# UNIVERSITY OF GOTHENBURG <br> DEPT OF POLITICAL SCIENCE 

## How equal are politicians really?

An experiment about gender and the effects of gender stereotypes on the perception of politicians

Bachelor Thesis in Political Science

Spring 2014
Johan Ryde
Supervisor: Elina Lindgren
Word count: 11993

Abstract: Experimental research in the US has shown that male and female politicians are evaluated differently. Such research has been lacking in a Nordic setting. By conducting an experiment on secondary education pupils in Sweden we bring this research into the modern Nordic setting and reconfirm that politicians are affected by gender stereotypes. We also look at the effects of an additional stereotype manipulation in which respondents are told that men and women often are seen as possessing different levels of authority. This type of manipulation has previously produced significant results in psychological experiments where respondents were taking math tests. In this study we see that the stereotype manipulation also has an effect in the evaluation of politicians. Additionally we establish that gender identification, previously shown to be relevant in experiments where respondents were taking math tests, is also relevant for the evaluation of politicians.

Keywords: Gender, gender stereotypes, gender identification, stereotype manipulation

## Table of Contents

1. Introduction ..... 1
2. Theoretical background ..... 2
2.1 The Nordic case and Matland's experiment ..... 4
2.2 Psychological math test experiments ..... 6
2.3 The effects of gender identification ..... 6
3. Hypotheses ..... 7
4. Method .....  9
4.1 Population and selection ..... 9
5. Experimental design ..... 10
5.1 Speech design ..... 11
5.2 Questionnaire design ..... 12
5.3 Validity measures \& Classroom appearance ..... 13
6. Analysis ..... 14
6.1 Randomization and manipulation control ..... 14
6.2 Analysis of group one and group two ..... 15
6.3 Analysis of group one and group three ..... 18
6.4 Analysis of group two and group four ..... 20
6.5 Gender identification ..... 22
7. Conclusion ..... 24
8. References ..... 26
9. Appendices ..... 30
9.1 Appendix A - ANOVA-test for randomization \& Regression for left-right affiliation ..... 30
9.2 Appendix B - T-test tables for analysis of group one and two ..... 32
9.3 Appendix C - Left-Right political spectrum table for analysis one ..... 35
9.4 Appendix D - T-test tables for analysis of group one and three ..... 36
9.5 Appendix E - T-test tables for analysis of group two and four ..... 39

## 1. Introduction

The feminist movement can today be found vibrant and alive in most western countries. Western countries have, in varying degrees, implemented policies to help women advance in public and private life. In the political life women have progressively gained representation in Sweden. In 1921 they gained the right to vote and in 1993 they gained more equal representation in parliament with the introduction of a policy to have every other slot on the ballot list (the order in which seats are awarded) filled by a woman by several political parties (Christensen, 1999: 78; Riksdagen, 2012). Women have gone from having 33\% of the seats in 1991 to having $45 \%$ of the seats in the Riksdag today (SCB). ${ }^{1}$ But are female and male politicians viewed as equal or are they still trapped in gender roles? A 1994 experiment in Norway, a country with similar gender equality as Sweden both then and today, found that the gender of a politician who authored a speech mattered for how they were perceived by the respondents (Matland, 1994; IPU, n.d.; IPU, 2014) . Since then no similar research has been done in the Nordic countries. The first purpose of this study is to find out if these differences remain or if other, or no, differences are found. This is interesting both because research is lacking and because the subject could hold great societal weight. A perceived difference between differently gendered politicians may be problematic for political life and the equal representation of men and women in politics, especially from a meritocratic point of view. To investigate this an experiment will be designed on the basis of Matland's 1994 experiment. The second purpose of this study is to see what effect the mentioning of a gender stereotype has on the perception of a politician. This idea derives from previous experiments in psychology on the performance of men and women on math tests. In these studies it was found that women performed worse on math tests when subjected to a stereotype before taking the test, i.e. being told that women had previously performed worse on the math test, that women perform worse on math tests in general or that their results would be used as part of an indicator for their gender (Schmader, 2002; Eriksson \& Lindholm, 2007; Johns, Schmader \& Martens, 2005). When not subjected to such a stereotype they perform equally to the men (Ibid.). A meta-analysis of the field showed that no real difference between men and women seem to exist (Lindberg, Hyde, Petersen \& Lind, 2010). The effectiveness of the stereotype manipulation could be problematic for feminism. When feminists argue against the societal injustices they see they invariably repeat the very stereotypes they wish to defeat in an effort to draw attention to them. I suspect that this repetition can lead to short term

[^0]internalization of this stereotype leading the audience of the feminist to believe the stereotype regardless of its actual connection to reality. Perhaps this might even work in the long term if repeated and reinforced enough. For the purposes of this study the focus is on the short term effect of stereotypes in the same vein as the psychological math test studies. Given my suspicions it seems worthwhile to investigate if a manipulation with a stereotype repetition has an effect on how the male and female politicians are perceived. To investigate this an additional manipulation will be added to the experiment, mentioning a stereotype about men and women. In one American and one Swedish psychological math test experiment it was found that gender identification moderated the respondent's performance on the test (Eriksson \& Lindholm, 2007; Schmader, 2002). Interestingly the results were reversed between the US and Swedish studies (Eriksson \& Lindholm, 2007). If gender identification is at play in the psychological math test experiments when the stereotype manipulation is applied it might also be at play when the stereotype manipulation is applied in this study. Furthermore any difference due to gender identification that is found could carry implications for both the work for a gender equal society and for the scientific understanding of gender identification. The third purpose is therefore to broaden the knowledge gender identification and see if it has an effect on the evaluation of politicians as well. This will be investigated by an addition of a gender identification scale in the questionnaire which is based on the US and Swedish studies.

To recap the aim of this study is to bring the political speech research in the Nordic countries into the 21 st century while at the same time gauging the current progress of feminism with regards to political equality. In addition, the older study by Matland (1994) will be expanded by the inclusion of a stereotype manipulation adopted from psychological math test experiments and by looking at the potential role of gender identification in relation to how respondents rate the differently gendered politicians. Such an expansion offers a fresh perspective on the issue and will hopefully serve to fill a gap currently left open in the scientific community. Furthermore both the inclusion of stereotype repetition and the analysis of differing gender identification are important as they might carry complications for the wider feminist movement.

## 2. Theoretical background

There has been a lot of research on the impact of gender on the public perception of politicians. Most of this research has been done in the US. An experiment conducted by Sapiro (1981-1982) showed disparity between how a male and female politician were
perceived, with the male being seen as more competent when it came to military issues and more likely to win an election and the female more competent at dealing with education, health problems and keeping an honest government. The common denominator of these issue areas is that they were not mentioned in the speech (Ibid.). Voters often rely on stereotypes such as race and gender in low information settings, drawing from the stereotypes to fill out an otherwise incomplete picture of the politician's stance on issues and ideological position (Alexander \& Andersen, 1993; McDermott, 1998). Studies using low information mock elections have shown that men often prefer the male candidate and females the female candidate (Sigelman \& Sigelman, 1982; Garret \& Brooks, 1987). It has been shown that voters believe that female candidates are more liberal, Democratic and feminist, stemming from their perceived compassionate nature (Huddy \& Terkildsen, 1993; Alexander \& Andersen, 1993). Voters also believe men, being more instrumental, are generally better at handling crime, defence and foreign policy issues whereas women are better at compassionate issues like helping the poor, the elderly, day care and healthcare (Ibid.). In the US, women have been shown to be favourably stereotyped in low information Community Council elections (Huddy \& Terkildsen, 1993; Matson \& Fine, 2006). One study focused on the potential role of party identification and found that gender stereotyping was still relevant despite party cues being present (Sanbonmatsu \& Dolan, 2009). However, female Republican politicians gained less from favourable stereotypes and lost more from unfavourable ones (Ibid.). So, voters rely on gender stereotypes to form their opinions. The stereotyping is especially prevalent when little other information is given but they are still significant even when more information is present (Sanbonmatsu \& Dolan, 2009; Matland 1994). Similar research in a European context does not seem to have been done. This seems to be particularly problematic when looking at the Nordic case, where many political parties in Sweden, Norway, Finland and Denmark introduced gender quotas between the mid 1970's and the mid 1990's, giving rise to a history of female representation in politics (Christensen, 1999: 78). Sweden is today ranked 2nd in the Gender Inequality Index (GII) from the United Nations Development Programme (UNDP) and 4th in the Global Gender Gaps Report (GGGR) from the World Economic Forum (WEF) (UNDP, 2012; WEF, 2013: 8). This can be compared to the US ranking of 43 and 23 respectively, ranking behind most of Europe as well as many other countries around the world (Ibid.). Looking at the parliamentary representation of women we find that the US has a ratio of 0.22 women per man, compared to Sweden's ratio of 0.81 women per man (WEF: 346, 370). Similar discrepancies are found when looking at women in ministerial posts where the US boasts only a ratio of 0.38 women per man
compared with Sweden's 1.09 women per man (Ibid.). The lack of female politicians may have an impact on the findings in the US-based studies. A study looking at rural leadership councils in India found that exposure to female politicians reduced the inherent societal bias against them (Beaman et al., 2009). Although not completely analogous to the US or national parliaments it makes clear that female representation is important for public perception.

### 2.1 The Nordic case and Matland's experiment

To find out what the situation is like in the Nordic countries we need to turn to Nordic studies. As mentioned above there has been a lack of such research, but there is one notable exception, a 1994 experiment conducted by Richard E. Matland in Norway. Norway, like Sweden, has good gender equality rankings with a ranking of 5 on the GII and 3 in the GGGR as well as better female representation ratios in the political arena (UNDP; WEF: 8, 302). Matland also argued for the specific case that is the Nordic countries when it comes to gender equality (Matland, 1994). Matland's study will be presented at length as much of this study will be based on it. In his experiment he gauged the opinions of secondary education pupils on politicians of different genders. To remove political variation in the answers Matland used four experiment groups, two with the same Labour Party text and two with the same Conservative Party text, and the respondents chose which speech to read based on which side of the political spectra they felt closer to. The respective Labour and Conservative texts were identical in their respective two groups with the only difference being the gender of the politician. Matland showed that when it came to policy areas men and women were statistically significantly rated differently in five out of fourteen policy areas in the Conservative group, and six out of fourteen for the Labour group. The Conservative Party readers found the male preferable for defence, agriculture and foreign policy and the female for child care policy and women's rights. The Labour Party readers found the male preferable for defence and the economy and the female for education, agriculture, elderly care and women's rights. The Conservative Party readers rated the male politician slightly better at arguing his policies whereas the Labour Party readers had slightly more confidence for the female as a MP. Because Matland used two distinctly different speeches in his experiment it is difficult to know if the right-left affiliation was the cause of the different ratings or if the actual speeches led the respondents to respond as differently as they did. Other significant results found was that female Conservative Party readers found the male politician to be a better vote getter and more likely to be elected. Labour party readers showed significant gender stereotyping effects even for some issues that were discussed in the speech. Matland
employed rather lengthy speeches for both the Conservative and the Labour Party so the respondents were well informed of the positions the politicians held on the discussed topics. The Labour Party readers differentiated between the male and female candidates with regards to the economy, which was discussed at length, and defence and education, which was mentioned briefly. This shows that gender stereotyping is not only relevant in low information elections but can also play a role in higher-information settings. Overall, and contrary to Matland's own expectations, we can see that Matland found results similar to the US studies. The male politician was rated favourably for defence regardless of political affiliation of the respondent and he was favourably viewed for the harder issues overall. The female politician was favourably viewed with regards to softer areas such as elderly care and child care and both groups saw her better at women's rights. The results were overall very strong as well, and prevalent even for issues discussed in the speech, something not seen in other studies. The interest of this study lies in whether these differences remain in place today, some 20 years later, or whether society's views have changed - for better or worse.

Before moving on I would like to present my three reasons for choosing to base large parts of my study, notably most of the experimental design, on Matland's study. The first reason Matland is of importance is because of the question Matland raised; Does the gender of a politician matter for the evaluation of them? It is as relevant today as it was back in '94. If the gender of a politician truly does change the perception of them and their political competency then we would do well to understand why that is and in what ways it may or may not be problematic. Matland arrived at the conclusion that overall it seemed that men and women were viewed as equal but different but this conclusion was reached after he explained away his results by referring to the then current political situation in Norway (Matland, 1994). The second reason is that basing my experiment on a previous experiment increases the internal validity of the study. It also lets me compare my results with Matland since the studies so closely resemble each other. The third reason Matland is of importance to this study is that the experiment was conducted in Norway. The Nordic countries, as laid out above, offer a special case given their equality inside and outside of parliament and only Matland has conducted a study in this region. Building on his work then seems like the only logical thing to do as, to my knowledge, no other previous research in the Nordic countries exists.

### 2.2 Psychological math test experiments

In the field of psychology multiple experimental studies have looked at the effects of priming by the means of stereotype manipulations. Pre-test priming by the means of stereotype manipulation has been shown effective both for gender and ethnical identification in the US, leading respondents to exhibit behaviour stereotypically related to their social group identity (Steele \& Aronson, 1995; Shih, Pittinsky \& Ambady, 1999; Aronson et al., 1999). A growing body of research has shown that men and women perform unequally on math tests when subjected to such stereotype priming before the math test is taken. When told that their performance would be used as an indicator of both their individual math ability and an indicator of the math ability of their gender women performed worse than when told that the test would just give an indication of their individual math ability (Schmader et al., 2001 in Schmader, 2002; Schmader, 2002; Eriksson \& Lindholm, 2007). When the math test was described as a problem-solving exercise men and women performed equally, but when the same test was described as a math test that would be used to test for potential gender differences women performed worse than men (Johns, Schmader \& Martens, 2005). A metaanalysis by Lindberg et al. (2010) of these kinds of psychological experiments and studies on the mathematical performance of men and women concluded that there are no real differences in their mathematical abilities, although the stereotype of boys and men being better at math seems to be prevalent in all age groups. One possible explanation for the lacking performance from women when subjected to a negative stereotype is that such a stereotype negatively affects their working memory (Schmader \& Johns, 2003). It seems plausible that this type of priming will not only affect their personal performance by lowering their working memory or pushing them to conform to gender identities but also affect the evaluation of others.

### 2.3 The effects of gender identification

Another explanation presented by Schmader (2002), citing social identity theory and selfcategorization theory, holds that respondent's self-identification with their gender is the factor behind the diverging results between men and women. While men performed equally well regardless of their individual gender identification the same was not true for women (Ibid.). Because the stereotype of women being worse than men at math is so prevalent women will want to conform to that prescribed female identity. Therefore women who identify more closely with their gender should also perform worse as to uphold and reproduce the stereotype than women who do not closely identify with their gender (Schmader, 2002). The result of Schmader's (2002) experiment confirmed this suspicion. However, a replicate study in

Sweden found contradicting results, having women who identified less with their gender perform worse on the math test (Eriksson \& Lindholm, 2007). In both cases gender identification was shown to play a role but the interaction between other societal variables appears complex. While the explanation given by Schmader for her results compare well to earlier literature the results of the Swedish study leaves more open to question. Nevertheless it seems clear that gender identification matters and that Sweden presents a diverging case from the US one.

## 3. Hypotheses

As we could see from Matland's study the results of the US experiments held true in a Nordic setting. Male and female politicians are viewed differently based on their gender although the specifics vary within the US studies and between them and Matland. As both Norway and Sweden has had gender quotas in their political parties since before Matland's study and since the ratios of political representation in parliament as well as overall gender equality rating is high we have to question whether Matland's findings hold true today. A lot could have happened with the public perception of gender differences and gender roles. However, a high rating on the gender equality indexes only means that the Nordic countries are beating out other countries and not that gender stereotypes do not exist. While progress has surely been made it seems reasonable to assume that baseline gender stereotypes, whether they be specific to the gender stereotypes of politicians or just a reflection of the society-wide gender stereotypes, are still in effect. Therefore the first hypothesis is as follows;
(1) A male politician will be rated more competent in hard issue areas such as defence policy and a female politician will be rated more competent in soft issue areas such as equality politics when no stereotype manipulation is present.

In the psychological math test experiments we saw how women performed distinctly worse when subjected to a stereotype manipulation. The stereotype manipulation worked as a psychological cue making the respondents internalize and reproduce the stereotype while taking the test. It seems plausible that this effect could be observed even when it has nothing to do with the respondent's own ability to perform a task. In a political setting it seems reasonable that a similar internalization of a stereotype would lead respondents to rate political candidates differently than had they not been subjected to such a stereotype. If the respondents are subjected to a stereotype manipulation similar to the ones used in the
psychological math test experiments then we should expect the respondents to rate the female politician worse than the respondents receiving no such manipulation. Furthermore, judging from the psychological math test experiments, the male politician's ratings should remain virtually the same. Because the respondents are rating someone else rather than taking a test themselves we should still be open to the possibility of completely different results than can be expected from the psychological math test experiments. Nevertheless the second hypothesis is;
(2) When subjected to a stereotype manipulation the female politician will be rated less favourably while the male's ratings will remain the same.

In two of the psychological math test experiments we saw that gender identification mattered for how respondents were affected by the manipulation. In the US study a strong gender identification among women correlated with worse results on the math test. In the Swedish study it was the female respondents with low gender identification that performed worse. It is not clear what the mechanisms behind their respective identifications and the differing performances are (Eriksson \& Lindholm, 2007). What has been shown is that it did matter for the respondents. The question posed in this thesis is whether it also matters when evaluating politicians? If a strong gender identification matters for their personal performance on a test it seems plausible that it will also matter for their evaluation of others. Seeing the world through their own eyes, so to speak. The gender norms of society might be interpreted differently by those who identify strongly with their gender and those who do not. As no similar research has been done before and because the original psychological studies had different results it seems impossible to know in which direction the effect will go, but they indicate that we will find an effect. The third hypothesis therefore reads;
(3) Differing gender identification will lead to different evaluations of the political candidates regardless of whether the stereotype manipulation is present or not.

The hypotheses are illustrated in model 1.

Model 1.


## 4. Method

When thinking about how to best answer the three hypotheses two methodological choices seem to stand out. A large survey study and a multi-group experiment. The reason these two stand out over other methodological choices is that they both offer a quantitative analytical tool that is missing in for example interview based studies. The ability to do deep multivariate analyses that these tools offer is important for being able to accurately pinpoint and measure the effects of gender, gender stereotype and gender identification. One reason a survey study would be problematic in this case is because it would be hard to ask questions that would give us the answers to the hypotheses. Many respondents would probably feel unease when pressed to give an answer to a direct question such as "Would you favour a male politician over a female politician" and might lie or otherwise withhold their views. An experiment on the other hand gives us the possibility to measure the direct effect of gender in a way that a survey study would not. Likewise, hypotheses two is unanswerable in a survey study as it requires us to measure the direct effect of the stereotype manipulation. Lastly, survey studies have, unlike experimental ones, previously failed to find differences (Kahn, 1996: 9).

### 4.1 Population and selection

The target population of the experiment is Swedish secondary education pupils. This decision was made due to the fact that Matland (1994) used Norwegian secondary education pupils and our goal is to maximize comparability with his study. The answer to hypothesis one, whether the male politician is seen as more competent at hard issues and the female at soft issues, will be more useful when we have Matland's baseline to compare it to. To be able to do that we should try to maximize comparability in selection as well. In doing so we'll know that any potential changes are due to either the potential differences between Norway and Sweden or due to the time that has passed rather than different approaches to the experiment. While the respondents will not necessarily reflect the views of the national population they offer a good insight in to what images young people are getting, from media
or elsewhere. One advantage is the fact that the age span will be very small, requiring less respondents for a significant result by producing more homogenous groups. Since the age span is smaller and the respondents are still in school other potential heterogeneous group features such as marriage, children and different occupations are limited. Out of the desired population a necessary geographical limitation was made due to lacking resources, in effect limiting the selection to secondary education pupils in Gothenburg. Gothenburg is Sweden's second largest city and as such it has several big secondary education schools that accept children from all parts of the city giving a spread of both social and geographical (in the suburban-urban sense) background. A suitable number of 400 respondents were estimated based on power analyses using effect from Matland's (1994) study. A target power of 0.80 was used for the power analyses.

Due to time constraints and great difficulty in finding willing schools for the experiment the actual number of respondents ended up being $272 .{ }^{2}$ These classes came from four different schools, all of which accepted pupils from the larger Gothenburg region.

## 5. Experimental design

The experiment is in large parts based on Matland's 1994 experiment. The experiment was of a $2 \times 2$ factorial design. Respondents were randomly assigned to one of four different groups. No neutral (genderless) control group was created as it would serve little purpose to answer the hypotheses. Only the differences between the differently manipulated groups is of interest. All groups read the same speech but received different manipulations in the following way: For group one and three the politician was male. For group two and four the politician was female. In group three and four an additional manipulation was introduced where the mentioning of a stereotype was present in the instructions. The stereotype manipulation read "We know, for example, that male and female politicians are often seen to possess different levels of authority" ${ }^{3}$. This form of manipulation was chosen because it was ambiguous enough to let the respondent's own preconceived stereotypes flourish while at the same time strong enough to make the respondents actively think in a stereotypical way about the way male and female politicians may exhibit differences. In groups one and two a vacuous replacement sentence was used, "In this study a total of three speeches are used, spread over different secondary education classes", which directly precedes the next sentence (identical in

[^1]all groups), "The speech you will now get to read is one of three different speeches that will be used in the study ${ }^{\prime 4}$. The choice to include this sentence, which only repeats information without adding anything new, was made on the basis of having uniform front pages for all the respondents. These groups are unlike the ones used by Matland as he separated people by Labour-Conservative affiliation to not have left-right biases overshadow the respondents' gender-related biases. Separating respondents into two distinct ideological groups with different speeches affects the overall design idea that everyone will be reading the same speech. It seems more efficient and statistically sound to control for political affiliation in the questionnaire.

The instructional front page included both gender, as in Matland's experiment, and, in groups three and four, stereotype manipulation. The respondents were asked to participate in a study where they would evaluate a political candidate based on a speech. The study claimed to be about how different speeches affected perception of the politician, and claimed that different classes were given different speeches. This cover story has been used previously with good results (Sapiro, 1981-1982).

### 5.1 Speech design

The speech was rather long at one full A4 page, a conscious choice made on the basis of Matland (1994). It covered the policy areas of children/kindergarten, unemployment, research, the economy and healthcare. The speech was kept rather politically neutral, avoiding any obvious party cues such as solidarity or taxes. The aim was not to have the speech completely neutral, only neutral enough to not drown out any gender-related bias. Given that the speech talks about all of these areas in a way that calls for improvement it is possible that the respondents are more likely to place the politician in the camp of the opposition, but as it shouldn't be obvious it is unlikely that this subtle distinction would be problematic for the validity of the experiment. The speech itself was constructed using parts of a speech held by the Social Democratic Party leader Stefan Löfven at Almedalen, a gathering of all the parties in the Swedish parliament that happens once a year ${ }^{5}$. Basing the speech on an actual political speech helps make the speech more realistic and strengthens the external validity. To avoid any obvious recognition only carefully selected parts of Löfvens rather lengthy speech was used and large parts were rewritten with about half the speech being original work by me. In the questionnaire a control for whether respondents listened to speeches held at Almedalen

[^2]was included, and is controlled for during the analysis below. The speech seems to have been fairly well designed from a left-right neutrality standpoint. When asked what party the respondents thought the politician came from $53.3 \%$ answered a left bloc party and $40.6 \%$ answered a right bloc party. ${ }^{6}$ The final speech ended up similar to Matland (1994) in that it covered several policy areas and was quite lengthy rather than brief.

### 5.2 Questionnaire design

The questionnaire was, apart from differing genders of the politicians, identical in all groups. The questionnaire opened with questions about the politician who's speech they've just read. The questions revolved around how they thought the politician would perform as an MP, as prime minister, how well they thought the politician argued their politics and what they thought about the politician in fourteen different policy areas (the economy, healthcare, agriculture, defence, education, transportation, foreign policy, unemployment, environment, elderly care, tax policy, gender equality, rural development and child care policy). Questions about whether they would support the politician and the politician's electability were also included. Control questions for age, gender, social background, political affiliation, political interest and what programme they are studying was present in the latter half of the questionnaire. The questionnaire was based on Matland's (1994) questionnaire but with a few changes. First, all of the questions relating to Matland's cover story were all dropped. These were a few questions on youth membership in Norwegian parties that were placed at the front of the questionnaire. The removed questions were never used by Matland in his analysis (Matland, 1994). Second, as the original experiment was held in Norwegian some things were rewritten for a Swedish and up to date context. Notable examples of this is Women's Rights, a term unfamiliar to Swedish voters, being translated to roughly Gender equality politics and Friend of nature and the environment being changed to Environmental politics ${ }^{7}$. Whenever possible the exact translation was used to maximize the comparability with Matland's study. Third, a few questions have been added. These are a question of what the respondent thought of the speech, a control question for left-right identification on the political spectrum, four questions regarding their gender identification and a manipulation control question. The manipulation control let respondents write freely to answer the question of whether they thought that there was any difference between male and female politicians and if so, what.

[^3]The idea was that, through a qualitative analysis, respondents subjected to the stereotype manipulation would mention authority or other words such as leadership, etc, more frequently than respondents in the other groups. The layout of the questionnaire was kept as similar to Matland's as possible given these changes.

Four questions about gender identification were added to the questionnaire directly following the control question for gender. They are based on a modified Collective SelfEsteem Scale as used by Schmader (2002) and Eriksson \& Lindholm (2007), both psychological math test experiments. The questions read; "Being a woman/man is an important part of my self-image", "Being a woman/man is unimportant to my sense of what kind of person I am", "Being a woman/man is an important reflection of who I am" and "Being a woman/man has very little to do with how I feel about myself". The respondents answered on a scale of 1 , strongly disagree, to 5 , strongly agree. The questions were later indexed to one variable of gender identification, with questions two and four reverse scored.

### 5.3 Validity measures \& Classroom appearance

Several measure were taken to minimize human error while preparing, conducting and processing the experiment. Random assignment was employed to create groups with similar composition of respondents. A randomized list was created, sorting all intended 400 respondents into the four groups of the experiment. ${ }^{8}$ The questionnaires were then sorted in the order of the list. ${ }^{9}$

When conducting the experiment I introduced myself as a student from Gothenburg University, doing research for my bachelor's thesis. To avoid spoiling the manipulations respondents were asked to not ask questions and told that all instructional information was available on the first page. The lack of verbal instructions was intentional since forcing them to read the instructions ensured that respondents in group three and four would read their manipulations. Although respondents had been asked to not ask questions complications still arose in two classes. While not ideal, an ANOVA test showed that the respondents from these classes were spread out evenly enough among the four groups to still be included. ${ }^{10}$ Because of this and the already reduced number of respondents (272) from the ideal (400) these two classes are still included.

[^4]
## 6. Analysis

The analysis will be separated into five steps. For randomization control we will first do ANOVA tests that control for the respondent's background variables such as gender and social background. In the second step group one (male politician, no stereotype manipulation) and two (female politician, no stereotype manipulation) will be analyzed and compared to Matland's 1994 findings to answer hypothesis one. In the third step group one (male politician, no stereotype manipulation) and three (male politician with stereotype manipulation) will be analyzed as part of answering hypotheses two. In the fourth step group two (female politician, no stereotype manipulation) and four (female politician with stereotype manipulation) will be analyzed to also answer hypothesis two. In step five we'll look at gender identification in all groups in order to answer hypothesis three.

### 6.1 Randomization and manipulation control

For an experiment to have good internal validity it is important that the respondents in the various groups in the experiment are statistically similar to each other with regards to factors which might influence the respondent's responses (Esaiasson, Gilljam, Oscarsson \& Wängnerud, 2012: 93-95). The first step to ensure internal validity is the randomization done before the experiment and the second step, this step, is to make sure that the randomization process didn't lead to differently composed experiment groups (Esaiasson et al., 2012: 330331). To control for this several ANOVA tests were used. ${ }^{11}$ The ANOVA tests employed the group variable (1-4) as the dependant variable and the respective background variable as the independent variable. ${ }^{12}$ If the result of the ANOVA test was statistically insignificant then the groups can be said to be similarly composed (Brace, Kemp \& Snelgar, 2002). Overall only one statistically significant result was found. Left-right identification was significant at the $p \leq 0.01$ level marking a difference between the groups $\left(F(4,245)=4.16, \eta^{2}=0.06, p=\right.$ $0.003) .{ }^{13}$ To see whether this difference would be problematic for the experiment overall a regression analysis was employed over all 19 questions used in the analysis below. ${ }^{14}$ Tax policy and foreign policy turned up at a $\mathrm{p}<0.1$ level (Tax policy: $\mathrm{R}^{2}=0.02, \mathrm{~F}(1,96)=2.80, \mathrm{p}$

[^5]$=0.10$. Foreign policy: $\mathrm{R}^{2}=0.02, \mathrm{~F}(1,97)=2.96, \mathrm{p}=0.09$, see Appendix A for all regressions). All other questions had non-significant results. Considering the low $\mathrm{r}^{2}$ values no further action seems necessary.

The manipulation control proved to not be very effective. I employed a qualitative text analysis in which I counted and categorized words and sentences the respondents had used to answer the manipulation question, "Do you think that there's any difference between male and female politicians? If so, what?". Similar amounts of "no", "don't know" and variations of other answers were observed in both the stereotype manipulated and non-manipulated groups with no noticeable differences. The manipulation seems to have gone through due to the results below but the manipulation control does not seem to have been aptly designed to do its job. My recommendation for future studies is to find an alternative solution for manipulation control.

### 6.2 Analysis of group one and group two ${ }^{15}$

As hypothesised above we expect to see the male politician favoured before the female politician by the respondents in at least some areas, and drawing from Matland (1994) we should expect to see differences with regards to both the respondent's own gender and the respondent's political affiliation in how the respondents rate the politician.

To maximize comparability with Matland (1994) and because the effects are easy to estimate a T-test was used to analyse the respondent's answers. Respondents were indifferent to a male or female politician with regards to their ability to argue their policies and their expected performance as an MP. Respondents did however expect the female politician to perform better as prime minister (table 1). These results differ from Matland (1994) where the

Table 1. T-test. Evaluation of Politician - Group one and two, significant results

| All | Lars (Male politician) |  |  | Lena (Female politician) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| As prime minister | 3.50 | 0.84 | 62 | 3.19 | 0.98 | 53 | 113 | 1.72* |
| Men | M | SD | N | M | SD | N | DF | T-score |
| As prime minister | 3.50 | 0.74 | 22 | 3.00 | 0.73 | 16 | 36 | 2.07** |
| Arguing policies | 3.38 | 1.17 | 24 | 2.59 | 0.71 | 17 | 39 | 2.46** |

[^6]readers of the conservative text found the man better at arguing his policies, and the readers of the labour party text expected the woman to perform better as an MP. While the result isn't statistically significant at more than a $\mathrm{p} \leq 0.1$ level it's still worthy of consideration.

Things become even more interesting when we separate men and women. Men are not only more optimistic about the female politician's expected performance as prime minister than the women are, they also find her better at arguing her policies. In fact, women show no significant effect for any of the questions. When conducting the experiment I noted that the respondents in the Technical programme were almost exclusively male and the other three programmes were female dominated. Perhaps the men's preference for the female politician is related to their programme rather than their gender. To investigate new T-tests were made separating the programmes from one another. The effects of gender did not disappear in any of the programme specific tests. Three programmes had no significant results. The only statistically significant result was found in the Aesthetics programme. They were more positive about the performance of the female politician as prime minister, rating her 3 ( $\mathrm{SD}=0.62$ ) and the male politician $3.66(\mathrm{SD}=0.88)$ (lower is better; $\mathrm{T}(44)=3.01, \mathrm{p}=0.004$ ). While less favourable than the male respondents (see table 1) it is more statistically significant. The Aesthetics programme is composed of $70 \%$ women which seems to suggest that different programmes aren't the reason for divergent results of the male and female respondents. To further investigate the potential explanatory value of the programmes a few regression analyses were done with gender and programme as independent variable, and the questions as the independent variable. However, these showed neither trend nor statistical significance and are not presented. What is clear is that these results diverge from Matland (1994), with the woman being expected to perform better as prime minister, and also seen as arguing better by men.

At first glance it seems that men and women are viewed equally in the policy areas too. Indeed, no significant result is found for any policy area (See Appendix B). Looking deeper we find that men on their part prefer the male politician for the environment, elderly care and tax policy (table 2). While tax policy could be argued to be a hard issue area, and as such favourably seen as a man's area, environment policy and, especially, elderly care is harder to explain (Huddy \& Terkildsen, 1993; Alexander \& Andersen, 1993; Matland, 1994). Do men simply trust the male politician more based on his gender? If that were true we should see significant results over more areas or, at the very least, a trend. Comparing with Matland (1994) we find elderly care to be the female politician's field of expertise in both the Labour and Conservative group. Both tax policy and environment policy are more neutral with no

Table 2. T-test. Competency rating in policy areas - Group one and two, significant results

| Men | Lars (Male) |  |  | Lena (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Environment | 2.80 | 0.41 | 15 | 3.75 | 0.87 | 12 | 25 | -3.76*** |
| Elderly care | 2.88 | 0.96 | 16 | 3.64 | 1.08 | 14 | 28 | -2.06** |
| Tax policy | 2.79 | 0.97 | 14 | 3.40 | 0.91 | 15 | 27 | -1.76* |
| Women | M | SD | N | M | SD | N | DF | T-score |
| Gender equality | 2.97 | 1.06 | 32 | 2.42 | 1.06 | 33 | 63 | 2.07** |

statistically significant results. Why the male respondents place environment policy so strongly in the male politician's favour remains an open question for future studies.

Women on their part found the female politician more competent with regards to gender equality policy, but there were otherwise no statistically significant results. However, if we look at the numbers we can see that trend-wise the women prefer the female politician in all areas. A larger sample would be required to measure these effects.

Respondents were as likely to support either of the differently gendered politicians, even when separated by gender. This is different from Matland (1994) where the willingness to support was the same between both the readers of both the Labour and the Conservative party texts regardless of gender, but with women believing the male politician was more likely to be nominated.

Overall we've seen results which are at odds with Matland (1994). In particular, men rating the male politician more favourably for elderly care and environment policy is at odds not only with Matland but with other earlier findings as well (Huddy \& Terkildsen, 1993; Alexander \& Andersen, 1993; Matland, 1994). It could be argued that gender roles have shifted significantly in the 20 years since Matland's study. The women's results seem to suggest that gender roles are disappearing for politicians. At least among young women. As for the hypothesis it seems clear that men and women are no longer seen as better at hard or soft issue areas in Sweden, at least not in the sense of the older studies. Only when separated by gender did differences appear, and for the men these took the form of a preference for the male politician on a previously soft issue policy, a neutral policy and an arguably hard issue policy. The fact that the women found the female politician more competent at gender equality policy doesn't save the hypothesis, since it requires perceived competency advantage in hard policies for the male politician and soft policies for the female politician - and not only for women. Unlike Matland (1994), but in line with other previous experiments there were no
significant results for policy areas discussed in the speech (Sapiro, 1981-1982; Huddy \& Terkildsen, 1993; Matson \& Fine, 2006).

Lastly, three significant results in group one was found for left-right political affiliation. By running several regression analyses it was found that healthcare, education and tax policy were slightly affected by the left-right affiliation (Healthcare: $R^{2}=0.07, F(1,60)=4.55, p=$ 0.04. Education: $\mathrm{R}^{2}=0.05, \mathrm{~F}(1,57)=3.20, \mathrm{p}=0.08$. Tax policy: $\mathrm{R}^{2=} 0.12, F(1,38)=5.25, \mathrm{p}=$ 0.03 , see Appendix C for all regressions). For healthcare and tax policy respondents to the left gave slightly higher ratings to the male politician. These help explain why the tax policy was rated more favourably for the male politician of the first group. For education people on the right gave slightly higher ratings. Overall it seems that left-right affiliation had little do to with how respondents rated the politicians. This seems to suggest that either Matland's (1994) differences between Labour and Conservative party readers was due to the content of the different speeches he employed, or that the dynamics of political affiliation and gender have changed or were always different in Sweden.

### 6.3 Analysis of group one and group three ${ }^{16}$

We hypothesized earlier that a stereotype manipulation would negatively affect the female politician and not affect the male politician. In this analysis of group one, the male politician without stereotype manipulation, and three, the male politician with stereotype manipulation, we expect the ratings for the politician to stay virtually the same between the two groups. This assumption builds on the psychological math test experiments from which the stereotype manipulation was derived. ${ }^{17}$

There was no preference for either politician in the two groups when it came to the politician's expected performance as prime minister, an MP or how they judged the politician's ability to argue their politics. When the respondents were isolated by gender a slight preference for the male politician as prime minister in the group with the stereotype manipulation presented itself among the female respondents (Lower is better. No stereotype: $\mathrm{M}=3.49$, $\mathrm{SD}=0.91$. Stereotype: $\mathrm{M}=3.14, \mathrm{SD}=0.77$. $\mathrm{T}(72)=1.74, \mathrm{P}=0.09$ ). Maybe the women responded more favourably to the manipulation than the men, identifying and positively

[^7]Table 3. T-test. Competency rating in policy areas - Group one and three, significant results

| Men | No Stereotype (Male) |  |  | Stereotype (Male) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Unemployment | 2.24 | 1.01 | 25 | 2.84 | 1.25 | 32 | 55 | -1.97* |
| Environment | 2.80 | 0.41 | 15 | 3.42 | 1.24 | 26 | 39 | -1.88** |
| Women | M | SD | N | M | SD | N | DF | T-score |
| The Economy | 2.78 | 0.72 | 36 | 2.45 | 0.72 | 31 | 65 | 1.84* |
| Transportation | 3.63 | 0.92 | 24 | 3.05 | 0.90 | 22 | 44 | 2.15** |
| Environment | 3.57 | 0.96 | 28 | 3.00 | 0.84 | 21 | 47 | $2.17 * *$ |
| Child care policy | 2.47 | 1.11 | 36 | 2.00 | 0.92 | 32 | 66 | 1.90* |

${ }^{*} \mathrm{p} \leq 0.1{ }^{* *} \mathrm{p} \leq 0.05$. $\mathrm{M}=$ Mean rating. Lower is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. DF $=$ Degrees of Freedom. $1=$ Very competent, $5=$ Not competent. Full results in Appendix D.
linking the word authority with the male politician. The women's continued preference for the manipulated male politician in the policy areas seem to support this idea. Women significantly rated the manipulated politician better for dealing with the economy, transportation policy, environment policy and child care policy (table 3). The economy has previously been seen as a hard issue area (Huddy \& Terkildsen, 1993; Matland, 1994). What is surprising however is the favouring for the manipulated politician for child care policy, an area previously linked to women (Huddy \& Terkildsen, 1993; Matland, 1994). The assumption that the female respondents prefer the manipulated male politician in the hard issue areas, playing on his authoritative role as a man as the manipulation implied, doesn't seem to hold up against the evidence. If we look a bit closer we can see that the women favoured the manipulated male in all policy areas. This suggests that women are affected by the stereotype manipulation, leading them to positively link it with the male politician and rating him more favourably than the male politician without such manipulation. The trend is not statistically significant for more than four areas, and only two areas if we look at a $\mathrm{p} \leq 0.05$ level. For the men on the other hand the trend is reversed. They prefer the non-manipulated male politician in all issue areas. There is a slight significance for unemployment policy and a strong significance for environment policy. In the previous analysis we also saw a significant preference for the male politician with regards to environment policy. While it is possible that both the stereotype manipulation and the gender difference led to a preference for the male and non-manipulated male respectively (being in the same group, group one, in both analyses) the more likely explanation is that the male respondents in group one represent an outlier with regards to environment policy. Nevertheless the trend among the men is clear, the male
politician without the manipulation is seen as more competent in all areas. But because of the lack of statistical significance it is not implausible that there are no differences for men between the male politician with the stereotype manipulation and the one without. While I don't find this to be the most likely explanation some caution should still be taken when looking at the results. When men and women are taken together we find no significant results for any policy area.

There was no difference in willingness to support the politician of either group nor of the perceived election chances of the politician, and with one exception the results stayed the same when looking at men and women separately. Women found the non-manipulated politician to have a slightly higher chance of being elected (Lower is better. No stereotype: $\mathrm{M}=3.37, \mathrm{SD}=0.80$. Stereotype: $\mathrm{M}=3.70, \mathrm{SD}=0.85 . \mathrm{T}(76)=1.74, \mathrm{P}=0.07$ ). Considering that the trend was the opposite for all policy areas it makes no sense for women to think more favourably of the non-manipulated male's chances of being elected. The most likely explanation is simply a false positive, especially considering it is not significant at a $\mathrm{p} \leq 0.05$ level.

Contrary to our second hypothesis, that the male politician's ratings will remain the same while the female would be rated worse, we can see that the male politician was rated both better and worse. Men tended to prefer the non-manipulated politician and women the manipulated politician. It is not too surprising that the results differ from the psychological experiments from which the hypothesis is derived since the psychological experiments were based on the personal performance of the respondents and this experiment is about the evaluation of others.

### 6.4 Analysis of group two and group four ${ }^{18}$

Contrary to our hypothesis, we know that there were differences for the male politician when the stereotype manipulation was applied. The question now is if we will, as hypothesized, find that the female politician is rated worse when the stereotype manipulation is applied? To find out we'll look at group two, the female politician without stereotype manipulation, and group four, the female politician with the stereotype manipulation. There were no significant differences when looking at the expected performance of the politician as an MP, as prime minister or the politician's ability to argue their policies. When separating respondents by gender we can see that men rated the female politician with the

[^8]Table 4. T-test. Evaluation of Politician - Group two and four, significant results

| Men | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| As prime minister | 3.00 | 0.73 | 16 | 3.74 | 1.18 | 23 | 37 | $-2.23 * *$ |
| Arguing policies | 2.59 | 0.71 | 17 | 3.23 | 1.34 | 26 | 41 | -1.82** |

stereotype manipulation worse with regards to her expected performance as prime minister and her ability to argue her policies (table 4). This result did not appear for the male politician when he was accompanied by the stereotype manipulation. In fact, the results were reversed when looking at the male and female politician of group one and two, with the female being favoured by the men under the same two questions. This gives some credence to the hypothesis that the female is rated worse when the stereotype manipulation is introduced while the results stay the same for the male. The results for the female respondents remained insignificant.

Looking at policy areas we can see that there was a preference for the non-manipulated politician when it came to education policy and gender equality (table 5). When separating men and women we find that men statistically significantly rated the non-manipulated politician more competent than the manipulated one when it came to education policy. However, they statistically significantly rated the manipulated politician more competent for transportation policy, environment policy, elderly care, tax policy and regional policy. The complexity of the stereotype manipulation's interaction with the respondents seem to have been underestimated. Not only is it a reversal of the expected pattern for the latter policies but they include a mix of soft and hard issue areas. Women on their part preferred the nonmanipulated woman for unemployment and gender equality policy.

There were no differences made with regards to willingness to support or perceived chances of being elected. When separated by gender men and women maintained their indifference towards the non-manipulated and manipulated politician.

It is likely, judging from the trend in the analysis of group one and three, that the stereotype affected the male politician much more than it did the female politician. The direction of the results were also clearer for the male politician with men preferring the nonmanipulated politician and females the manipulated one. For the female politician we instead find results both ways, for both genders. Our hypothesis that the female would be rated worse

Table 5. T-test. Competency rating in policy areas - Group two and four, significant results

| All | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Education | 2.33 | 0.98 | 52 | 2.74 | 1.01 | 62 | 112 | -2.21** |
| Gender equality | 2.45 | 1.00 | 47 | 2.80 | 0.99 | 50 | 95 | -1.75* |
| Men | M | SD | N | M | SD | N | DF | T-score |
| Education | 2.19 | 0.83 | 16 | 2.80 | 0.96 | 25 | 39 | -2.10** |
| Transportation | 3.36 | 1.01 | 14 | 2.67 | 0.91 | 18 | 30 | 2.03* |
| Environment | 3.75 | 0.87 | 12 | 2.84 | 0.76 | 19 | 29 | 3.06*** |
| Elderly care | 3.64 | 1.08 | 14 | 2.94 | 0.54 | 18 | 30 | 2.39 ** |
| Tax policy | 3.40 | 0.91 | 15 | 2.76 | 0.94 | 21 | 34 | 2.03** |
| Rural development | 2.79 | 0.70 | 14 | 2.42 | 0.51 | 19 | 31 | 1.74* |
| Women | M | SD | N | M | SD | N | DF | T-score |
| Unemployment | 2.25 | 0.95 | 40 | 2.65 | 1.07 | 34 | 72 | -1.69* |
| Gender equality | 2.42 | 1.06 | 33 | 2.93 | 1.09 | 28 | 59 | -1.83* |

${ }^{*} \mathrm{p} \leq 0.1{ }^{* *} \mathrm{p} \leq 0.05{ }^{* * *} \mathrm{p} \leq 0.01 . \mathrm{M}=$ Mean rating. Lower is better. SD = Standard Deviation. N = Number of respondents. DF $=$ Degrees of Freedom. $1=$ Very competent, $5=$ Not competent. Full results in Appendix E.
when the stereotype manipulation was applied does not hold up against the evidence. Rather the female politician is rated both better and worse after the stereotype manipulation is applied. It is not entirely unexpected that the results are not as clear cut as in the psychological math test experiments from which the manipulation is derived.

### 6.5 Gender identification

We saw from two psychological math test experiments that gender identification had an effect on the respondent's performance on the math test. In one high identification led to worse results for women and in the other low identification led to worse results for the women (Schmader, 2002 ; Eriksson \& Lindholm, 2007). The effects of gender identification appears to be complex. To see what effect it has on the respondents in this study we will employ regression analyses. I chose regression because the results are clearer than a T-test. The variable of gender identification runs from -8 (low identification) to +8 (high identification). A T-test with such a variable would just be confusing. The gender identification regressions are done within one experiment group, for one gender, at a time. Each question has a separate regression for each gender and group. The questions were set as dependent and gender identification as independent. The idea is to have a probe into what effects gender
identification has for the perception of the politicians. I will limit the discussion to results significant at the $\mathrm{p} \leq 0.05$ level. The regression results are presented in table 6 .

For all regressions with statistically significant results a lower identification led to a better rating of the politician, with the exceptions of willingness to support (women group one) and perceived likelihood of being elected (women group three). I suspect that respondents with low gender identification might be less secure in themselves and as such are more favourable towards others leading them. If that were true it would make a lot of sense for them to believe in other's competencies. The one outlier, women in group one, being less willing to support the politician the less they identify with their gender, contradicts this idea. At the same time they only present an $r^{2}$ of 0.08 , compared with the other much more forceful $r^{2}$ s going in the opposite direction.

Table 6. Regression. Gender identification

| Evaluation of politician | Group one |  | Group two |  | Group three |  | Group four |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men | Women | Men | Women | Men | Women | Men | Women |
| As an MP | -0.03 | -0.01 | -0.06 | -0.02 | 0.00 | 0.00 | -0.05 | -0.03 |
| As prime minister | 0.13* | 0.04 | -0.03 | -0.03 | -0.02 | 0.20*** | -0.01 | -0.01 |
| At arguing their policies | 0.02 | 0.02 | -0.06 | -0.02 | -0.03 | 0.00 | -0.04 | -0.02 |
| Perceived competency in policy areas |  |  |  |  |  |  |  |  |
| The Economy | -0.04 | 0.03 | -0.05 | -0.03 | 0.05 | 0.20*** | -0.03 | 0.02 |
| Healthcare | -0.04 | -0.01 | -0.02 | -0.02 | -0.01 | 0.08** | -0.04 | -0.03 |
| Agriculture | 0.00 | -0.04 | -0.06 | -0.05 | 0.16** | -0.01 | -0.04 | -0.06 |
| Defence | -0.07 | -0.04 | 0.04 | 0.00 | 0.18** | -0.04 | 0.09 | -0.04 |
| Education | 0.03 | 0.03 | 0.00 | -0.02 | 0.00 | 0.08* | -0.01 | -0.02 |
| Transportation | 0.04 | 0.05 | 0.02 | 0.00 | -0.04 | -0.02 | -0.05 | -0.03 |
| Foreign policy | 0.19** | 0.05 | 0.28** | -0.04 | 0.09* | 0.10* | -0.06 | -0.03 |
| Unemployment | -0.04 | -0.02 | -0.06 | 0.05* | 0.00 | 0.12** | -0.01 | 0.11** |
| Environment | 0.01 | -0.01 | -0.03 | -0.04 | -0.01 | 0.03 | -0.04 | -0.04 |
| Elderly care | 0.53*** | 0.02 | 0.00 | -0.04 | -0.04 | 0.11* | -0.06 | -0.02 |
| Tax policy | 0.34** | -0.02 | 0.01 | -0.04 | -0.03 | 0.25*** | 0.10* | -0.04 |
| Gender equality | -0.01 | -0.03 | 0.40*** | 0.07* | 0.02 | 0.03 | -0.05 | 0.04 |
| Rural development | 0.22** | -0.05 | 0.14 | -0.02 | 0.00 | 0.13* | -0.03 | 0.16* |
| Child care policy | -0.4 | 0.00 | -0.07 | 0.05 | -0.02 | 0.09* | 0.11* | 0.01 |
| Further evaluation |  |  |  |  |  |  |  |  |
| Willingness to support | -0.03 | 0.08** | -0.06 | -0.02 | -0.03 | -0.01 | 0.00 | -0.02 |
| Perceived likelihood of being elected | 0.04 | 0.02 | 0.15* | -0.02 | -0.03 | 0.22 *** | -0.04 | -0.03 |

No question or policy area seems always covariate with gender identification. Indeed, no question or policy turns up more than twice across groups and genders. This would suggest one of two things. Either the gender identification shown here is simply a symptom of another underlying cause that is prompting the respondents to both rate the politician more favourably and feel less identified with their gender. Or the complexity of gender identification might be even more complex in how it interacts than thought previously. Another possibility is that the gender identification scale employed simply isn't a good tool for the job giving unreliable results. In group one and two we see several significant results for men and in total only one for women. On the other hand women show several significant results in group three. This is interesting since we saw in the analysis above that this is the group where women were much more favourable towards the male politician than they were in the first group.

Overall it seems we cannot form a proper opinion on what causes gender identification to be relevant in a question. The differences in gender identification do not correspond to the questions and policy areas which had significant results on the T-tests above either. What is clear, however, is that gender identification can play a role, even if it did not in the majority of cases. The hypothesis therefore gets support. Our initial probe suggests that further study is needed to understand the relationship between gender identification and the perception of both male and female politicians.

## 7. Conclusion

Male and female politicians are not always viewed as equal. But it does seem like we've moved forward from the time of Matland's (1994) study. In fact men preferred the female politician before the male one for prime minister and found her better at arguing her policies. We also saw only small differences for the policy areas. These differences are similar to the differences Matland (1994) found in number. There is an important difference, though. Men found the male politician preferable for elderly care, in contrast to it often being seen as a woman's area (Huddy \& Terkildsen, 1993; Matland, 1994). Perhaps gender roles are slowly shifting. They still seem to be active at a low level, but the results of the experiment does not suggest that there is any large scale discrimination by neither men nor women. It is entirely plausible that the results could be fully explained by the respondents having good views of a certain politician with a specific gender that they think has done good things in the areas they rated differently. This seems likely for elderly care. And it also seems likely for environment policy which has not previously been linked to either gender (Huddy \& Terkildsen, 1993,

Matland, 1994). We've seen no evidence in favour of our first hypothesis, that the male politician will be rated more competent in hard issue areas such as defence policy and the female politician will be rated more competent in soft issue areas such as equality politics. Our results instead lead us to discard our first hypothesis.

The mentioning of the gender stereotype also produced results. Unexpectedly the male politician was seen as both less competent (by men) and more competent (by women). The female politician also produced unexpected results, being seen as both more competent and less competent. My suspicion that the mentioning of a stereotype also has an effect on the evaluation of others seems to have been confirmed but the interactions seem harder to judge than I had anticipated. On the basis of this evidence the second hypothesis must be discarded. We expected the stereotype to not adversely affect the male politician but our results were of the opposite nature. Likewise, there were several positive results for the female politician which also speaks against the hypothesis.

Gender identification has been shown to be just as complex if not more so than it was in the psychological math test experiments from which it was derived. What we have seen is that it does have an effect and that the causal relationship in perception seems to be that respondents become more favourable towards the politician when they identify less with their own gender, regardless of the politician's gender. The third hypothesis, that gender identification would have an effect, can be confirmed.

Beyond the hypotheses we found that the gender of the respondents have a great effect on how they perceived the politicians in all groups. Male and female respondents had very different opinions for almost all of the statistically significant results. Not only does it seem that the gender of the politician matters, the gender of the respondents does too.

In the introduction I introduced the idea that the mentioning of stereotypes could lead to the internalization of that very same stereotype by the audience. It seems that there is some truth to this idea. If one wishes to mitigate the effects of repeating a stereotype, as to not reinforce it, then saying it is untrue may work well (Johns, Schmader \& Martens, 2005).

My recommendation for future research is take a closer look at the effects of the respondent's own gender. What triggers male and female respondents to answer differently, and does it matter for the politicians in the real world? Another recommendation would be to more rigorously explore the effects of gender identification as a moderating variable. When does gender identification matter? Why does it matter for the evaluation of politicians? And is it really gender identification at play or it is just the variable that pops up into the foreground in place of the real underlying variable?

## 8. References

Alexander, Deborah \& Kristi Andersen (1993). Gender as a Factor in the Attribution of Leadership Traits. Political Research Quarterly, 46(3), pp. 527-545.

Aronson, Joshua, Michael J. Lustina, Catherine Good, Kelli Keough, Claude M. Steele \& Joseph Brown (1999). When White Men Can't Do Math: Necessary and Sufficient Factors in Stereotype Threat. Journal of Experimental Social Psychology, 35(1), 29-46.

Beaman, Lori, Raghabendra Chattopadhyay, Esther Duflo, Rohini Pande \& Petia Topalova (2009). Powerful Women: Does Exposure Reduce Bias? The Quarterly Journal of Economics, 124(4), pp. 1497-1540.

Brace, Nicola, Richard Kemp \& Rosemary Snelgar (2002). SPSS for Psychologists. 2nd ed. Palgrave Macmillan.

Christensen, Ann-Dorte (1999). Women in the political parties. In: Christina Bergqvist ed. 1999. Equal Democracies? Gender and Politics in the Nordic Countries. Oslo: Scandinavian University Press. pp. 65-87.

Eriksson, Kimmo \& Torun Lindholm (2007). Making gender matter: The role of genderbased expectancies and gender identification on women's and men's math performance in Sweden. Scandinavian Journal of Psychology, 48(4), pp. 329-338.

Esaiasson, Peter, Mikael Gilljam, Henrik Oscarsson \& Lena Wängnerud (2012). Metodpraktikan: Konsten att studera samhälle, individ och marknad. 4th ed. Stockholm: Nordstedt Juridik AB.

Garret, C. John \& Charles I. Brooks (1987). Effects of ballot color, sex of candidate and sex of college students of voting age on their voting behavior. Psychological Reports, 60, pp. 3944.

Huddy, Leonie \& Nayda Terkildsen (1993). Gender Stereotypes and the Perception of Male and Female Candidates. American Journal of Political Science, 37(1), pp. 119-147.

IPU, Inter-Parliamentary Union (n.d. a). NORWAY: parliamentary elections Stortinget 1993. [online] Available at: http://www.ipu.org/parline-e/reports/arc/2239_93.htm [Accessed 08-022014]

IPU, Inter-Parliamentary Union (2014). Women in Parliaments: World Classification [online] Available at: http://www.ipu.org/wmn-e/arc/classif010114.htm [Accessed 08-02-2014]

Johns, Michael, Toni Schmader \& Andy Martens (2005). Knowing Is Half the Battle: Teaching Stereotype Threat as a Means of Improving Women's Math Performance. Psychological Science, 16(3), pp. 175-179.

Kahn, Kim Fridkin (1996). The political consequences of being a woman: how stereotypes influence the conduct and consequences of political campaigns. New York: Columbia University Press.

Lindberg, Sara M., Janet S. Hyde, Jennifer L. Petersen \& Marcia C. Linn (2010). New Trends in Gender and Mathematics Performance: A Meta-Analysis. Psychological Bulletin, 136(6), pp. 1123-1135

Matland, Richard E. (1994). Putting Scandinavian Equality to the Test: An Experimental Evaluation of Gender Stereotyping of Political Candidates in a Sample of Norwegian Voters. British Journal of Political Science, 24(2), pp. 273-292.

Matson, Marsha \& Terri Susan Fine (2006). Gender, Ethnicity, and Ballot Information: Ballot Cues in Low-Information Elections. State Politics \& Policy Quarterly, 6(1), pp. 49-72

McDermott, Monika L. (1998). Race and Gender Cues in Low-Information Elections. Political Research Quarterly, 51(4), pp. 895-918.

Riksdagen (2012). The history of the Riksdag - riksdagen.se. [online] Available at: http://www.riksdagen.se/en/How-the-Riksdag-works/Democracy/The-history-of-the-Riksdag/ [Accessed 08-02-2014]

Sanbonmatsu, Kira \& Kathleen Dolan (2009). Do Gender Stereotypes Transcend Party?. Political Research Quarterly, 62(3), pp. 485-494.

Sapiro, Virginia (1981-1982). If U.S. Senator Baker Were A Woman: An Experimental Study of Candidate Images. Political Psychology, 3(1-2), pp. 61-83.

SCB, Statistiska Centralbyrån (n.d.). Riksdagsval 1922-2010. Valda efter kön - Statistiska Centralbyrån. [online] Available at: http://www.scb.se/sv_/Hitta-statistik/Statistik-efter-amne/Demokrati/Allmanna-val/Allmanna-val-nominerade-och-valda-/12352/2013A01X/Riksdagsval/Riksdagsval-1922-2010-Valda-efter-kon/ [Accessed 4/3/2014]

Schmader, Toni (2002). Gender Identification Moderates Stereotype Threat Effects on Women's Math Performance. Journal of Experimental Social Psychology, 38(2), pp. 194-201.

Schmader, Toni \& Michael Johns (2003). Converging Evidence That Stereotype Threat Reduces Working Memory Capacity. Journal of Personality and Social Psychology, 85(3), pp. 440-452.

Shih, Margaret, Todd L. Pittinsky \& Nalini Ambady (1999). Stereotype Susceptibility: Identity Salience and Shifts in Quantitative Performance. Psychological Science, 10(1), pp. 80-83.

Sigelman, Lee \& Carol K. Sigelman (1982). Sexism, Racism and Ageism in Voting Behavior: An Experimental Analysis. Social Psychology Quarterly, 45(4), pp. 263-269.

Steele, Claude M. \& Joshua Aronson (1995). Stereotype Threat and the Intellectual Test Performance of African Americans. Journal of Personality and Social Psychology, 69(5), pp. 797-811.

UNDP, United Nations Development Programme (2012). Table 4: Gender Inequality Index. |
Data | United Nations Development Programme. [online database] Available at: https://data.undp.org/dataset/Table-4-Gender-Inequality-Index/pq34-nwq7 [Accessed 22/01/2014] Note: Sort by Gender Inequality Index Rank.

WEF, World Economic Forum (2013). The Global Gender Gap Report 2013. [online]
Available at: http://www3.weforum.org/docs/WEF_GenderGap_Report_2013.pdf [Accessed 23/01/2014]

## 9. Appendices

### 9.1 Appendix A - ANOVA-test for randomization \& Regression for left-right affiliation

ANOVA-test. Randomization control

| Background variable | DF | F | $\eta^{2}$ |
| :--- | :---: | :---: | :---: |
| Gender | 1 | 1.17 | 0.00 |
| Age | 4 | 0.68 | 0.01 |
| City-countryside upbringing | 3 | 1.13 | 0.01 |
| Parents' education level | 3 | 1.76 | 0.02 |
| Left-Right identification | 4 | $4.16^{* * *}$ | 0.06 |
| Political party identification | 8 | 0.68 | 0.02 |
| Next best party identification | 8 | 1.26 | 0.05 |
| Political interest | 4 | 0.78 | 0.01 |
| Familiarity with Almedalen speeches | 3 | 0.23 | 0.00 |
| Frequency of political material reading | 3 | 1.26 | 0.01 |
| Frequency of political discussions | 4 | 0.99 | 0.01 |
| Programme | 3 | 1.37 | 0.02 |

$* * * \mathrm{p} \leq 0.01 \mathrm{DF}=$ Degrees of freedom. Comments: Group variable (1-4) used as dependent. Respective background variable used as independent.

Regression. Control for the effects of left-right affiliation.

| Evaluation of the politician | $\mathrm{R}^{2}$ | P |
| :--- | :---: | :---: |
| As an MP | 0.02 | 0.13 |
| As prime minister | 0.01 | 0.24 |
| Arguing policies | 0.00 | 0.57 |
| Perceived competency in policy areas | $\mathrm{R}^{2}$ | P |
| The Economy | 0.00 | 0.90 |
| Healthcare | 0.00 | 0.76 |
| Agriculture | 0.00 | 0.75 |
| Defence | 0.02 | 0.21 |
| Education | 0.00 | 0.95 |
| Transportation | 0.00 | 0.87 |
| Foreign policy | 0.03 | 0.09 |
| Unemployment | 0.00 | 0.95 |
| Environment | 0.01 | 0.51 |
| Elderly care | 0.00 | 0.56 |
| Tax policy | 0.03 | 0.10 |
| Gender equality | 0.00 | 0.86 |


| Rural development | 0.01 | 0.53 |
| :--- | :---: | :---: |
| Child care policy | 0.00 | 0.69 |
| Further evaluation | $\mathrm{R}^{2}$ | P |
| Willingness to support | 0.01 | 0.36 |
| Chances of being elected | 0.01 | 0.32 |
| Comments: The respondents were treated as one group for the regression analysis. Left-right |  |  |
| affiliation used as independent, respective question used as dependent. |  |  |

### 9.2 Appendix B - T-test tables for analysis of group one and two

T-test. Evaluation of Politician - Group one and two

| All | Lars (Male politician) |  |  | Lena (Female politician) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| As an MP | 3.14 | 0.69 | 63 | 2.96 | 0.86 | 52 | 113 | 1.25 |
| As prime minister | 3.50 | 0.84 | 62 | 3.19 | 0.98 | 53 | 113 | 1.72* |
| Arguing policies | 3.1 | 1.03 | 66 | 2.91 | 0.82 | 58 | 122 | 0.96 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 3.26 | 0.49 | 23 | 3.19 | 0.75 | 16 | 37 | 0.38 |
| As prime minister | 3.50 | 0.74 | 22 | 3.00 | 0.73 | 16 | 36 | 2.07** |
| Arguing policies | 3.38 | 1.17 | 24 | 2.59 | 0.71 | 17 | 39 | 2.46** |
| Women | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 3.10 | 0.79 | 39 | 2.86 | 0.90 | 36 | 73 | 1.24 |
| As prime minister | 3.49 | 0.91 | 39 | 3.27 | 1.07 | 37 | 74 | 0.95 |
| Arguing policies | 2.95 | 0.86 | 41 | 3.05 | 0.84 | 41 | 80 | -0.52 |

* $\mathrm{p} \leq 0.1^{* *} \mathrm{p} \leq 0.05 \mathrm{M}=$ Mean rating. Lower is better. SD $=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. DF $=$ Degrees of Freedom. $1=$ Remarkable, $2=$ Very good, $6=$ Very bad.

T-test. Competency rating in policy areas - Group one and two

| All | Lars (Male) |  |  | Lena (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.75 | 0.68 | 60 | 2.69 | 0.73 | 52 | 110 | 0.43 |
| Healthcare | 2.26 | 0.84 | 66 | 2.26 | 1.01 | 56 | 121 | -0.03 |
| Agriculture | 3.51 | 0.74 | 35 | 3.41 | 0.89 | 34 | 67 | 0.52 |
| Defence | 3.58 | 0.96 | 40 | 3.59 | 0.96 | 34 | 72 | -0.60 |
| Education | 2.51 | 0.93 | 63 | 2.33 | 0.98 | 52 | 113 | 1.01 |
| Transportation | 3.50 | 0.88 | 40 | 3.38 | 0.98 | 37 | 75 | 0.57 |
| Foreign policy | 2.73 | 0.93 | 49 | 2.79 | 0.97 | 43 | 90 | -0.28 |
| Unemployment | 2.28 | 1.11 | 67 | 2.29 | 0.91 | 56 | 121 | -0.01 |
| Environment | 3.30 | 0.88 | 44 | 3.37 | 1.07 | 41 | 83 | -0.33 |
| Elderly care | 3.05 | 1.01 | 42 | 3.22 | 1.26 | 41 | 81 | -0.69 |
| Tax policy | 2.90 | 1.02 | 41 | 3.09 | 1.06 | 45 | 84 | -0.83 |
| Gender equality | 2.73 | 1.00 | 51 | 2.45 | 1.00 | 47 | 96 | 1.38 |
| Rural development | 2.90 | 0.75 | 39 | 2.74 | 0.74 | 35 | 72 | 0.89 |


| Child care | 2.28 | 1.00 | 61 | 2.21 | 1.00 | 47 | 106 | 0.34 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| policy |  |  |  |  |  |  |  |  |


| Men | Lars (Male) |  |  | Lena (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.74 | 0.62 | 23 | 2.88 | 0.81 | 16 | 37 | -0.60 |
| Healthcare | 2.12 | 0.73 | 25 | 2.18 | 0.88 | 17 | 40 | -0.23 |
| Agriculture | 3.31 | 0.63 | 13 | 3.33 | 0.49 | 12 | 23 | -0.11 |
| Defence | 3.50 | 1.10 | 16 | 3.73 | 0.79 | 11 | 25 | -0.60 |
| Education | 2.52 | 0.92 | 25 | 2.19 | 0.83 | 16 | 39 | 1.17 |
| Transportation | 3.31 | 0.79 | 16 | 3.36 | 1.01 | 14 | 28 | -0.14 |
| Foreign policy | 2.63 | 0.60 | 19 | 2.80 | 0.94 | 15 | 32 | -0.64 |
| Unemployment | 2.24 | 1.01 | 25 | 2.38 | 0.81 | 16 | 39 | -0.45 |
| Environment | 2.80 | 0.41 | 15 | 3.75 | 0.87 | 12 | 25 | -3.76*** |
| Elderly care | 2.88 | 0.96 | 16 | 3.64 | 1.08 | 14 | 28 | -2.06** |
| Tax policy | 2.79 | 0.97 | 14 | 3.40 | 0.91 | 15 | 27 | -1.76* |
| Gender equality | 2.33 | 0.77 | 18 | 2.50 | 0.85 | 14 | 30 | -0.58 |
| Rural development | 2.67 | 0.62 | 15 | 2.79 | 0.70 | 14 | 27 | -0.49 |
| Child care policy | 2.04 | 0.75 | 24 | 2.13 | 0.72 | 16 | 38 | -0.35 |
| Women | Lars (Male) |  |  | Lena (Female) |  |  |  |  |
|  | M | SD | N | M | SD | N | DF | T-score |
| The Economy | 2.78 | 0.72 | 36 | 2.61 | 0.69 | 36 | 70 | 1.00 |
| Healthcare | 2.38 | 0.90 | 40 | 2.30 | 1.07 | 40 | 78 | 0.34 |
| Agriculture | 3.64 | 0.79 | 22 | 3.45 | 1.06 | 22 | 42 | 0.65 |
| Defence | 3.63 | 0.88 | 24 | 3.52 | 1.04 | 23 | 45 | 0.37 |
| Education | 2.54 | 0.93 | 37 | 2.39 | 1.05 | 36 | 71 | 0.65 |
| Transportation | 3.63 | 0.92 | 24 | 3.39 | 0.99 | 23 | 45 | 0.84 |
| Foreign policy | 2.83 | 1.10 | 29 | 2.79 | 0.99 | 28 | 55 | 0.15 |
| Unemployment | 2.34 | 1.17 | 41 | 2.25 | 0.95 | 40 | 79 | 0.38 |
| Environment | 3.57 | 0.96 | 28 | 3.21 | 1.11 | 29 | 55 | 1.32 |
| Elderly care | 3.15 | 1.05 | 26 | 3.00 | 1.30 | 27 | 51 | 0.47 |
| Tax policy | 3.04 | 1.00 | 26 | 2.93 | 1.11 | 30 | 54 | 0.37 |
| Gender equality | 2.97 | 1.06 | 32 | 2.42 | 1.06 | 33 | 63 | 2.07** |
| Rural development | 3.09 | 0.79 | 23 | 2.71 | 0.78 | 21 | 42 | 1.57 |
| Child care policy | 2.47 | 1.11 | 36 | 2.26 | 1.12 | 31 | 65 | 0.78 |

${ }^{*} \mathrm{p} \leq 0.1^{* *} \mathrm{p} \leq 0.05 * * * \mathrm{p} \leq 0.01$. $\mathrm{M}=$ Mean rating. Lower is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of
respondents. DF $=$ Degrees of Freedom. $1=$ Very competent, $5=$ Not competent.

T-test. Additional evaluation of the politician - Group one and two

| All | Lars (Male politician) |  |  | Lena (Female politician) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Willingness to support ${ }^{8}$ | 3.08 | 1.32 | 71 | 2.90 | 1.18 | 62 | 131 | 0.83 |
| Chances of being elected ${ }^{\#}$ | 3.34 | 0.75 | 67 | 3.40 | 0.75 | 58 | 123 | -0.40 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{8}$ | 2.92 | 1.38 | 26 | 3.11 | 1.32 | 18 | 42 | -0.45 |
| Chances of being elected ${ }^{\#}$ | 3.32 | 0.69 | 25 | 3.12 | 0.60 | 17 | 40 | 0.98 |
| Women | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{\text {8 }}$ | 3.18 | 1.30 | 44 | 2.82 | 1.13 | 44 | 86 | 1.40 |
| Chances of being elected ${ }^{\text {\# }}$ | 3.37 | 0.80 | 41 | 3.51 | 0.78 | 41 | 80 | -0.84 |

$\mathrm{M}=$ Mean rating. Higher is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. $\mathrm{DF}=$ Degrees of Freedom. ${ }^{\S} 1=$ Would never want to support, $4=$ Would certainly want to support. ${ }^{\text {\# }} 1=$ No chance, $5=$ Very good chance, $6=$ Will surely be elected.

### 9.3 Appendix C - Left-Right political spectrum table for analysis one

Regression. Group one and two, left-right political spectrum affiliation

|  | Group one |  |  | Group two |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Evaluation of politician | $\mathrm{R}^{2}$ | P |  | $\mathrm{R}^{2}$ | P |
| As an MP | 0.01 | 0.59 |  | 0.01 | 0.58 |
| As prime minister | 0.00 | 0.62 |  | 0.01 | 0.58 |
| Arguing policies | 0.00 | 0.72 |  | 0.04 | 0.15 |
| Perceived competency in policy | $\mathrm{R}^{2}$ | P |  | $\mathrm{R}^{2}$ | P |
| areas |  |  |  |  |  |
| The Economy | 0.00 | 0.79 |  | 0.03 | 0.23 |
| Healthcare | 0.07 | 0.04 |  | 0.01 | 0.42 |
| Agriculture | 0.00 | 0.77 |  | 0.00 | 0.72 |
| Defence | 0.01 | 0.49 |  | 0.02 | 0.74 |
| Education | 0.05 | 0.08 |  | 0.04 | 0.18 |
| Transportation | 0.01 | 0.52 |  | 0.01 | 0.57 |
| Foreign policy | 0.01 | 0.52 |  | 0.04 | 0.20 |
| Unemployment | 0.01 | 0.36 |  | 0.01 | 0.58 |
| Environment | 0.00 | 0.82 |  | 0.03 | 0.28 |
| Elderly care | 0.00 | 0.94 |  | 0.06 | 0.11 |
| Tax policy | 0.12 | 0.03 |  | 0.06 | 0.11 |
| Gender equality | 0.00 | 0.82 |  | 0.00 | 0.86 |
| Rural development | 0.01 | 0.53 |  | 0.00 | 0.86 |
| Child care policy | 0.02 | 0.31 |  | 0.00 | 0.77 |
| Further evaluation | $\mathrm{R}^{2}$ | P | R |  | P |
| Willingness to support | 0.00 | 0.82 | 0.01 | 0.36 |  |
| Chances of being elected | 0.00 | 0.79 | 0.01 | 0.57 |  |

### 9.4 Appendix D - T-test tables for analysis of group one and three.

T-test. Evaluation of Politician - Group one and three

| All | No Stereotype (Male) |  |  | Stereotype (Male) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| As an MP | 3.14 | 0.69 | 63 | 3.15 | 0.89 | 68 | 129 | -0.03 |
| As prime minister | 3.48 | 0.84 | 62 | 3.29 | 0.84 | 66 | 126 | 1.32 |
| Arguing policies | 3.08 | 1.03 | 66 | 2.85 | 1.00 | 72 | 136 | 1.32 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 3.26 | 0.45 | 23 | 3.36 | 0.82 | 33 | 54 | -0.54 |
| As prime minister | 3.50 | 0.74 | 22 | 3.43 | 0.90 | 30 | 50 | 0.28 |
| Arguing policies | 3.38 | 1.17 | 24 | 3.00 | 1.14 | 32 | 54 | 1.20 |
| Women | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 3.10 | 0.79 | 39 | 2.88 | 0.84 | 34 | 71 | 1.15 |
| As prime minister | 3.49 | 0.91 | 39 | 3.14 | 0.77 | 35 | 72 | 1.74* |
| Arguing policies | 2.95 | 0.86 | 41 | 2.74 | 0.88 | 39 | 78 | 1.06 |

* $\mathrm{p} \leq 0.1 \mathrm{M}=$ Mean rating. Lower is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. $\mathrm{DF}=$ Degrees of Freedom. $1=$ Remarkable, $2=$ Very good, $6=$ Very bad.

T-test. Competency rating in policy areas - Group one and three

| All | No Stereotype (Male) |  |  | Stereotype (Male) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.75 | 0.68 | 60 | 2.59 | 0.80 | 63 | 121 | 1.21 |
| Healthcare | 2.26 | 0.85 | 66 | 2.22 | 0.89 | 72 | 136 | 0.24 |
| Agriculture | 3.51 | 0.74 | 35 | 3.53 | 0.81 | 45 | 78 | -0.11 |
| Defence | 3.58 | 0.96 | 40 | 3.50 | 0.95 | 44 | 82 | 0.36 |
| Education | 2.51 | 0.93 | 63 | 2.51 | 1.07 | 68 | 129 | -0.04 |
| Transportation | 3.50 | 0.88 | 40 | 3.29 | 1.06 | 51 | 89 | 0.99 |
| Foreign policy | 2.73 | 0.93 | 49 | 2.81 | 0.84 | 52 | 99 | -0.41 |
| Unemployment | 2.28 | 1.11 | 67 | 2.46 | 1.12 | 70 | 135 | -0.87 |
| Environment | 3.30 | 0.88 | 44 | 3.21 | 1.09 | 48 | 90 | 0.42 |
| Elderly care | 3.05 | 1.01 | 42 | 3.22 | 1.11 | 50 | 90 | -0.77 |
| Tax policy | 2.90 | 1.02 | 41 | 2.94 | 1.00 | 50 | 89 | -0.18 |
| Gender equality | 2.73 | 1.00 | 51 | 2.69 | 1.01 | 58 | 107 | 0.18 |
| Rural development | 2.90 | 0.75 | 39 | 2.90 | 0.85 | 42 | 79 | -0.04 |


| Child care <br> policy | 2.28 | 1.00 | 61 | 2.15 | 0.96 | 62 | 121 | 0.76 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Men | No Stereotype (Male) |  |  | Stereotype (Male) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.74 | 0.62 | 23 | 2.74 | 0.86 | 31 | 52 | -0.01 |
| Healthcare | 2.12 | 0.73 | 25 | 2.42 | 0.90 | 33 | 56 | -1.38 |
| Agriculture | 3.31 | 0.63 | 13 | 3.58 | 0.93 | 24 | 35 | -0.96 |
| Defence | 3.50 | 1.10 | 16 | 3.81 | 1.08 | 21 | 35 | -0.86 |
| Education | 2.52 | 0.92 | 25 | 2.69 | 1.00 | 32 | 55 | -0.65 |
| Transportation | 3.31 | 0.79 | 16 | 3.46 | 1.17 | 28 | 42 | -0.46 |
| Foreign policy | 2.63 | 0.60 | 19 | 2.89 | 0.85 | 27 | 44 | -1.14 |
| Unemployment | 2.24 | 1.01 | 25 | 2.84 | 1.25 | 32 | 55 | -1.97* |
| Environment | 2.80 | 0.41 | 15 | 3.42 | 1.24 | 26 | 39 | -1.88** |
| Elderly care | 2.88 | 0.96 | 16 | 3.35 | 1.27 | 23 | 37 | -1.26 |
| Tax policy | 2.79 | 0.97 | 14 | 3.08 | 1.12 | 25 | 37 | -0.83 |
| Gender equality | 2.33 | 0.77 | 18 | 2.79 | 1.01 | 29 | 45 | -1.65 |
| Rural development | 2.67 | 0.62 | 15 | 2.95 | 0.79 | 22 | 35 | -1.19 |
| Child care policy | 2.04 | 0.75 | 24 | 2.21 | 0.86 | 29 | 51 | -0.74 |
| Women | No Stereotype (Male) |  |  | Stereotype (Male) |  |  |  |  |
|  | M | SD | N | M | SD | N | DF | T-score |
| The Economy | 2.78 | 0.72 | 36 | 2.45 | 0.72 | 31 | 65 | 1.84* |
| Healthcare | 2.38 | 0.90 | 40 | 2.05 | 0.87 | 38 | 76 | 1.61 |
| Agriculture | 3.64 | 0.79 | 22 | 3.40 | 0.60 | 20 | 40 | 1.09 |
| Defence | 3.63 | 0.88 | 24 | 3.23 | 0.75 | 22 | 44 | 1.65 |
| Education | 2.54 | 0.93 | 37 | 2.37 | 1.14 | 35 | 70 | 0.69 |
| Transportation | 3.63 | 0.92 | 24 | 3.05 | 0.90 | 22 | 44 | 2.15** |
| Foreign policy | 2.83 | 1.10 | 29 | 2.72 | 0.84 | 25 | 52 | 0.40 |
| Unemployment | 2.34 | 1.17 | 41 | 2.11 | 1.13 | 37 | 76 | 0.89 |
| Environment | 3.57 | 0.96 | 28 | 3.00 | 0.84 | 21 | 47 | 2.17** |
| Elderly care | 3.15 | 1.05 | 26 | 3.12 | 0.99 | 26 | 50 | 0.14 |
| Tax policy | 3.04 | 1.00 | 26 | 2.79 | 0.88 | 24 | 48 | 0.92 |
| Gender equality | 2.97 | 1.06 | 32 | 2.61 | 1.03 | 28 | 58 | 1.33 |
| Rural development | 3.09 | 0.79 | 23 | 2.84 | 0.96 | 19 | 40 | 0.91 |
| Child care policy | 2.47 | 1.11 | 36 | 2.00 | 0.92 | 32 | 66 | 1.90* |

${ }^{*} \mathrm{p} \leq 0.1$ ** $\mathrm{p} \leq 0.05 . \mathrm{M}=$ Mean rating. Lower is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. DF = Degrees of Freedom. $1=$ Very competent, $5=$ Not competent.

T-test. Additional evaluation of the politician - Group one and three

| All | No Stereotype (Male) |  |  | Stereotype (Male) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Willingness to support ${ }^{\S}$ | 3.08 | 1.32 | 71 | 2.99 | 1.28 | 75 | 144 | 0.45 |
| Chances of being elected ${ }^{\#}$ | 3.34 | 0.75 | 67 | 3.39 | 0.94 | 70 | 135 | -0.29 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{\S}$ | 2.92 | 1.38 | 26 | 3.17 | 1.47 | 35 | 59 | -0.67 |
| Chances of being elected ${ }^{\text {\# }}$ | 3.32 | 0.69 | 25 | 3.06 | 0.91 | 32 | 55 | 1.17 |
| Women | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{8}$ | 3.18 | 1.30 | 44 | 2.82 | 1.10 | 39 | 81 | 1.36 |
| Chances of being elected ${ }^{\#}$ | 3.37 | 0.80 | 41 | 3.70 | 0.85 | 37 | 76 | -1.81* |

${ }^{*} \mathrm{p} \leq 0.1 \mathrm{M}=$ Mean rating. Higher is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. $\mathrm{DF}=$ Degrees of Freedom. ${ }^{\S} 1=$ Would never want to support, $4=$ Would certainly want to support. ${ }^{\#} 1=$ No chance, $5=$ Very good chance, $6=$ Will surely be elected.

### 9.5 Appendix E - T-test tables for analysis of group two and four.

T-test. Evaluation of Politician - Group two and four

| All | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| As an MP | 2.96 | 0.86 | 52 | 2.98 | 0.90 | 56 | 106 | -0.12 |
| As prime minister | 3.19 | 0.98 | 53 | 3.43 | 1.02 | 54 | 105 | -1.23 |
| Arguing policies | 2.91 | 0.82 | 58 | 3.06 | 1.01 | 62 | 118 | -0.90 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 3.19 | 0.75 | 16 | 3.35 | 1.18 | 20 | 34 | -0.48 |
| As prime minister | 3.00 | 0.73 | 16 | 3.74 | 1.18 | 23 | 37 | -2.23** |
| Arguing policies | 2.59 | 0.71 | 17 | 3.23 | 1.34 | 26 | 41 | -1.82** |
| Women | M | SD | N | M | SD | N | DF | T-score |
| As an MP | 2.86 | 0.90 | 36 | 2.78 | 0.64 | 36 | 70 | 0.45 |
| As prime minister | 3.27 | 1.07 | 37 | 3.19 | 0.83 | 31 | 66 | 0.33 |
| Arguing policies | 3.05 | 0.84 | 41 | 2.94 | 0.67 | 36 | 75 | 0.60 |

T-test. Competency rating in policy areas - Group two and four

| All | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.69 | 0.73 | 52 | 2.65 | 0.76 | 60 | 110 | 0.30 |
| Healthcare | 2.26 | 1.01 | 56 | 2.39 | 1.09 | 62 | 117 | -0.64 |
| Agriculture | 3.41 | 0.89 | 34 | 3.41 | 0.87 | 41 | 73 | -0.01 |
| Defence | 3.59 | 0.96 | 34 | 3.24 | 0.98 | 42 | 74 | 1.56 |
| Education | 2.33 | 0.98 | 52 | 2.74 | 1.01 | 62 | 112 | -2.21** |
| Transportation | 3.38 | 0.98 | 37 | 3.09 | 0.96 | 46 | 81 | 1.36 |
| Foreign policy | 2.79 | 0.97 | 43 | 2.80 | 0.99 | 45 | 86 | -0.05 |
| Unemployment | 2.29 | 0.91 | 56 | 2.55 | 1.16 | 58 | 112 | -1.36 |
| Environment | 3.37 | 1.07 | 41 | 3.04 | 0.82 | 45 | 84 | 1.57 |
| Elderly care | 3.22 | 1.26 | 41 | 3.04 | 0.90 | 45 | 84 | 0.75 |
| Tax policy | 3.09 | 1.06 | 45 | 2.93 | 0.85 | 46 | 89 | 0.76 |
| Gender equality | 2.45 | 1.00 | 47 | 2.80 | 0.99 | 50 | 95 | -1.75* |
| Rural development | 2.74 | 0.74 | 35 | 2.61 | 0.68 | 38 | 71 | 0.83 |


| Child care <br> policy | 2.21 | 1.00 | 47 | 2.37 | 0.92 | 54 | 99 | -0.83 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Men | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| The Economy | 2.88 | 0.81 | 16 | 2.69 | 0.74 | 26 | 40 | 0.75 |
| Healthcare | 2.18 | 0.88 | 17 | 2.48 | 1.05 | 25 | 40 | -0.98 |
| Agriculture | 3.33 | 0.49 | 12 | 3.28 | 0.83 | 18 | 28 | 0.21 |
| Defence | 3.73 | 0.79 | 11 | 3.28 | 1.07 | 18 | 27 | 1.20 |
| Education | 2.19 | 0.83 | 16 | 2.80 | 0.96 | 25 | 39 | -2.10** |
| Transportation | 3.36 | 1.01 | 14 | 2.67 | 0.91 | 18 | 30 | 2.03* |
| Foreign policy | 2.80 | 0.94 | 15 | 2.32 | 0.75 | 19 | 32 | 1.67 |
| Unemployment | 2.38 | 0.81 | 16 | 2.42 | 1.28 | 24 | 38 | -0.12 |
| Environment | 3.75 | 0.87 | 12 | 2.84 | 0.76 | 19 | 29 | 3.06 *** |
| Elderly care | 3.64 | 1.08 | 14 | 2.94 | 0.54 | 18 | 30 | 2.39** |
| Tax policy | 3.40 | 0.91 | 15 | 2.76 | 0.94 | 21 | 34 | 2.03** |
| Gender equality | 2.50 | 0.85 | 14 | 2.64 | 0.85 | 22 | 34 | -0.47 |
| Rural development | 2.79 | 0.70 | 14 | 2.42 | 0.51 | 19 | 31 | 1.74* |
| Child care policy | 2.13 | 0.72 | 16 | 2.45 | 0.96 | 22 | 36 | -1.15 |
| Women | No Stereotype (Female) |  |  | Stereotype (Female) |  |  |  |  |
|  | M | SD | N | M | SD | N | DF | T-score |
| The Economy | 2.61 | 0.69 | 36 | 2.62 | 0.78 | 34 | 68 | -0.04 |
| Healthcare | 2.30 | 1.07 | 40 | 2.32 | 1.13 | 37 | 75 | -0.10 |
| Agriculture | 3.45 | 1.06 | 22 | 3.52 | 0.90 | 23 | 43 | -0.23 |
| Defence | 3.52 | 1.04 | 23 | 3.21 | 0.93 | 24 | 45 | 1.09 |
| Education | 2.39 | 1.05 | 36 | 2.70 | 1.05 | 37 | 71 | -1.28 |
| Transportation | 3.39 | 0.99 | 23 | 3.36 | 0.91 | 28 | 49 | 0.13 |
| Foreign policy | 2.79 | 0.99 | 28 | 3.15 | 1.01 | 26 | 52 | -1.35 |
| Unemployment | 2.25 | 0.95 | 40 | 2.65 | 1.07 | 34 | 72 | -1.69* |
| Environment | 3.21 | 1.11 | 29 | 3.19 | 0.85 | 26 | 53 | 0.05 |
| Elderly care | 3.00 | 1.30 | 27 | 3.11 | 1.09 | 27 | 52 | -0.34 |
| Tax policy | 2.93 | 1.11 | 30 | 3.08 | 0.76 | 25 | 53 | -0.56 |
| Gender equality | 2.42 | 1.06 | 33 | 2.93 | 1.09 | 28 | 59 | -1.83* |
| Rural development | 2.71 | 0.78 | 21 | 2.79 | 0.79 | 19 | 38 | -0.30 |
| Child care policy | 2.26 | 1.12 | 31 | 2.31 | 0.90 | 32 | 61 | -0.21 |

${ }^{*} \mathrm{p} \leq 0.1 * * \mathrm{p} \leq 0.05{ }^{* * *} \mathrm{p} \leq 0.01 . \mathrm{M}=$ Mean rating. Lower is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of
respondents. DF $=$ Degrees of Freedom. $1=$ Very competent, $5=$ Not competent.

T-test. Additional evaluation of the politician - Group two and four

| All | No Stereotype (Female) |  |  | Stereotype (Female) |  |  | DF | T-score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | SD | N | M | SD | N |  |  |
| Willingness to support ${ }^{8}$ | 2.90 | 1.18 | 62 | 2.95 | 1.31 | 63 | 123 | -0.22 |
| Chances of being elected ${ }^{\text {\# }}$ | 3.40 | 0.75 | 58 | 3.37 | 0.95 | 59 | 115 | 0.15 |
| Men | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{\text {8 }}$ | 3.11 | 1.32 | 18 | 2.88 | 1.39 | 25 | 41 | 0.55 |
| Chances of being elected ${ }^{\text {\# }}$ | 3.12 | 0.60 | 17 | 2.92 | 0.93 | 24 | 39 | 0.78 |
| Women | M | SD | N | M | SD | N | DF | T-score |
| Willingness to support ${ }^{\text {8 }}$ | 2.82 | 1.13 | 44 | 3.00 | 1.27 | 38 | 80 | -0.69 |
| Chances of being elected ${ }^{\#}$ | 3.51 | 0.78 | 41 | 3.69 | 0.83 | 35 | 74 | -0.94 |

$\mathrm{M}=$ Mean rating. Higher is better. $\mathrm{SD}=$ Standard Deviation. $\mathrm{N}=$ Number of respondents. $\mathrm{DF}=$ Degrees of Freedom. ${ }^{\S} 1=$ Would never want to support, $4=$ Would certainly want to support. ${ }^{\text {\# }} 1=$ No chance, $5=$ Very good chance, $6=$ Will surely be elected.


[^0]:    ${ }^{1}$ The Riksdag is the Swedish national parliament.

[^1]:    ${ }^{2}$ Nine out of the 12 classes were only obtained due to the help of a personal acquaintance who working as a secondary education teacher.
    ${ }^{3}$ Translated from Swedish.

[^2]:    ${ }^{4}$ Translated from Swedish.
    ${ }^{5}$ More information about Almedalen can be found at Almedalsveckan.info

[^3]:    ${ }^{6}$ The remainder were made up of "Other party" and the Sweden Democrats, who currently lack a clear bloc affiliation. Non-answers were not included.
    ${ }^{7}$ Translated from Swedish and Norwegian to English for the purpose of presentation.

[^4]:    ${ }^{8}$ This resulted in slightly uneven groups due to the fact that only 272 respondents ended up being included. The number of respondents per group are important for finding significant results, but only adversely affects validity if the respondents in the groups are not similarly composed.
    ${ }^{9}$ During sorting all the questionnaires were double-checked for errors.
    ${ }^{10}$ Dependent: Group variable (1-4). Independent: Classes. Potentially problematic class respondents set as 1 , rest set at 2. Class 1: $\mathrm{F}(1,270)=1.15, \mathrm{p}=0.22$. Class 2: $\mathrm{F}(1,270)=0.39, \mathrm{p}=0.53$.

[^5]:    ${ }^{11}$ The following variables were controlled for: Gender, age, social background (parents education, city/suburb/countryside upbringing), political interest, political affiliation (left/right scale and political party vote preference), whether they followed the speeches held at Almedalen, how often they read political material, how often they had private discussions about politics and what programme they are studying.
    ${ }^{12}$ Invalid answers and non-answers were excluded from the ANOVA.
    ${ }^{13}$ Full results available in Appendix A.
    ${ }^{14}$ For the purpose of the regression all respondents were treated as one group.

[^6]:    ${ }^{15}$ Group one $=$ Male politician. Group two $=$ Female politician.

[^7]:    ${ }^{16}$ Group one $=$ Male politician. Group three $=$ Male politician with stereotype manipulation .
    ${ }^{17}$ It is however possible that we will see differences since the proposed explanatory mechanisms behind the differences in the psychological math test experiments (internalization of stereotypes and impairment of working memory capacity being possible explanations) can't be expected to be the same for the evaluation of politicians. It is plausible, for example, that the word authority primes the respondents in the third group leading them to see the male politician in a more positive and typically male leadership role, rating him more favourably in general, or just in hard issue areas.

[^8]:    ${ }^{18}$ Group two $=$ Female politician. Group four $=$ Female politician with stereotype manipulation

