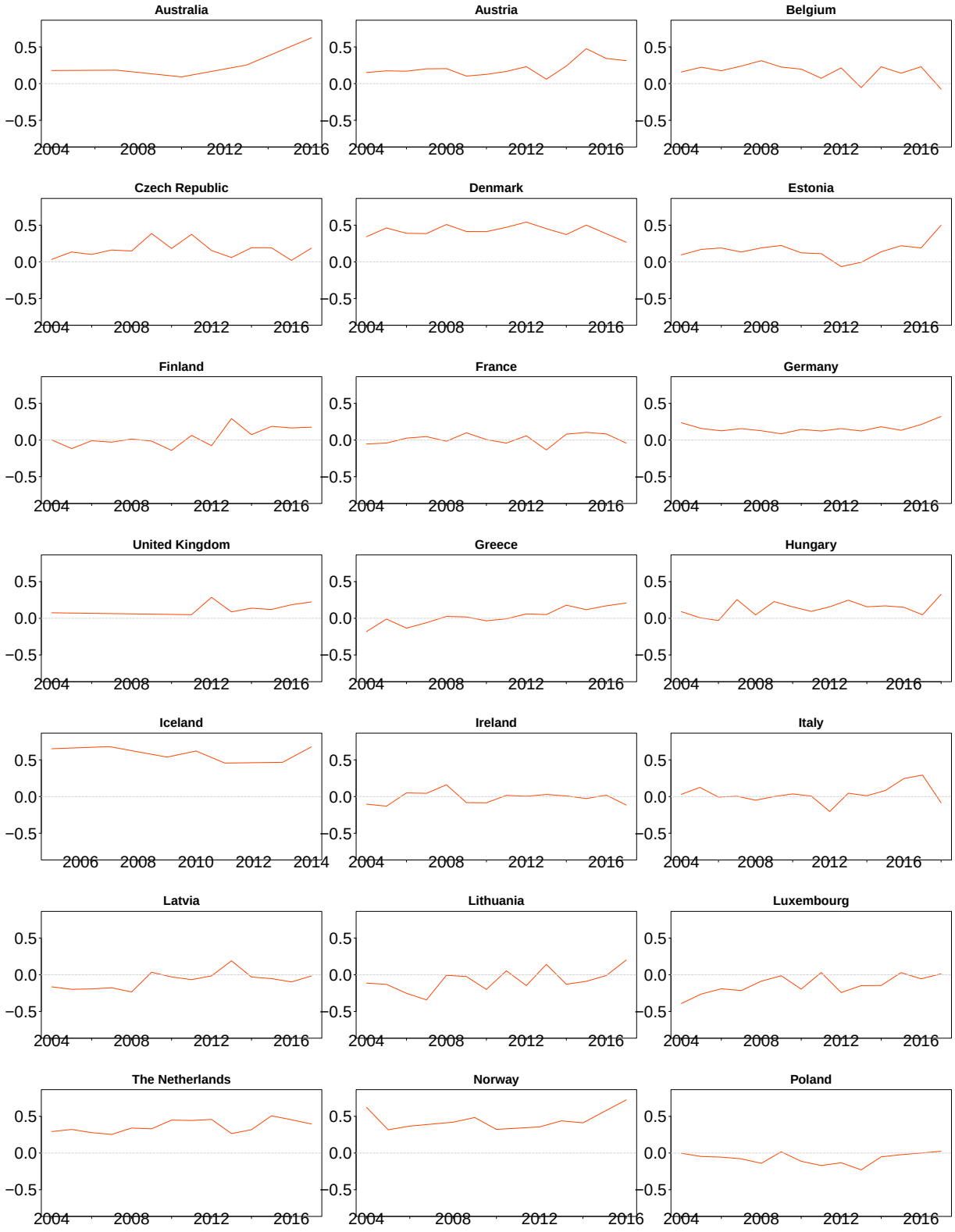
Figure 5. Development of women's (red) and men's (blue) ideological self−placement over time, by country



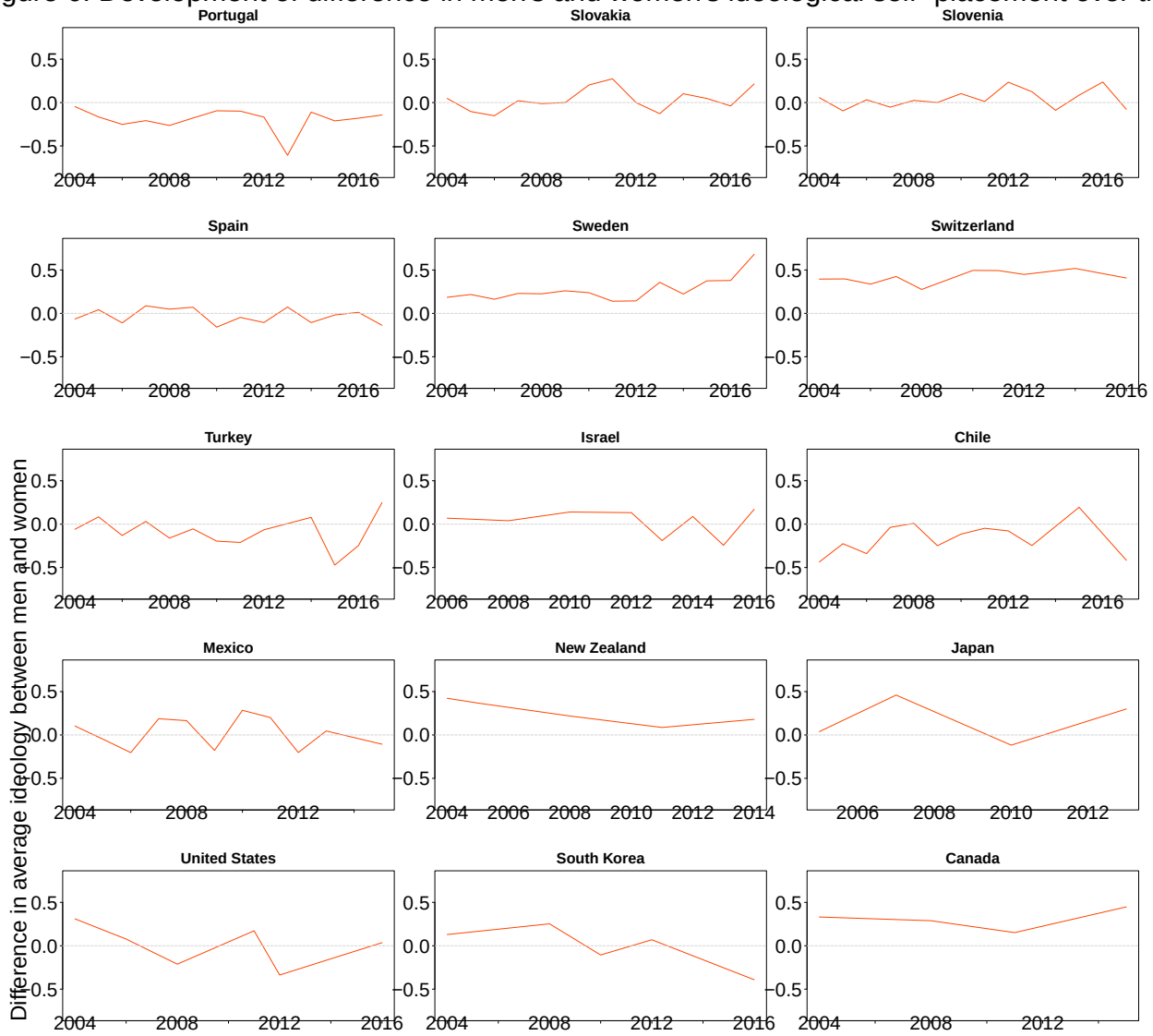
In breaking down the visualization by country, our findings reflect Dassonneville's in that there is a lot of

variation in the ideological gap over time as compared to Figure 3 (Dassonneville 2021, 232). Where some countries like Australia, Austria, Norway and Canada have seem an increasing ideology gap between men and women, the gap in other countries like Iceland, the Netherlands, and Switzerland has remained remarkably steady. Countires including Belgium, Turkey, Slovenia, and South Korea actually saw a narrowing down and reversal of the ideological gap, such that over time women seem to be self-identifying as more conservative than men. The country-wise breakdown of data also makes it clear that while some countries have a significant ideological gap between the genders, in other countries, the ideological gap over time ranges between very small to almost nonexistent. This includes examples like France, Ireland, Poland, and Latvia.

Figure 5, therefore, clearly shows that evidence of the existence of a gendered ideological gap varies across countries. As our `gender` variable is a proxy, this indicates to us that the cultural salience of women's issues varies across countries with different sociocultural and politico-legal contexts.


Australia
Austria
Belgium
Czech Republic
Denmark
Estonia
Finland
France
Germany
United Kingdom
Greece
Hungary
Iceland
Ireland
Italy
Latvia
Lithuania
Luxembourg
The Netherlands
Norway
Poland
0.5
0.0
−0.5
2004
2008
2012
2016
2006
2010
2014

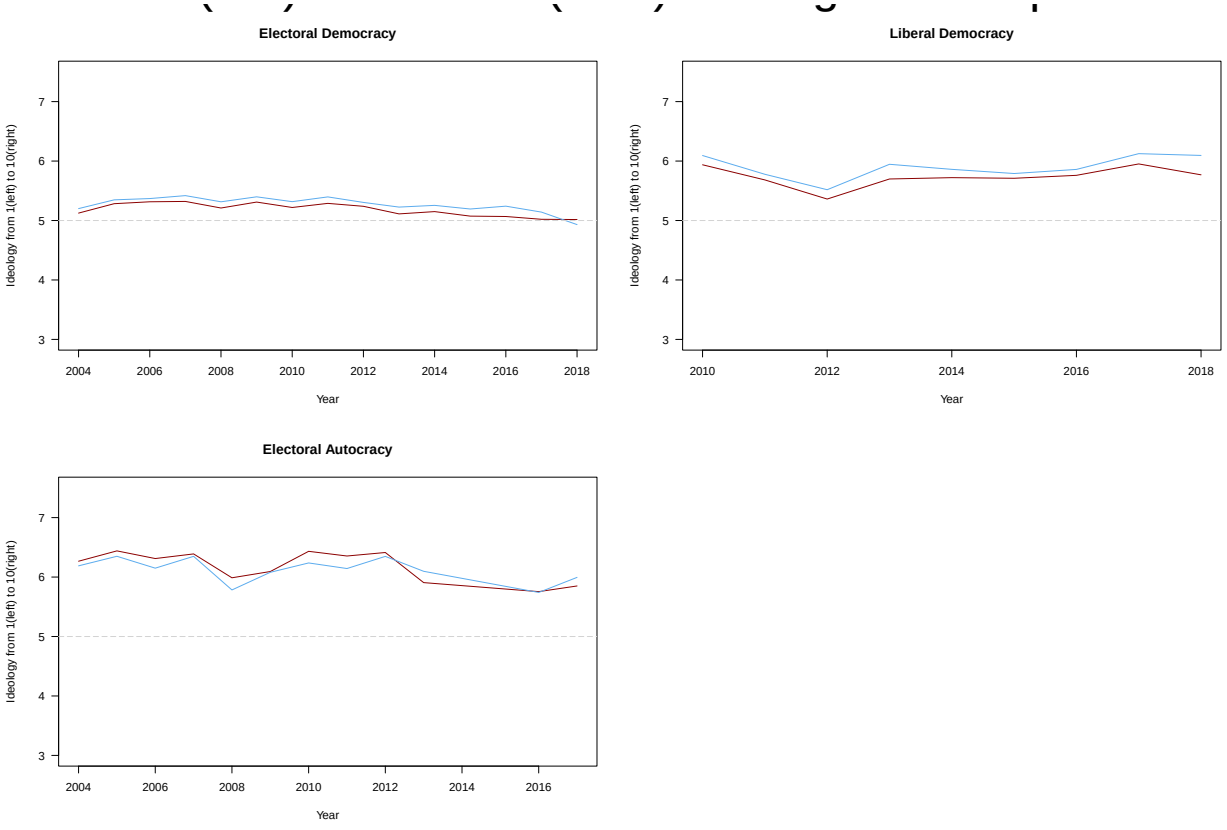
gure 6. Development of difference in men's and women's ideological self−placement over ti

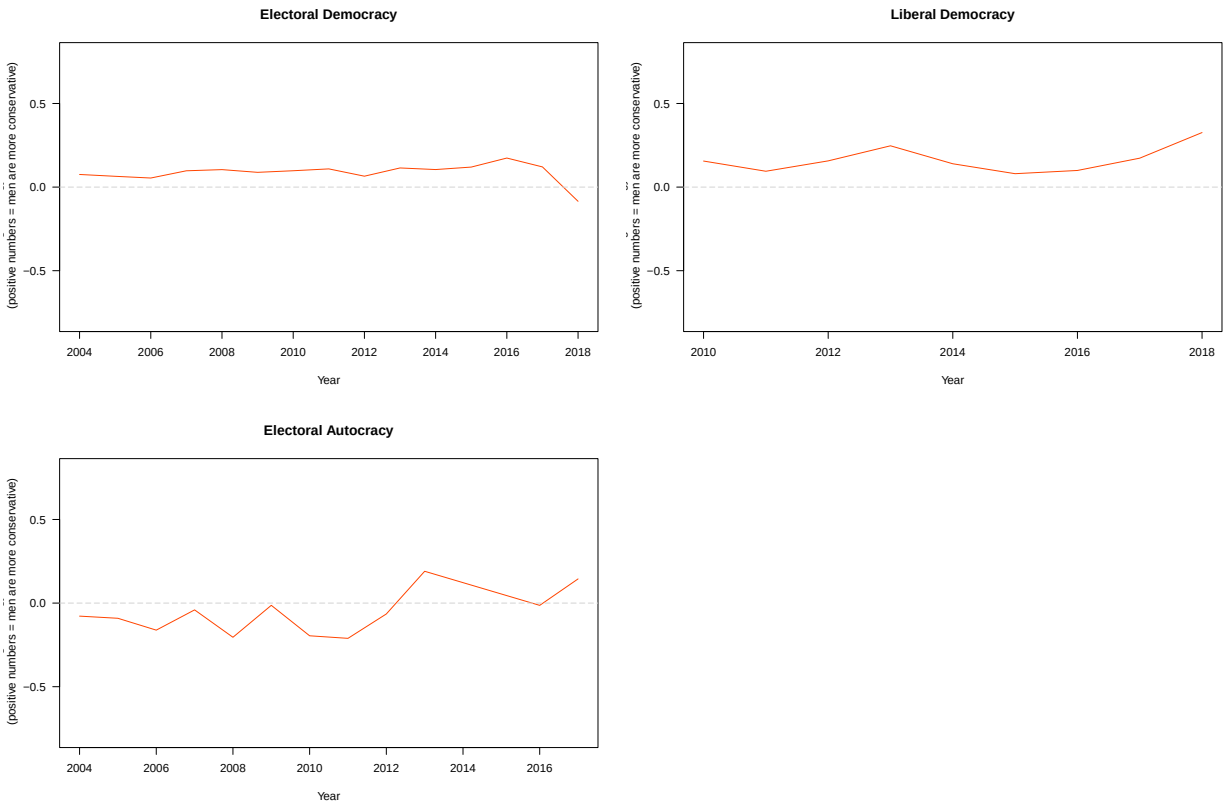


Building on the country-wise variation as seen in Figure 5, Figure 6 breaks down the difference in degree

of ideological self-identification by gender over time. Although Dassonneville asserts that the ideological gender gap has been largely stable over time since the 1990s (Dassonneville 2021, 234), Figure 6 shows that most countries have seen fluctuation in the ideological gap between genders, even if the difference is not so dramatic as it was in the 80s and early 90s.

As figures 7 and 8 display, there are slight differences in the relationship between gender and ideology between regime types, lending support to our hypothesis 3. In liberal democracies, women are more liberal than men throughout almost the entire period of analysis. Only in 2018, a reversal is visible, which may be attributable to the fact that, in 2018, the data set only contains data for a single liberal democracy, Italy. In contrast, in electoral democracies and electoral autocracies, the reversal of the gender gap seems to have occurred later than in liberal democracies. Moreover, the gender gap seems to be slightly larger in electoral autocracies than in liberal and electoral democracies. While these patterns suggest interesting interactions between regime type and the relationship between gender and ideology, they need to be examined with caution. As our data set predominantly consists of liberal democracies, a more extensive analysis of other regime types seems warranted to draw further conclusions.





3.4 Data analysis method

To evaluate the relationship between gender and ideology, and the extent to which this effect is moderated by variables like year, age, country, and regime, we employ regression analysis and create several linear models.

First, we run a simple linear regression, analysing the relationship between gender and ideology. We subsequently include interaction terms to examine heterogenous treatment effect of gender based on year, age, country, and regime type respectively.

4 Data analysis and Discussion

(1000 - 1500 words)

In this section, we are going to run linear regressions in order to determine the plausibility of every hypothesis. Our working strategy was to start with models with a single explanatory variable, and subsequently build up the complexity through controlling for different variables or adding multiple interactions, so as to account for potential confounders. At the end of this section, a table will be presented with all the models for accessibility reasons.

5 Hypothesis 1

To reiterate, hypothesis 1 pressuposes that women should self-identify, on average, as more liberal than men. Therefore, we start with a simple model, correlating ideology with gender. α represents the intercept (which, in this case, is the average ideology score for men); $\beta 1$ represents the difference in ideology score between women and men, which is interacted with variable *Gender*, and ϵ is the error term.

```
proto_fit_1a = lm(lrgen$ideology_st ~ lrgen$female)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \epsilon$$

The $\beta 1$ coefficient indicates that, on average, being a woman is associated with more liberal self-identification (-0.09). Despite the fact the result is statistically significant, we believe that the effect might be moderated by the country in which the survey had taken place. In other words, the difference between women and men's self-reported ideology might vary from country to country depending on cultural, political, socioeconomic or women rights-related factors. Therefore, we are adding to the simple model the interaction term between gender and country.

```
proto_fit_1b = lm(lrgen$ideology_st ~ lrgen$female * lrgen$country)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \beta 2 \cdot Country + \beta 3 \cdot (Gender \cdot Country) + \epsilon$$

Indeed, this adapted model shows that there is great variance in self-reported ideology when accounting for the different countries. For example, women in Portugal are estimated to be 0.43 units less liberal than men, whereas in Iceland the opposite seems to be true, with women being -0.31 units more liberal. Despite these significant differences within countries, the overall effect of gender across all countries is still notable, with women being around -0.26 units less conservative than men, on average.

Followingly, we will add a temporal dimension by including time as a predictor, resulting in the final model. This is in order to control for the potential influence of the passing of time on the self-placement on the ideological scale of individuals, and assures that time is not a confounder.

```
fit1 = lm(lrgen$ideology_st ~ lrgen$female * lrgen$country + lrgen$year)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \beta 2 \cdot Country + \beta 3 \cdot (Gender \cdot Country) + \beta 4 \cdot Year + \epsilon$$

The results indicate that, on average, for every increase in the surveyed year there is a -0.012 move towards more liberal ideological self-placement; in other words, respondents tend to be more liberal as time goes by. However, the results on gender remain similar to the previous model, both in statistical significance and the magnitude of the effect. According to this, women are -0.258 units more liberal than men, on average, across all countries.

In transitioning from this model to the second one, we aim to explore how the effect on ideology might be shaped by age and its interaction with the relevant variables (year, gender and countries). Note that we have opted to treat countries as a fixed term going forward, for ease of understanding and to avoiding overfitting. Importantly, our earlier analysis has already established that countries experience different effects, yet on average women still move towards being more liberal.

```
fit3 = lm(lrgen$ideology_st ~ lrgen$female * lrgen$age + lrgen$year + lrgen$country)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \beta 2 \cdot Age + \beta 3 \cdot (Gender \cdot Age) + \beta 4 \cdot Year + \beta 5 \cdot Country + \epsilon$$

The $\beta 3$ coefficient is very statistically significant and has a value of 0.004, indicating that women's ideology tends to change more than that of men, as it is bigger than $\beta 2$ (0.002). Essentially, this shows that, despite the existent gender gap, women tend to very slightly turn more conservative as they become older (0.004) the gender gap in ideological self-placement widens as women age too. **(did i interpret it right?)** We can conclude H1 is passed.

5.1 Hypothesis 2

For the second hypothesis, we aim to determine whether the gender-ideology relationship strengthens over time in our time-frame. Naturally, we begin by interacting gender and year to explore the potential changes in their relationship over the years.

```
proto_fit_2a= lm(lrgen$ideology_st ~ lrgen$female * lrgen$year)
```

$$\alpha + \beta 1 \cdot Gender + \beta 2 \cdot Year + \beta 3 \cdot (Gender \cdot Year) + \epsilon$$

Our analysis indicates a general trend towards increased liberalism over time for both genders: the coefficient β_2 suggests that, on average, individuals report higher ideology scores as the years progress, with an estimated increase of -0.01 units per year. Even more importantly, our findings highlight that this trend is more pronounced among women. The coefficient β_3 confirms that women exhibit a steeper increase in liberalism, with an estimated additional increase of -0.01 units per year.

As previously established, adding countries as a fixed term helps us control for the inherent differences there might be between countries. Thus, we have added this variable in the final model:

```
fit2 <- lm(lrgen$ideology_st ~ lrgen$female * lrgen$year + lrgen$country)
```

$$\alpha + \beta 1 \cdot Gender + \beta 2 \cdot Year + \beta 3 \cdot (Gender \cdot Year) + \beta 4 \cdot Country + \epsilon$$

Despite the great differences between countries, every year does lead, on average, towards more liberal attitudes (-0.01). $\beta 3$ shows that there is a statistically significant, more pronounced trend for women to become -0.01 units more liberal than men for every given year. This, in turn, confirms H2.

5.2 Hypothesis 3

If the third hypothesis is correct, then we should expect to see an impact of regime on the gender gap. Therefore, we will start with an interaction with regime.

```
proto_fit_6a = lm(ideology_st ~ female * regime, data = lrgen)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \beta 2 \cdot Regime + \beta 3 \cdot (Gender \cdot Regime) + \epsilon$$

The initial findings reveal that in autocratic regimes, men tend to exhibit a slightly conservative base ideology (denoted by α), while women's ideology is marginally more liberal by a slight degree (approximately -0.03 units). This effect could have happened by chance; however, the effect of regime type on ideology scores emerges as highly statistically significant. On average, the more democratic a country's regime type is, the more liberal the self-placements of individuals seem to be (-0.37 units). The interaction $\beta 3$ between gender and regime type is similarly significant, and suggests that the gender-ideology relationship is moderated by regimes, as the difference in ideology scores between men and women tend to diminish (by -0.03 units), the more liberal a country is. Therefore, these results indicate that regime does have an effect on gender gap.

Next, we will include years as a fixed term so as to control for this variable.

```
fit6 = lm(lrgen$ideology_st ~ lrgen$female * lrgen$regime + lrgen$year)
```

$$Ideology = \alpha + \beta 1 \cdot Gender + \beta 2 \cdot Regime + \beta 3 \cdot (Gender \cdot Regime) + \beta 4 \cdot Year + \epsilon$$

Just as observed in previous models, one-year increases in survey years lead, on average, towards more liberal self-placements. Even when accounting for survey-years however, the gender gap widens with every increase in the regime type (from autocracy -> electoral democracy -> liberal democracy), as women become NA units more liberal than men. This indicates that regime types do have an impact on the gender gap, confirming H3.

```
labelss = c("Males", "Females (change)", "Age", "Austria", "Belgium", "Canada", "Chile", "Czech Republi
```

TO ADD: cannot manipulate gender, no experiment, . . . ,)

6 Conclusion

(500 - 700 words) • a short summary of your paper,

• discusses the limitations of your approach (either in the theory you propose or in the empirical analyses). These limitations can be presented in positive terms as they open new avenues for future research.

- gender proxies the salience of sociocultural issues: does this salience only affect women or also men in the ideological gender gap (do they become more/less liberal in solidarity/backlash? is there a way to map this? is it relevant? not so if we're only measuring the gap, but potentially relevant if we're generally interested in gender-ideology relationship)
- Further potential confounders we did not account for? Economic situation (economic crises, etc. - but is this really relevant?)? Anything else? - I would say economic crises (as they affect everyone) would shift the placement at large but would not necessarily affect the gap. Previous gender gap literature found that women identify as more liberal even when contorlling for economci disadvantage, so I would assume its not really relevant.

Table 3: Regression table

	Dependent variable:			
	Ideological self-placement from left (1) to right (10)			
	OLS			
	H1 Model 1	H1 Model 2	H2 Model 3	H3 Model 4
	(1)	(2)	(3)	(4)
Males	30.28290***	33.00739***	23.12920***	42.80171***
	(0.89969)	(0.90156)	(1.30066)	(0.90753)
Females (change)	−0.25823***	−0.28729***	13.41680***	−0.03017
	(0.04113)	(0.01031)	(1.77978)	(0.01913)
Age		0.00213***		
		(0.00014)		
Austria	−0.54857***	−0.50311***	−0.52922***	
	(0.03207)	(0.02240)	(0.02240)	
Belgium	−0.50401***	−0.45007***	−0.46853***	
	(0.03180)	(0.02226)	(0.02227)	
Canada	−0.10930**	−0.12850***	−0.12068***	
	(0.05042)	(0.03510)	(0.03512)	
Chile	−0.58646***	−0.33504***	−0.36986***	
	(0.03891)	(0.02721)	(0.02722)	
Czech Republic	−0.12302***	−0.05541**	−0.07903***	
	(0.03183)	(0.02215)	(0.02216)	
Denmark	−0.11753***	−0.18763***	−0.19449***	
	(0.03172)	(0.02222)	(0.02223)	
Estonia	0.10124***	0.15518***	0.14656***	
	(0.03294)	(0.02264)	(0.02265)	
Finland	−0.00786	0.10996***	0.10756***	
	(0.03170)	(0.02214)	(0.02215)	
France	−0.68781***	−0.55581***	−0.56769***	
	(0.03190)	(0.02222)	(0.02223)	
Germany	−0.81131***	−0.74970***	−0.76086***	
	(0.03088)	(0.02162)	(0.02163)	
Greece	−0.35351***	−0.19985***	−0.22126***	
	(0.03246)	(0.02264)	(0.02265)	
Hungary	0.02172	0.09222***	0.08348***	

Table 4: Regression table

TRUE

- potential dataset limitation: The data we have is compiled from different data-sets - (partially) different question-wording/scales/question administration techniques, etc. -> may possibly lead to systematically different answers to different surveys - BUT not a huge problem because question wording is very similar + surveys are well established/tested
- Problem with left-right self-placements as proxy for 'ideology': (Anna has sources on this, if we want to include further references - but probably not necessary) PROBLEM: 'left-right' might not be understood similarly by different people/in different contexts; ideology may actually be multi-dimensional and not well captured with left-right scale; Social desirability bias in self-identification; etc. BUT Not a massive problem: left-right is still most dominantly used in literature; understood by most respondents SOLUTION/further research: use different measures of ideology (different scales, infer left-right position from questions on policy-areas, etc.)

- State how your analysis could be improved (e.g. better data that would be useful to collect).

  - dassonneville notes a flattening of the ideology gap (holds mostly steady post-1990). Potential dataset limitation here that it caps out at 2018 and doesn't capture the major cultural trend/mobilization of the metoo movement which became salient post-2017 and probably has driven the ideology gap wider
  - potential dataset limitation: the data we have is only for OECD countries where the sociocultural gendered divide might not be as stark as in some other densely-populated developing (industrial?) societies like China, India, Brazil, etc.The findings would be more robust if data from these places could also be incorporated
  - regime-type: most of the observations in our dataset are liberal democracies. Non-findings for gender-ideology relationship by regime type might be due to limited number of observations.

- Basically, state what your paper could not do and propose how future research could go about it. If for example you know that there are important confounding factors which you could not include, mention these and emphasize the importance of including them.
- makes concrete suggestions for future research.

7 Proposal

Please write your final project using this template.

The below text explains in detail how to cite and get a nicely formatted reference list.You can delete this text and use the rmd file as your template.

How to cite works and get a reference list automatically? With this template we included two additional files, references.bib and american-political-science-association.csl.

- I want to cite the book by (Aytac and Stokes 2016, 20).
- The references.bib file contains the references of two works in bibtex format. You can extend this reference file by adding the works you want to cite in bibtex format. Open the references file to see how it looks like. The first reference is for Powner(2015) and it starts with `@Book{powner2015, author = {Leanne C Powner},(...)}`. `powner2015` is the keyname of this reference and you can refer to it (or cite it) using the `@` sign in front of it, in particular by writing `@powner2015`. For example,

  - you can cite works within the Rmarkdown file, by writing `[@powner2015]` in the text and you will get the following citation in brackets (Powner 2015).
  - If you want to refer to a work without using round brackets, write `@mayhew2005divided` (without the squared brackets) in your text and you will get Mayhew (2005).
  - To add references of the works you want to cite, you need to insert the citation information in the references.bib file. You can find the citation information on almost anything on google scholar: - 1) go to google scholar and search for topic of your interest, - 2) choose a work on Google Scholar, then click on cite, then choose Bibtex format, copy-paste this in the references.bib file, save the .bib file. That is all.

- In this class we are going to use the APSA reference and citation style.

  - The hard way to follow this style is to read the style manual and manually correct the style in your reference list and citations. By style is meant, for example, whether one should write the full names of the authors, or abbreviate the first name, whether one should write the title of the work in italics or not, whether one should place the publication year right after the author's name or towards the end, etc..
  - All these rules are specified in the APSA style manual, which I uploaded on Moodle.
  - The good news is, in this class you do not need to do anything manually, as Rmarkdown will do it for you! (From personal experience I can tell, this is pretty awesome, it will save you tons of time.)
  - You just need to specify the citation and language style in the YAML preamble and supply the style file in the folder where your Rmd file is. **This is already done in this template**. Check the YAML preamble in this template, line 9 says `csl: american-political-science-association.csl`, this is you telling Rmarkdown to use the style saved in this .csl file.
  - You do not need to do anything more, just cite the works in your text. Rmarkdown will create proper citations and format the reference list in the correct way as specified by the APSA style. It will include the reference list right at the bottom of your document.

Let us cite another work by Tsebelis here: Tsebelis (1999) or (Tsebelis 1999, 100).

8 References

```
# stargazer::stargazer(fit1, fit3, fit2, fit6,
#                      title = "Regression table",
#                      intercept.top = TRUE,
#                      intercept.bottom = FALSE,
#                      covariate.labels = labelss,
#                      dep.var.labels = "Ideological self-placement from left (1) to right (10)",
#                      column.sep.width = "10pt",
#                      font.size = "large",
#                      model.names = TRUE,
#                      column.labels = c("H1 Model 1", "H1 Model 2", "H2 Model 3", "H3 Model 4"),
#                      omit.stat = c("f", "ser"),
#                      type = "latex",
#                      header = FALSE,
#                      digits = 5)
# write(output, file = "regression_table.html")
```

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