Personality and Gendered Selection Processes in the Political Pipeline

Adam M. Dynes
Brigham Young University

Hans J.G. Hassell
Florida State University

Matthew R. Miles
Brigham Young University, Idaho

Jessica R. Preece
Brigham Young University

Abstract

Most research on the causes of women's underrepresentation examines one of two stages of the political pipeline—the development of nascent political ambition or specific aspects of the campaign and election process. In this short paper, we make a different kind of contribution. We build on the growing literature on gender, psychology, and representation to provide an analysis of what kinds of men and women make it through the political pipeline at each of these stages. This allows us to draw some conclusions about the ways in which the overall process is similar and different for women and men.

Using surveys of the general population (N=1,939) and elected municipal officials such as mayors and city councilors (N=2,354) that measure the distribution of Big Five personality traits, we find that roughly the same types of men and women have nascent political ambition; there is just an intercept shift for sex. By contrast, male and female elected officials have different personality profiles. These differences do not reflect underlying distributions in the general population or the population of political aspirants. In short, our data suggest that socialization into political ambition is similar for men and women, but campaign and election processes are not.

Keywords: gender, political psychology, representation, candidate emergence, political ambition

Word count: 7,157

Women are underrepresented at every level of government in the United States.[1] Scholars have proposed a wide variety of reasons why elected office might be more elusive for women than for men, but they fall into roughly two broad categories: political socialization into lower levels of nascent political ambition and informal campaign and election barriers to officeholding. In this paper, we examine the selection effects of these two processes on what types of men and women make it through the pipeline to political office—specifically elected municipal offices such as mayor and city council. This analysis offers clues about how the pipeline is both similar and different for women and men and has important implications for the empirical study of women's representation.

Following a growing body of work on political psychology and women's representation (e.g., Schneider and Bos 2014; Bauer 2015, 2017; Kanthak and Woon 2015; Schneider et al. 2015; Cassese and Holman 2017; Oliver and Conroy 2017), we use surveys of the general population and elected municipal officials to examine distributions of Big Five personality traits in three populations—the general public, the politically ambitious, and municipal officeholders.[2] We find that women of all personality profiles have lower average levels of nascent political ambition than similar men, and that the gender gap in ambition is quite similar across personality traits and range. In other words, the political socialization process into political ambition appears to be substantively the same for men and women—there is just an intercept shift by sex.

[1] Current data on women's representation are available at http://www.cawp.rutgers.edu/current-numbers. Women currently hold 20% to 25% of elected offices across all levels of government, including municipal government according to our own data.

[2] Others have already made the case that psychological factors interact with the political environment to shape nascent and progressive ambition (Dietrich et al. 2012; Dynes, Hassell, and Miles 2018a; Fox and Lawless 2011). Our contribution is analyzing differences between the personality profiles of men and women who are 1) in the general population, 2) interested in running for political office, and 3) already elected officials. In doing so, we show the ways in which these stages of the political pipeline select for similar and different personality traits among men and women.

By contrast, the selection process of male and female political aspirants into officeholding does interact with personality in meaningful ways: female officeholders display higher levels of conscientiousness and extraversion than male officeholders. Importantly, these differences do not reflect differences in the general population or in the population of politically ambitious individuals. In other words, when it comes to the campaign and elections process, it may not make much sense to think of "the" political pipeline, but rather a political pipeline for women and a political pipeline for men (Carroll and Sanbonmatsu 2013).

Candidate Emergence and Selection into Office

Gender scholars have examined many aspects of whether women face unique challenges in the pipeline to political office. The bulk of these studies focus on one of two broad parts of the process: the development of nascent political ambition or various aspects of the campaign and election process. Studies consistently show that women have lower levels of nascent political ambition than men—part of which may be the result of socialization into gender norms and part of which may be endogenous to lower levels of recruitment (Fox and Lawless 2005; Moore 2005; Maestas et al. 2006; Lawless and Fox 2010; Preece and Stoddard 2015; Schneider et al. 2015; Holman and Schneider 2018).

Interestingly, despite the persistent gender gap in nascent political ambition, some research suggests that the factors that contribute to it may be broadly similar for men and women. Surveys of high school and college students find that once factors such as family socialization about politics and competitive experiences are controlled for, sex is no longer significant predictor of political ambition (Fox and Lawless 2014). Girls and young women have less political ambition, but it is because they receive fewer of the kinds of inputs that lead to it

than boys and young men do. A similar pattern may play out in the way that recruitment to office leads to more interest in running. Both men and women who remember being recruited have greater political ambition, but women are recruited less than men (Lawless and Fox 2010). At the same time, based on surveys of state legislators, there is some evidence that the development of political ambition varies for men and women, with men following more of a self-starter model and women following more of a "relationally-embedded" model (Carroll and Sanbonmatsu 2013).

While the research on ambition consistently shows gender differences, studies evaluating whether specific informal election institutions present disproportionate barriers for women have a wider variety of conclusions. Candidate recruitment and negative recruitment patterns favor men (Crowder-Meyer 2013; Niven 2006). On the other hand, some studies of electoral institutions show no discrimination against women. For example, the media may cover men and women similarly (Hayes and Lawless 2015);[3] fundraising may not be much of a practical electoral barrier to women's representation (Barber, Butler, and Preece 2016); party support of women appears to be on par or higher than men (Doherty, Dowling, and Miller 2018; Fraga and Hassell 2018; Hassell and Visalvanich 2019), and voters primarily care about partisanship and incumbency (Dolan 2014; Claassen and Ryan 2016; but see Karpowitz et al. 2018).

These and other null findings form the basis of the common adage that when women run, women win (Burrell 1994). Nevertheless, most gender scholars agree that reality is much more complex. Many aspects of the campaign process are gendered (Dittmar 2015; Conroy 2016, 2018). Female candidates may be much higher quality than their male counterparts or common research approaches may be poorly suited to measuring the campaign barriers women face—or

[3] It is important to note that this study only focused on overall coverage, issue coverage, and coverage of physical appearance. Recent work in non-U.S. context has suggested that media coverage of leadership traits for men and women is different (Aaldering and Van Der Pas 2018).

both (Fulton 2012; Pearson and McGhee 2013). This can make it extremely difficult to empirically identify if gendered processes are at play in the campaign and election stage. Indeed, the possibility of selection effects that obscure causation is one of the biggest challenges to the empirical study of gender and representation.

Increasingly, scholars of women's underrepresentation have turned to political psychology—especially political psychology experiments—to untangle this puzzle. Some of this research examines the psychology of how male and female politicians conceptualize running for office and the effect on nascent political ambition (Kanthak and Woon 2015; Schneider et al. 2015; Preece 2016). Other research focuses on how voters view male and female politicians during the campaign process (Schneider and Bos 2014; Cassese and Holman 2017; Bauer 2015, 2017) or on how masculine personality traits affect recruitment (Oliver and Conroy 2017). Our study goes in a different direction than most of this recent work on gender and political psychology, but it complements it nicely.

Instead of studying the political psychology of specific elements of the pipeline to office, we measure whether broad stages in the process result in different kinds of men and women navigating the stages successfully. In other words, we use tools from political psychology to present an overview of the effects of the pipeline to office. We do this by identifying differences in the average personality profiles of men and women moving from 1) the general population to the population of political aspirants and 2) the population of political aspirants to the population of local elected officials.

This kind of analytic approach is important because it provides information about the presence or absence of gendered selection effects, something that is empirically very challenging to do. If a selection process is egalitarian, we would expect to see it select on similar personality

traits for both men and women. On the other hand, if we see differences in the types of men and women that advance through each stage (i.e. a disproportionate presence of one trait among men and a different trait among women), that indicates that gendered selection processes are at play. The findings can also give us clues about the nature of any gendered selection effects. This simple approach also allows us to evaluate the cumulative effects of these selection processes on how representative elected officials' personality traits are of their baseline populations.

In examining how the political pipeline is gendered, we utilize the five-factor model or "Big Five" personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism (or its opposite, emotional stability).[4] We do so for several reasons. First, we have strong reasons to believe that voters and candidate recruiters are looking for different character traits for men and women when evaluating potential candidates (Dittmar 2015; Karpowitz et al. 2018). Moreover, we also have strong reasons to believe that women focus on different components of the electoral environment when considering a run for office (Carroll and Sanbonmatsu 2013; Dittmar 2015; Kanthak and Woon 2015), which might also result in differences in personality traits. Personality traits correlate with the comfort individuals experience while participating in different contexts—and in particular their interest in running for political office (Dietrich et al. 2012; Dynes et al. 2018a). These traits consistently emerge as dominant features of individual personality (McCrae and Costa 2008).

Furthermore, individual scores on the Big Five personality traits are remarkably stable. A longitudinal study of German youth measured their personality traits during the last year of high school and every two years afterwards for the next eight years. The changes in personality

[4] One concern with our analysis might be that winning office changes people's personality as measured by the Big Five. However, personality traits show remarkable stability over the course of one's adult life (Specht, Egloff, & Schmukle, 2011) and are genetically heritable (Vukasović & Bratko, 2015). In addition, studies find genetic correlations between personality traits and political behavior (Lo et al. 2017, Miles and Haider-Markel 2018).

over the course of the eight-year study were mostly attributed to maturation even when comparing those who entered military service to those who did not (Jackson et al 2012). Research suggests that as people mature it is possible for them to register minor changes in their personality traits, but after an individual reaches 30 years of age, their personality remains stable for the rest of their life (McCrae and Costa 2005; Specht, Egloff, & Schmukle, 2011). Neither the number of life changes, the severity of those life changes, nor changes to physical or mental health have been found to significantly alter one's personality over the course of their adult life (summarized in McCrae and Costa 2005, pp.130-135). Additionally, there is evidence that personality traits are genetically heritable (Jang, Livesley, & Vemon, 1996; Vukasović & Bratko, 2015).

Finally, a large body of work has found that the Big Five are associated with a wide range of political attitudes and behaviors among voters (see Gerber et al. 2011 for a review). In addition, some of the genes that predispose individuals to developing certain personality traits also predispose them to selecting certain forms of political participation as adults. The political context largely determines why individuals with certain personality traits opt for one form of political participation over another (Miles and Haider-Markel 2018). And, a new but growing literature finds that personality traits influence decision-making in office (Caprara et al. 2010; Cuhadar et al. 2016; Dietrich et al. 2012; Ramey et al. 2017) and during the campaign (Hassell 2018b). The well-established nature of the Big Five in the social sciences, their usefulness in identifying individual personality differences, and their relationship to the comfort an individual feels in different social and professional environments makes them an ideal framework for an analysis of how the political pipeline selects for male and female candidates for public office.

Methods and Results

To examine the political selection process for men and women, we examine personality traits by sex among both the general American public (using an online survey of a representative sample of 1,939 American adults conducted in 2015) and elected officials (using a survey of 2,354 elected officials serving in municipal government in the U.S. conducted in 2016). For extensive details on both surveys, please see the supplementary online appendix.

Our online survey of municipal officials targeted elected municipal executives (mayors) and legislators (e.g., city councilors, aldermen, supervisors, etc.). This sample is similar to ones used in previous work to understand municipal officials' decision-making (e.g., Butler et al. 2017), including on issues of gender and candidate emergence (Butler and Preece 2016). The survey was administered online using Qualtrics and was conducted in two waves sent to two different samples of municipal officials. Email invitations to the first wave were sent in May and June of 2016 to a sample of 27,862 elected mayors and municipal legislators from 4,187 cities with a population above 10,000. This wave had a 17.8% response rate, similar to other surveys of municipal officials. [5] The second wave of the survey was conducted in June and July of 2016. That sample consisted of the email addresses of elected mayors and municipal legislators gathered by Daniel Butler and Adam Dynes for surveys conducted in 2012 and 2014. Given that these email addresses were gathered 2 to 4 years earlier, we knew that a large percentage would no longer be accurate. Indeed, 26% of the emails sent through Qualtrics were undeliverable. It is

[5] This list of officials was compiled by a for-profit organization that gathers contact information and email addresses of public officials from municipalities that have a website and a population above 10,000. The organization uses webcrawler software to create the list of emails. Unfortunately, this approach has a high error rate. Based on looking up a random sample of 832 officials from this list, we discovered that only 44% of the email addresses were accurate.

likely that some of the active email addresses were no longer monitored. The response rate for the second round of the survey was 6.9%.

We combine both rounds of the survey and analyze the data together given the short amount of time between the two waves of the survey. Overall, the municipal officials in our sample come from a wide variety of municipalities from 49 states[6] and, individually, vary significantly across a wide range of politically relevant variables. Though respondents come from slightly larger cities than the average municipal official,[7] these cities are representative in terms of cities' aggregate policy views (as measured by Tausanovitch and Warshaw 2013) and demographic features such as minority population size, median income, employment, and education levels. And while the full population of municipal officials is unknown, respondents to our survey are similar to non-respondents on gender and elected position (i.e., mayor versus city council members). Finally, in Table A.8 in the appendix, we show that the personality differences between female and male officials hold even when controlling for a host of other politically relevant variables.

In both samples, we asked a battery of questions designed to measure Big Five personality traits and questions measuring nascent political ambition in the general population. (In the survey of municipal officials, the battery of personality trait questions were one of many sets of questions in the survey for a variety of research projects.) Consistent with previous work, we measure each respondents' personality trait scores by calculating their mean response across the items measuring a particular trait and then rescale the mean to be from 0-1, with higher

[6] We do not have any officials from Hawaii since counties in this state administer the services that are normally delegated to municipalities in the rest of the US.

[7] The average population of all municipalities in the US is 9,118, while the average municipal population among our sample of officials is 54,777. When ordering cities from smallest to largest, the median American across these cities lives in a city with a population of about 60,000. Thus, our sample of municipal officials are more likely to come from the types of municipalities where most Americans live.

numbers indicating higher levels of a particular trait. To measure nascent political ambition among the general population, we follow Lawless and Fox (2010) and ask respondents about their "attitude toward running for office in the future." We find that 17% of the sample is either "actively considering" (1%) or "open to the possibility" (16%) of running for office in the future. Further details on the sample and methodology are available in the online appendix.

Nascent Political Ambition

We begin by examining the relationship between personality traits and nascent political ambition for men and women. In other words, do the personality profiles of politically ambitious men and women look similar or different? This will help us ascertain whether the socialization process that leads to being open to running for office is distinct for men and women.

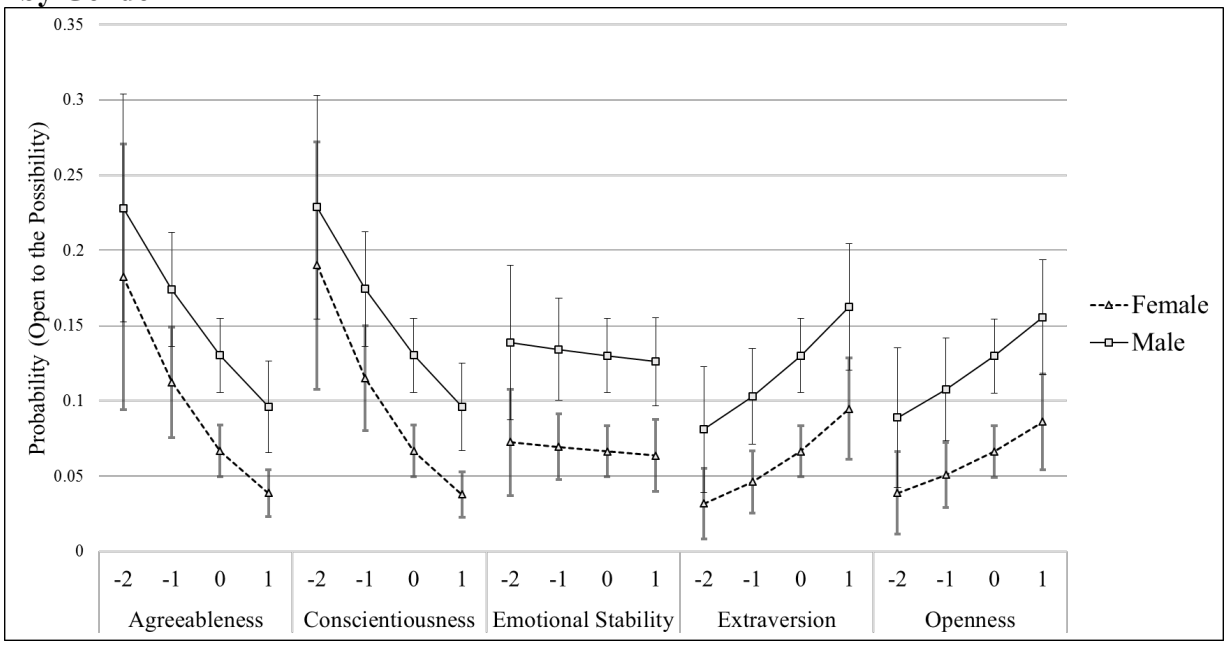
Figure 1 is estimated from an ordered logit model (available in the appendix).[8] We include personality traits as well as controls for income, education, party identification, ideology, and race. We asked respondents to characterize their interest in running for public office on a three-point scale (no interest=80%, open to the possibility=16%, actively considering=1%). Figure 1 plots the predicted probability of a respondent saying that they are open to the possibility of running for higher office by gender and each personality trait level.

Consistent with previous research, we find that women generally express less interest than men in running for office and that personality predicts ambition (Dietrich et al. 2012; Dynes et al. 2018a). What is interesting, however, is that the slopes of these lines for men and women are approximately parallel. For both men and women, agreeableness and conscientiousness are strongly negatively correlated with political ambition; emotional stability is slightly negatively

[8] While previous research has not explicitly looked at the Big Five personality traits and their relationship to nascent political ambition, it has examined other factors such as self-assessments of political traits that might be considered similar in some ways (Lawless 2012; Lawless and Fox 2010).

correlated with political ambition; and extraversion and openness are strongly positively correlated with political ambition. In other words, sex does not interact with personality in regard to a willingness to express political ambition. On average, women of all personality types express less interest in running for office than similar men—but the personality traits that predict political ambition are substantively the same across sex. Hence, although it takes more (or less) of a given personality trait to lead to political ambition for women than men, the same basic types of men and women are attracted to running for office.

Figure 1: The Effect of Personality Traits on Political Ambition in the General Population by Gender



Note: 2015 Survey of US Adults. Points are the predicted probabilities from the ordered logistic regression model; bars are the 95% confidence interval. X-axis is the standard deviation from the mean. $N = 955$ for women; and 985 for men.

This is consistent with the Fox and Lawless (2014) findings that the primary reason girls and young women are less politically ambitious is that they receive fewer of the inputs that predict political ambition—e.g., they are less likely to be part of political conversations,

participate in competitive sports, etc. When thinking about our findings in conjunction with their findings, it seems that existing socialization processes work best to motivate a particular profile of person into politics, but women with that personality profile are less likely to receive that socialization than men are. Interestingly, as our next section shows, the profile that is most likely to be open to running for office in the future is not necessarily the profile that is mostly likely to be successful at navigating the campaign and election process.

Selection into Office

The previous section investigated how personality and gender influence who is open to running for office. However, simply being interested in running for office is not enough for representation to occur. Political aspirants must navigate a campaign and election process to actually get into office. Hence, this section compares the personality traits of men and women with similar levels of political ambition with the personality traits of men and women actually in office.

In other words, we are interested in finding whether there is evidence of gendered selection effects into office. A gender-neutral selection process into office would take one of two forms. It might replicate the same distribution of traits that exist among political aspirants, which would correspond with a process along the lines of a random draw from the male and female political aspirant pools, respectively. Or, it might result in more or less identical personality profiles among men and women in office, which would correspond with a process that selects for the same personality traits, regardless of sex.

Figure 2 shows the differences in the distribution of personality traits among men and women who have expressed an interest in running for higher office in the general population

survey ("political aspirants") [9] and the elected municipal officials.[10] We first note the remarkable similarity in the distribution of personality traits between politically ambitious men and women in the general population sample (see Table A.6 for statistical tests). As follows from the previous section, the same types of men and women tend to have political ambition. On openness, conscientiousness, extraversion, and agreeableness, politically ambitious individuals have very similar scores, regardless of their sex; politically ambitious females do score somewhat lower on emotionally stability than their male counterparts, though.

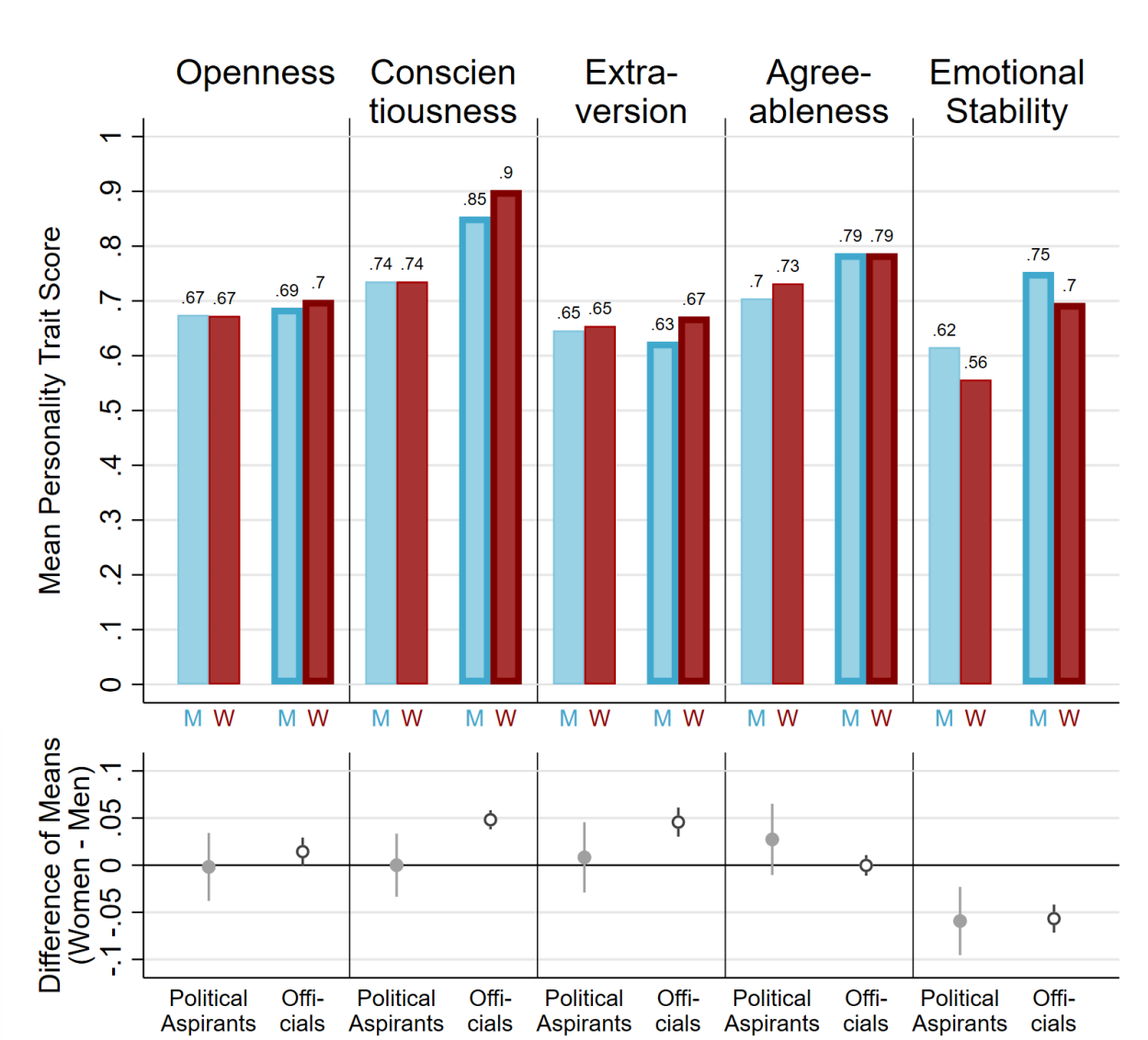
Yet, in contrast to our political ambition findings, we find evidence of gendered differences in the selection into office process. Despite the overall similarities in the distribution of personality traits among politically ambitious individuals, there are some differences in the distribution of personality traits among male and female elected officials. There are statistically significant differences in male and female elected officials' levels of conscientiousness (diff. = 0.05 or 1/3 a standard deviation, $p<0.01$), extraversion (diff. = 0.05 or 1/5 a standard deviation, $p<0.01$), and emotional stability (diff. = 0.06 or ¼ a standard deviation, $p <0.01$). Women elected officials are significantly more conscientious and extraverted, while men elected officials score higher on emotionally stable.[11]

[9] Results are similar for individuals who were both "actively considering" and "open to the possibility" of seeking higher office.

[10] In Table A.6 in the appendix, we show the mean and standard deviation for each trait among each of these groups. In Figure A.6, we show a kernel density plot of the distribution of these traits. In Table A.8 we show that the differences between female and male officials hold even when controlling for a host of political relevant variables at the municipal and individual level.

[11] We ran the same analysis that produced Figures 2 and 3 for municipal executives (mayors) and legislators (city councilors, aldermen, etc.), and found some evidence for differences in differences between female mayors and male mayors and between female municipal legislators and male municipal legislators on Extraversion (4 point diff-in-diff) and Agreeableness (5 point diff-in-diff). However, given the small number of female mayors in our sample, the analysis was underpowered, such that none of the differences in differences reached statistical significance at the 0.05 level.

Figure 2: Differences in Personality Traits between Men and Women in the General Population with Political Ambition and among Male and Female Elected Local Officials



Note: Bar graph (top panel) indicates groups' mean score on the Big Five personality traits, which are measured on a scale from 0 to 1 where higher numbers indicate higher levels of that trait. Light blue bars indicate means for men while dark red bars indicate means for women. For each personality trait, the two bars on the left side are the means for male and female political aspirants while the two bars on the right are the means for male and female elected officials. The lower panel indicates the difference of means between women and men among political aspirants (solid, gray circles) and among elected officials (open, black circles), with their corresponding 85% confidence intervals. We use 85% confidence intervals (Payton et al. 2000, Maghsoodloo and Huang 2010) to more clearly indicate statistically significant differences between the difference of means at the 0.05 level, which is achieved when the confidence intervals do not overlap, as is the case with Conscientiousness. $N = 651$ for female officials; 1,699 for male officials; 102 for female political aspirants; and 235 for male political aspirants.

This suggests a gendered campaign and election selection process at play, but the process might still be considered gender neutral if this just represented proportional draws from populations with different baseline traits. In other words, if male and female *aspirants* were fundamentally different from each other and that difference was merely replicated among male and female *elected officials*, then we may not be so concerned about how gendered the campaign and election process is. For one trait—emotional stability—that seems to be precisely the case. The gender gap in emotional stability among political aspirants is exactly replicated among elected officials. As the lower panel in Figure 2 shows, the difference-in-differences for emotional stability is practically zero. And while the gender gap in extraversion is slightly larger, its difference-in-differences calculation falls below standard levels of statistical significance. Essentially, controlling for the level of these traits in the political aspirant pool, it does not seem to be the case that campaigns and elections are differentially selecting men and women for emotional stability, and possibly extraversion.

The findings for conscientiousness, however, are different. Taking political aspirants as the baseline, female elected officials are disproportionately conscientious compared to male elected officials. As Figure 2 shows, levels of conscientiousness among male and female political aspirants are identical. But among elected officials, female aspirants are more conscientious. In fact, female elected officials show the highest levels of conscientiousness than any group shows of any trait.

Our data obviously cannot identify the precise reasons for these differences or the specific parts of the campaign and election processes that account for them. However, thinking about our results in conjunction with prior research is more helpful with regard to conscientiousness and extraversion. Our conscientiousness findings dovetail well with existing

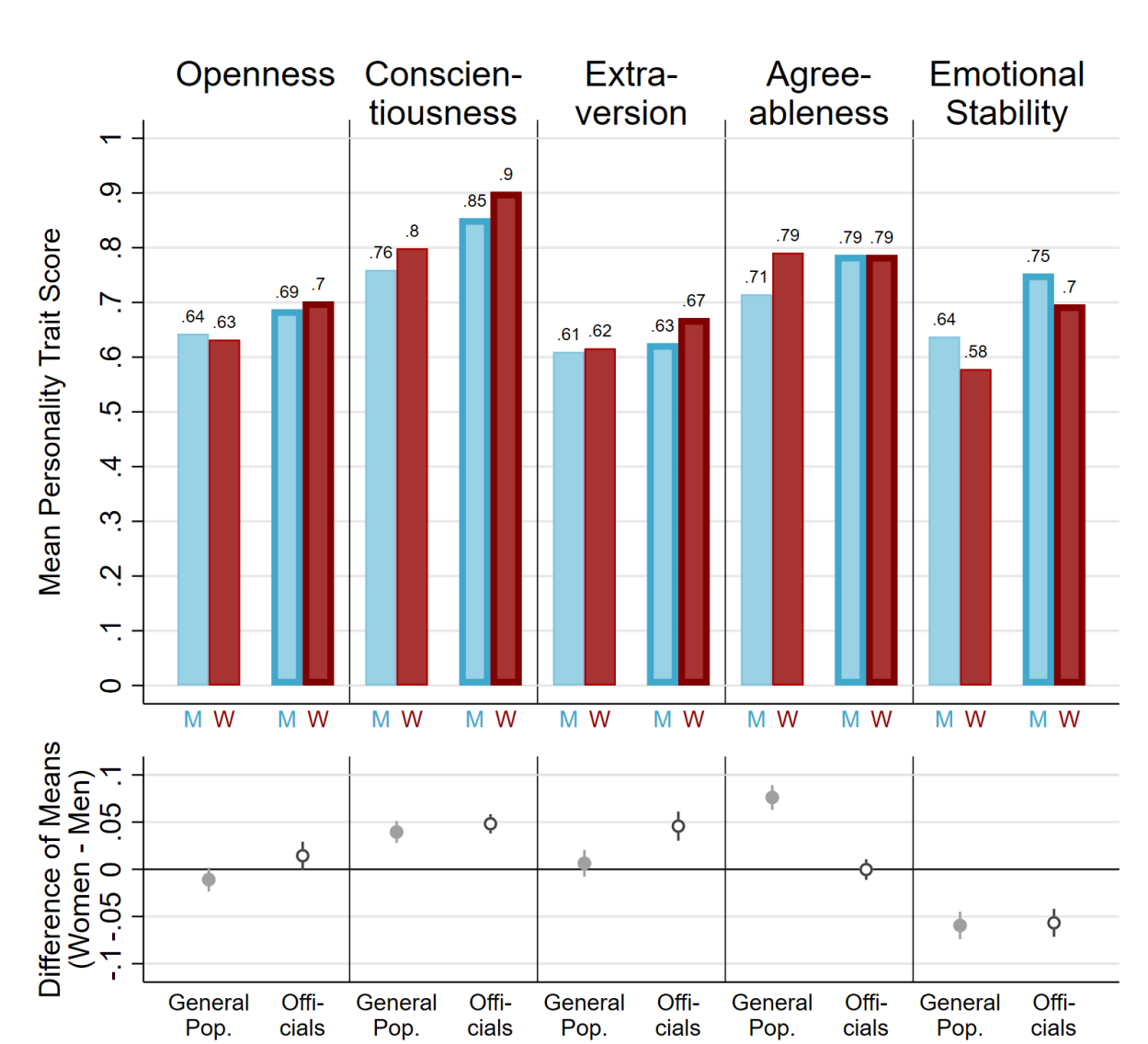
research that finds that, at least at the Congressional level, women typically feel the need to be more qualified—and indeed are more qualified—to run for office (Pearson and McGhee 2013; Lawless and Fox 2010). They also face more primary election challengers (Lawless and Pearson 2008). It is perhaps not coincidental that they are often more effective legislators (Anzia and Berry 2011; Volden, Wiseman, and Wittmer 2013). Further, the work on candidate recruitment may help to explain why extraverted women are somewhat overrepresented in office. We know that recruitment is an important part of the pipeline to office and that the networks that recruiters typically draw from are male-dominated (Lawless and Fox 2010; Crowder-Meyer 2013; Niven 2006; Carroll and Sanbonmatsu 2013). Extraverted women may be better suited to break into these male-dominated recruitment networks.

The Overall Consequence of the Political Pipeline

Now that we have examined two constituent parts of the pipeline to elected office, we examine the overall consequence of these selection processes on the distribution of men and women in office compared to men and women in the general population. This provides a summary of the effect of these processes on descriptive representation, as seen through the lens of gender and personality traits. As Figure 3 shows, [12] elected officials typically score higher on the Big Five personality traits than their respective general populations, especially with regard to emotional stability (diff. = 0.12 or ½ a standard deviation, $p<0.01$) and conscientiousness (diff = 0.09 or ½ a standard deviation, $p<0.01$). It is not especially surprising that the pipeline to elected office does not represent a random draw of citizens. In fact, it may be desirable that the overall

[12] In Table A.7 in the appendix, we show the mean and standard deviation for each trait among each of these groups. In Figure A.7, we show a kernel density plot of the distribution of these traits. In Table A.8 we show that the differences between female and male officials hold even when controlling for a host of political relevant variables at the municipal and individual level.

Figure 3: Differences in Personality Traits between Men and Women in the General Population and among Male and Female Elected Local Officials



Note: Bar graph (top panel) indicates groups' mean score on the Big Five personality traits, which are measured on a scale from 0 to 1 where higher numbers indicate higher levels of that trait. Light blue bars indicate means for men while dark red bars indicate means for women. For each personality trait, the two bars on the left side are the means for men and women in the general population while the two bars on the right are the means for male and female elected officials. The lower panel indicates the difference of means between women and men in the general population (solid, gray circles) and among elected officials (open, black circles), with their corresponding 85% confidence intervals. We use 85% confidence intervals (Payton et al. 2000, Maghsoodloo and Huang 2010) to more clearly indicate statistically significant differences between the difference of means at the 0.05 level, which is achieved when the confidence intervals do not overlap, as is the case with Extraversion and Agreeableness. $N = 651$ for female officials; 1,699 for male officials; 955 for women in the general population; and 985 for men in the general population.

political pipeline (in stark contrast to nascent political ambition) strongly selects for traits like emotional stability and conscientiousness. This normative question is, of course, worth debating; as Mansbridge points out, it is not entirely clear that a random draw from the citizenry would mortally impair the function of local government (1999, 630–32).

In addition to these overall differences, there are some gender differences. Figure 3 shows that male elected officials are significantly more agreeable than the average man in the general population compared to female elected officials and the average woman in the general population (diff-in-diff = -0.08 or 2/5 a standard deviation, $p<0.01$), while female elected officials are more extraverted (diff-in-diff = 0.04 or 1/5 a standard deviation, $p<0.01$) and marginally more open (diff-in-diff = 0.02 or 1/10 a standard deviation, $p<0.1$). These differences in the representativeness of personality traits among male and female elected officials may have important implications for representation, as recent work finds evidence that personality traits affect policymakers' decision making in office (Best 2011; Caprara et al. 2010; Cuhadar et al. 2016; Dynes et al. 2018b; Dietrich et al. 2012; Ramey et al. 2017).

Conclusion

Political scientists have studied a wide variety of specific contributions to women's underrepresentation in politics. In this paper, we take a different approach—we describe who makes it through the two broad stages of the political pipeline. In other words, our findings give us a view of what the overall pipeline for office looks like for men and women and allow us to make some assessments about the similarities and differences of the process for men and women.

We find that women of all personality profiles have consistently lower average levels of nascent political ambition than men with similar personality profiles. Yet, there is almost no

interaction between gender and personality, suggesting that the process of socialization into political ambition may be broadly similar for men and women—women just receive less of it or respond less strongly. This reinforces the findings that have looked at the predictors of nascent political ambition and found them to be broadly similar for boys and girls (Fox and Lawless 2014).

At the same time, we find that the campaign and election process selects for somewhat different kinds of men and women. In particular, when compared to the pool of political aspirants, female elected officials are differentially more conscientious and somewhat more extraverted than male elected officials. Though determining the mechanisms through which these selection effects happen are beyond the scope of our data, we hypothesize that this may because women feel the need to be more qualified before running for office and need to be especially extraverted to break into male-dominated recruitment networks and get the "relationally embedded" encouragement they need to run (Carroll and Sanbonmatsu 2013). If these are indeed the mechanisms through which this differential selection happens, there are reasons to believe that other underrepresented groups may show similar patterns of personality trait differences. For example, social networks are profoundly racially segregated (McPherson, Smith-Lovin, and Cook 2001); since political networks tend to be predominantly white, it would not be surprising to find that African-American elected officials are especially extraverted.

Our findings about the campaign and election process reinforces findings from Carroll and Sanbonmatsu (2013) that men and women have somewhat different pathways to office. Gendered processes in the latter stages of the political pipeline mean that it may not make sense to think of "the" political pipeline, but rather a political pipeline for men and a political pipeline for women. From an empirical analysis standpoint, this suggests a different kind of

methodological approach than simply controlling for sex, as our findings suggest one reasonably could when studying socialization into political ambition. Researchers who study campaigns and elections may consider returning to the analytic approach that Burns et al. (2001, 48–50) employ, namely running different models for men and women or making generous use of interaction terms in analyses.

Finally, our findings have implications for the adage that "when women [want to] run, women win." Comparing the profiles of politically ambitious citizens to the profiles of local officeholders makes it clear that some kinds of women are more successful than others, and that differs somewhat from the kind of men who are successful. Our results show that, independent of the political ambition deficit, there are gendered selection effects at play in the campaign and/or election process. Focusing on identifying those selection effects should be a priority for gender scholars.

References

Aaldering, Loes, and Daphne Joanna Van Der Pas. 2018. "Political Leadership in the Media: Gender Bias in Leader Stereotypes during Campaign and Routine Times." *British Journal of Political Science*.

Barber, Michael, Daniel M. Butler, and Jessica Preece. 2016. "Gender Inequalities in Campaign Finance." *Quarterly Journal of Political Science* 11 (2):219–48.

Bauer, Nichole M. 2015. "Emotional, sensitive, and unfit for office? Gender stereotype activation and support female candidates." *Political Psychology* 36(6): 691-708.

Bauer, Nichole M. 2015. "Who stereotypes female candidates? Identifying individual differences in feminine stereotype reliance." *Politics, Groups, and Identities* 3(1): 94-110.

Bauer, Nichole M. 2017. "The effects of counterstereotypic gender strategies on candidate evaluations." *Political Psychology* 38(2): 279-295.

Best, Heinrich. 2011. "Does Personality Matter in Politics? Personality Factors as Determinants of Parliamentary Recruitment and Policy Preferences." *Comparative Sociology* 10 (6): 928–48.

Burns, Nancy, Kay Lehman Schlozman, and Sidney Verba. 2001. *The private roots of public action*. Harvard University Press.

Burrell, Barbara. 1994. *A Woman's Place Is in the House: Campaigning for Congress in the Feminist Era*. Ann Arbor: University of Michigan Press.

Butler, Daniel M., and Jessica Robinson Preece. 2016. "Recruitment and Perceptions of Gender Bias in Party Leader Support." *Political Research Quarterly* 69 (4): 842–51.

Butler, Daniel M., Craig Volden, Adam M. Dynes, and Boris Shor. 2017. "Ideology, Learning, and Policy Diffusion: Experimental Evidence." *American Journal of Political Science* 61 (1): 37–49.

Caprara, Gian Vittorio, Claudio Barbaranelli, Chiara Consiglio, Laura Picconi, and Philip G Zimbardo. 2003. “Personalities of Politicians and Voters: Unique and Synergistic Relationships.” *Journal of Personality and Social Psychology* 84(4):849.

Caprara, Gianvittorio, Donata Francescato, Minou Mebane, Roberta Sorace, and Michele Vecchione. 2010. Personality Foundations of Ideological Divide: A Comparison of Women Members of Parliament and Women Voters in Italy. *Political Psychology*. 31(5):739–762.

Carroll, Susan J., and Kira Sanbonmatsu. 2013. *More women can run: Gender and pathways to the state legislatures*. Oxford University Press.

Cassese, Erin C., and Mirya R. Holman. 2017. "Party and Gender Stereotypes in Campaign Attacks." *Political Behavior*.

Claassen, Ryan L. and John Barry Ryan. 2016. “Social Desirability, Hidden Biases, and Support for Hillary Clinton*.” Special Election Issue of PS: Political Science and Politics*. 49: 730-735.

Conroy, Meredith. 2018. "Strength, Stamina, and Sexism in the 2016 Presidential Race." *Politics & Gender* 14(1): 116-121.

Conroy, Meredith. 2016. *Masculinity, media, and the American presidency*. Springer.

Costa Jr, Paul T., Antonio Terracciano, and Robert R. McCrae. "Gender differences in personality traits

across cultures: robust and surprising findings." *Journal of personality and social psychology* 81,

no. 2 (2001): 322.

Crowder-Meyer, Melody Ara. 2013. *Gendered Recruitment without Trying: How Local Party Recruiters Affect Women's Representation*. Cambridge Univ Press.

Cuhadar, Esra, Juliet Kaarbo, Baris Kesgin, and Binnur Ozkececi-Taner. 2016. "Personality or Role? Comparisons of Turkish Leaders across Different Institutional Positions." *Political Psychology* 38(1): 39–54.

Dietrich, Bryce J., Scott Lasley, Jeffery J. Mondak, Megan L. Remmel, and Joel Turner. 2012. "Personality and Legislative Politics: The Big Five Trait Dimensions among US State Legislators." *Political Psychology* 33(2): 195-210.

Dittmar, Kelly. 2015. *Navigating Gendered Terrain: Stereotypes and Strategy in Political Campaigns*. Temple University Press.

Dittmar, Kelly. 2015. "Encouragement is not Enough: Addressing Social and Structural Barriers to Female Recruitment." *Politics & Gender* 11(4):759–765

Dynes, Adam M., Hans J.G. Hassell, and Matthew R. Miles. 2018a. "The Personality of the Politically Ambitious." *Political Behavior*.

Dynes, Adam M., Hans J.G. Hassell, and Matthew R. Miles. 2018b. "Variations in Local Representational Style: The Role of Personality Traits on the Behavior of Elected Official." *Working Paper.*

Dolan, Kathleen. 2014. *When Does Gender Matter?: Women Candidates and Gender Stereotypes in American Elections*. Oxford University Press, USA.

Fox, Richard L, and Jennifer L Lawless. 2011. "Gendered Perceptions and Political Candidacies: A Central Barrier to Women's Equality Politics in Electoral Politics." *American Journal of Political Science* 55(1): 59–73.

Fraga, Bernard L., and Hans J.G. Hassell. 2018. “Are Minority and Women Candidates Penalized by Party Politics? Race, Gender, and Access to Party Support.” *Indiana University Working Paper.*

Fulton, Sarah A. 2012. “Running Backwards and in High Heels: The Gendered Quality Gap and Incumbent Electoral Success.” *Political Research Quarterly* 65 (2):303–14.

Gerber, Alan S., Gregory A. Huber, David Doherty, Conor M. Dowling. 2011. “The Big Five Personality Traits in the Political Arena.” *Annual Review of Political Science* 14: 265–87.

Hassell, Hans JG. 2018a. *The Party's Primary: Control of Congressional Nominations*. Cambridge University Press.

Hassell, Hans J.G. 2018b. “It’s Who’s on the Inside that Counts: Campaign Practitioner Personality and Campaign Tactics.” *Political Behavior.*

Hassell, Hans J.G. and Neil Visalvanich. 2019. “The Party’s Primary Preferences: Race, Gender, and Party Support of Congressional Primary Candidates.” *Midwest Political Science Association Conference.*

Hayes, Danny, and Jennifer L Lawless. 2015. “A Non-Gendered Lens? Media, Voters, and Female Candidates in Contemporary Congressional Elections.” *Perspectives on Politics* 13 (1):95–118.

Holman, Mirya R., and Monica C. Schneider. 2018. "Gender, Race, and Political ambition: How Intersectionality and Frames Influence Interest in Political Office." *Politics, Groups, and Identities* 6(2): 264-280.

Jackson, J. J., Thoemmes, F., Jonkmann, K., Ludtke, O., & Trautwein, U. (2012). “Military training and personality trait development: Does the military make the man, or does the man make the military?” *Psychological Science*, 23, 270–277

Kanthak, Kristin, and Jonathan Woon. "Women don't run? Election aversion and candidate entry." *American Journal of Political Science* 59, no. 3 (2015): 595-612.

Karpowitz, Chris F., J. Quin Monson, Jessica Robinson Preece, and Alejandra Teresita Gimenez. 2018. "Selecting for Masculinity: The Double Bind and Women's Representation in the Republican Party." *American Political Science Association Annual Conference.*

Lawless, Jennifer L. 2012. *Becoming a Candidate: Political Ambition and the Decision to Run for Office.* NewYork: Cambridge University Press

Lawless, Jennifer L. and Richard L. Fox. 2010. *It Still Takes a Candidate: Why Women Don't Run for Office.* New York: Cambridge University Press.

Lawless, Jennifer L., and Richard L. Fox. 2005. *It Takes a Candidate: Why Women Don't Run for Office*. Cambridge University Press.

Lo, Min-Tzu, David A. Hinds, Joyce Y. Tung, Carol Franz, Chun-Chieh Fan, Yunpeng Wang, Olav B. Smeland et al. 2017. "Genome-wide analyses for personality traits identify six genomic loci and show correlations with psychiatric disorders." *Nature genetics* 49 (1): 152..

Maestas, Cherie D., Sarah Fulton, L. Sandy Maisel, and Walter J. Stone. 2006. "When to risk it? Institutions, ambitions, and the decision to run for the US House." *American Political Science Review* 100(2): 195-208.

Maghsoodloo, Saeed, and Ching-Ying Huang. 2010. "Comparing the overlapping of two independent confidence intervals with a single confidence interval for two normal population parameters." *Journal of Statistical Planning and Inference* 140 (11): 3295-3305.

McCrae, Robert R., and Paul T. Costa. Personality in adulthood: A five-factor theory perspective. Guilford Press, 2005.

--------. 2008. “The Five Factor Model of Personality.” In *Handbook of Personality: Theory and Research*, eds. Oliver P. John, Richard W. Robins, and Lawrence A. Pervin. New York: Guilford Press.

Miles, Matthew R., and Donald P. Haider-Markel. "Personality and Genetic Associations With Military Service." *Armed Forces & Society* 1 (2018): 22.

Moore, Robert G. 2005. "Religion, race, and gender differences in political ambition." *Politics & Gender* 1(4): 577-596.

Oliver, Sarah, and Meredith Conroy. 2017. "Tough Enough for the Job? How Masculinity Predicts Recruitment of City Council Members." *American Politics Research*.

Payton, Mark E., Anthony E. Miller, and William R. Raun. 2000. “Testing statistical hypotheses using standard error bars and confidence intervals.” *Communications in Soil Science and Plant Analysis* 31(5-6): 547-551.

Pearson, Kathryn, and Eric McGhee. 2013. “What It Takes to Win: Questioning ‘Gender Neutral’ Outcomes in US House Elections.” *Politics & Gender* 9 (04):439–62.

Preece, Jessica Robinson. 2016. "Mind the gender gap: An experiment on the influence of self-efficacy on political interest." *Politics & Gender* 12(1): 198-217.

Preece, Jessica, and Olga Stoddard. 2015. "Why women don’t run: Experimental evidence on gender differences in political competition aversion." *Journal of Economic Behavior & Organization* 117: 296-308.

Ramey, Adam J., Jonathan D. Klingler, and Gary E. Hollibaugh Jr. *More than a feeling: Personality, polarization, and the transformation of the US Congress*. University of Chicago Press, 2017.

Schneider, Monica C., and Angela L. Bos. 2014. "The Interplay of Gender and Party Stereotypes in Evaluating Political Candidates." In *annual meeting of the Western Political Science Association, Portland, OR*, pp. 245-66.

Schneider, Monica C., Mirya R. Holman, Amanda B. Diekman, and Thomas McAndrew. 2016. "Power, conflict, and community: How gendered views of political power influence women's political ambition." *Political Psychology* 37(4): 515-531.

Specht, J., Egloff, B., & Schmukle, S. C. (2011). Stability and change of personality across the life course: the impact of age and major life events on mean-level and rank-order stability of the Big Five. *Journal of personality and social psychology, 101*(4), 862.

Tausanovitch, Chris, and Christopher Warshaw. 2013. "Measuring constituent policy preferences in congress, state legislatures, and cities." *The Journal of Politics* 75(2): 330-342.

Vukasović, T., & Bratko, D. (2015). Heritability of personality: A meta-analysis of behavior genetic studies. *Psychological bulletin, 141*(4), 769.

Online Appendix (Not Intended for print publication)

General Population Study Methodology

To collect the diverse sample of the general public, we commissioned Clear Voice Research (CVR) to conduct an online survey of American adults. CVR fielded the survey in an online platform from June 12- June 25, 2015. Although marginal demographics may not fully characterize the bias in online panels (Kennedy et al. 2016), we note in the online appendix that the demographic distributions of the participants are consistent with the demographics of traditional telephone surveys and other representative samples. A sample of 1,939 subjects was recruited by Clear Voice Research to participate in a national political study from June 15-25, 2015. Clear Voice has maintained an online panel for the last eight years that is used solely for research purposes. Participants in the panel are told that they will be invited to participate in online research surveys in exchange for various incentives. Their initial registration form collects basic fields including: name, email address, postal address, gender, date of birth, and language. After completing this form, a double opt-in/confirmation email is sent to the email address. Only double opt-in/confirmed accounts are invited to participate in surveys. Following opt-in, panelists are asked to complete their profile so that they collect as many data points as possible, which increases their targeting abilities when they send the member survey invitations. Based on client specifications a sample is pulled in quota group formats. Simple randomization is used to give a representative sample of new and old members within the quota groups. Participants are invited via email to participate in the survey. For this survey, Clear Voice sent out 51,492 invitations, 2,488 began the survey (4.8% response rate) and 1,939 (77.9%) completed the entire survey.

The demographic characteristics of these panels closely resemble that of the United States population on several important traits. Table A.1 displays the demographics of this sample compared to American Community Survey (2014), Amazon's Mechanical Turk (adapted from Berinsky, Huber and Lenz (2012)), and a more nationally representative sample, the Annenberg National Election Study Johnston, Hall-Jameison, and Mutz (2008). Amazon's Mechanical Turk is an online marketplace where people hire laborers for a variety of tasks. Since the mid-2000's researchers have been offering people money to participate in online survey experiments through Amazon's Mechanical Turk. Recently, scholars have spent considerable effort trying to determine the quality of the samples that are usually obtained through this service (Mullinix et al. 2015). The following table shows that this sample is much more representative of the US population on key variables than samples obtained through Amazon's Mechanical Turk and largely identical to the nationally representative sample collected in the Annenberg National Election Study.

Table A.1: Summary of General Population Survey Demographics

Demographics	**CVR 2015 Survey**	**ACS 2014 Estimates**	**MTurk**	**NAES 2008**
Female	49.23%	50.8%	60.1%	56.62%
Age (mean years)	50	37.4 (median)	20.3	50.05
Education (% completing some college)	60.31%	-	-	62.86%
White	80.61%	73.8%	83.5%	79.12%
Black	9.13%	12.6%	4.4%	9.67%
Asian	3.2%	5.0%	-	2.53%
Latino (a)	4.07%	16.9%	-	6.3%
Multi-Racial	2.27%	2.9%	-	2.37%
Party Identification				
Democrat	33.75%	-	40.8%	36.67%
Independent	41.49%	-	34.1%	20.82%
Republican	24.77%	-	16.9%	30.61%
N	1,939	-	484-551	19,234

Figure A1 provides the battery of questions used to measure the personality traits of respondents to the national survey of the American public. The battery is drawn from Bem (1981).

Survey of Municipal Officials

The questions for the study of public officials were included in the [NAME REDACTED] Survey (NAME REDACTED). The survey was conducted in two waves sent to two different samples of municipal officials. Invitations to the first wave were sent in May and June of 2016 to a sample of 27,862 elected mayors and legislators (e.g., city councilors, aldermen, supervisors, etc.) from 4,187 cities. Subjects were recruited via emails with a link to the survey. We sent each potential subject three emails one to two weeks apart, inviting them to participate. The sample was compiled by a for-profit organization that gathers contact information and email addresses of public officials from municipalities that have a website and a population above 10,000. The organization uses webcrawler software to identify when information changes on the contact pages of each city's website and then has research assistants update its contact list of officials accordingly. Unfortunately, this approach has a high error rate. Based on Qualtrics' email tracking, only 18,567 (or 67%) of the email invitations were delivered to an active email address. In addition, we looked up a sample of 832 officials in the list and found that only 44% of the email addresses were accurate. 2,165 officials (or 17.8%[13]) answered questions on the first wave of the survey. This rate is similar to those from other surveys of municipal officials (e.g., Butler and Dynes (2016) report a response rate of 23%).

The second wave of the survey was conducted in June and July of 2016. The sample consisted of the email addresses of elected mayors and city councilors (or equivalent) gathered by Daniel Butler and Adam Dynes for surveys conducted in 2012 and 2014 (See Butler and Dynes (2016) for more details on the 2012 sample and http://www.municipalsurvey.org/past-survey-results/ for more details on both samples). Excluding the email addresses from the first wave resulted in a list of 29,250 emails. The email addresses from the 2012 survey were gathered in January through March of 2012 by a team of undergraduate research assistants who searched for the website of 26,566 US municipalities. The email addresses from the 2014 survey were gathered in a similar fashion in early 2014 but excluded municipalities with a population below 3,000 due to the low percentage of small towns with websites. Given that these email addresses were gathered 2 to 4 years prior to this latest survey, we knew that a large percentage of the emails and names of the officials (in the case of cities that use generic email accounts for each office) would no longer be accurate. Indeed, 26% of the emails sent through Qualtrics were undeliverable. It is likely that many more of the email addresses are no longer monitored though they remain active. With 1,500 officials participating, the response rate for the second round of the survey was 6.9%.

The graphs and figures in this section provide additional descriptive statistics about the officials and municipalities in our sample as well as all municipalities across the U.S. The population of municipalities and demographic data on them are from the U.S. Census Bureau. We defined municipalities as general-purpose local governments using the following categorizations from the Census Bureau:

- Incorporated Places: In most states, they are called cities, towns, boroughs, and villages.
- Consolidated Cities: These are a "unit of government for which the functions of an Incorporated Place and its county or Minor Civil Divisions have merged."14
- Minor Civil Divisions (MCDs) in CT, ME, MA, MI, MN, NH, NJ, NY, PA, RI, VT, and WI. In these states, they are usually called townships or towns. We included Minor Civil Divisions from these states based on the Census Bureau's assessment that "Most of the MCDs in [these] twelve states ... serve as general-purpose local governments that can perform the same governmental functions as incorporated places."15

This resulted in a list of 24,083 municipalities. In the tables and figures, we use the term city instead of municipality to save space.

Table A.2 displays the percent of the total respondents, officials emailed (i.e., respondents and non-respondents), and municipalities from each state. As illustrated by these tables, respondents come from all states, save for Hawaii (which has county governments but not municipal ones), and the percent from each state is similar to the percent of officials emailed from each state, though some states appear to have higher response rates than others.

Table A.3 provides descriptive statistics about the municipalities in and out of our sample. The data come from multiple sources, as indicated in the notes on Table A3. Column 1 displays information about all municipalities. It is important to note that the large majority of cities are small, rural, and overwhelmingly non-

[13] The 17.8% is calculated as follows: 2,165/(.4375*27,862).

[14] U.S. Census Bureau. 2012. \Geographic Terms and Concepts { County Subdivision", http://www.census.gov/geo/reference/gtc/gtc cousub.html (January 9, 2014).

[15] Ibid.

Latino white. The mean population is just 9,118 while the median population is 1,324. To provide an additional comparison to the types of municipalities where most Americans live, Column 2 displays the same descriptive information except that the sample of all municipalities is weighted based on each municipality's population as a proportion of the total population of all municipalities. With these weights, the mean city's population jumps to 583,120 and the median's is 62,298. This is more reflective of where most Americans live. For instance, if all of the municipalities are ordered by population from smallest to largest, the median resident across all cities would be found in Maple Grove City, MN, a suburban city with a population of 61,567, which is right at the median in the population weighted results in Column (2). The 25th percentile resident is in a city of 17,000 while the 75th percentile is in one of 260,000.

Table A.2: % of Total Respondents, Officials Emailed, and Municipalities from Each State

	Respondents from each state		Officials Emailed	Municipalities
	#	%	%	%
Alabama	31	0.91%	1.55%	1.85%
Alaska	9	0.26%	0.37%	0.61%
Arizona	45	1.32%	1.43%	0.38%
Arkansas	35	1.02%	1.25%	2.00%
California	230	6.72%	6.89%	2.09%
Colorado	71	2.08%	2.26%	1.13%
Connecticut	68	1.99%	1.91%	0.80%
Delaware	12	0.35%	0.36%	0.23%
Florida	113	3.30%	3.70%	1.80%
Georgia	57	1.67%	2.31%	2.20%
Hawaii	0	0.00%	0.03%	0.04%
Idaho	16	0.47%	0.55%	0.81%
Illinois	207	6.05%	6.32%	5.21%
Indiana	56	1.64%	2.07%	2.29%
Iowa	72	2.10%	1.71%	3.79%
Kansas	43	1.26%	1.17%	2.51%
Kentucky	32	0.94%	1.37%	1.68%
Louisiana	12	0.35%	0.60%	1.23%
Maine	40	1.17%	1.23%	2.13%
Maryland	45	1.32%	0.89%	0.77%
Massachusetts	126	3.68%	2.73%	1.60%
Michigan	200	5.85%	4.77%	6.46%
Minnesota	134	3.92%	3.83%	3.63%
Mississippi	25	0.73%	0.73%	1.20%
Missouri	112	3.27%	2.71%	3.84%
Montana	11	0.32%	0.26%	0.53%
Nebraska	10	0.29%	0.52%	2.13%
Nevada	9	0.26%	0.14%	0.09%
New Hampshire	22	0.64%	0.76%	1.03%
New Jersey	131	3.83%	4.60%	2.40%
New Mexico	27	0.79%	0.71%	0.43%
New York	228	6.66%	5.54%	6.44%
North Carolina	131	3.83%	2.92%	2.24%
North Dakota	14	0.41%	0.35%	1.43%
Ohio	145	4.24%	4.93%	3.85%
Oklahoma	26	0.76%	0.82%	2.37%
Oregon	74	2.16%	1.62%	0.97%
Pennsylvania	136	3.98%	3.96%	4.82%
Rhode Island	17	0.50%	0.54%	0.18%
South Carolina	26	0.76%	1.09%	1.08%
South Dakota	13	0.38%	0.36%	1.25%
Tennessee	66	1.93%	1.49%	1.42%
Texas	137	4.00%	5.47%	4.91%
Utah	65	1.90%	1.29%	0.99%
Vermont	24	0.70%	0.60%	1.17%
Virginia	65	1.90%	1.37%	1.01%
Washington	64	1.87%	2.22%	1.16%
West Virginia	24	0.70%	0.54%	0.93%
Wisconsin	147	4.30%	4.78%	6.49%
Wyoming	18	0.53%	0.34%	0.39%
Total	3,421	100%	100%	100%

In column (3), we display data on municipalities that had at least one official who was invited to participate in the survey. In other words, these are the municipalities of officials in our sampling frame. Finally, in column (4), we have data on municipalities that had at least one respondent to the survey—i.e., our actual sample. Overall, the municipalities of officials whom we emailed or who responded are quite similar to each other and fall between the municipalities where most Americans reside (Column [2]) and the broader sample of all municipalities (Column [1]), with the municipalities with respondents (Column [4]) slightly more similar to those in Column (2) than the municipalities emailed (Column [3]).

Table A.3: Characteristics of Municipalities by Sample Status

		(1) All Cities	(2) All Cities, weighted by pop.	(3) Cities Emailed	(4) Cities w/ at least 1 Respon-dent
City Population	Mean	9,118	583,120	26,001	39,969
	Median	1,324	62,298	7,481	11,936
% Population Minority	Mean	15.5%	33.3%	21.3%	21.6%
	Median	5.8%	28.3%	12.0%	13.2%
% Population w/ Some College or More	Mean	19.5%	18.6%	19.8%	19.8%
	Median	19.3%	18.4%	19.8%	19.8%
Median Income (in 2012 $1,000)	Mean	$46.9	$55.6	$55.0	$56.3
	Median	$41.8	$48.1	$48.5	$50.2
% Population Not in Labor Force	Mean	28.4%	28.0%	28.4%	28.1%
	Median	27.3%	27.0%	27.3%	27.2%
% Population Unemployed	Mean	8.5%	9.1%	8.6%	8.5%
	Median	7.5%	8.7%	7.8%	7.7%
% Population Homeowners	Mean	16.2%	17.3%	17.3%	17.3%
	Median	16.3%	17.3%	17.3%	17.3%
% Population with 2nd Mortgage	Mean	0.8%	1.0%	1.1%	1.1%
	Median	0.6%	0.9%	0.9%	0.9%
Form of Government					
% Mayor/Council without City Manager		65.7%	50.6%	53.9%	50.8%
% Mayor/Council with City Manager		14.8%	40.0%	29.9%	36.4%
% Commissioners		1.6%	1.3%	1.2%	1.5%
% Supervisors		17.5%	8.0%	14.6%	11.2%
% Town Meeting		0.2%	0.1%	0.2%	0.2%
% Representative Town Meeting		0.2%	0.1%	0.2%	0.0%
% with some Town Meeting decision-making		17.6%	8.6%	5.9%	11.2%
% with Home Rule Charter		19.6%	47.5%	30.9%	36.3%
% with Republican Rep. in U.S. House		47.5%	38.7%	51.1%	49.5%
Citizens' Policy Preferences (only for cities w/	Mean	-0.08	-0.18	-0.07	-0.08
pop. at or above 25k; range: -1 to .6;	Median	-0.05	-0.15	-0.03	-0.04
higher = more conservative)					

Notes: Column (1) includes all cities, towns, Population figures are from the 2010 U.S. Census. Form of government figures are from the U.S. Census Bureau's 2012 Census of Governments. The partisanship of the Representative of the U.S. House that represents each city is based on Congressional membership in March, 2016. Cities that crossed multiple House districts were matched to the district in which a plurality of the city's population resided. Citizens' Policy Preferences are from The American Ideology Project, which are estimated based on surveys conducted from 2000 to 2011. See Tausanovitch and Warshaw (2013) for more details on this measure.

Figures A.2 through A.4 display a density plot of the different municipal characteristics found in table A.4. What stands out is how similar municipalities with respondents are to all of the municipalities with officials included in the sampling frame. The one area where the distributions are most different are in population, in which respondents were more likely to be from slightly larger municipalities.

Table A.4 displays individual level data on the officials emailed (the sampling frame) and the actual respondents (the sample). In general, there are very little data available on municipal officials outside of the data we gather in the survey. However, based on the officials' titles, which we collect for all officials emailed, we can identify mayors in the sampling frame. We can also identify officials' gender as it is indicated in the list we used from the for-profit organization that gathers elected officials' contact information. For those gathered from municipal websites, we identified officials' gender based on the proportion of females with that first name in public social security records. Overall, mayors from cities without city managers were more likely to respond. Female officials had a slightly higher response rate.

Figure A.1: Density Plot of Municipalities' Population by Sample Status

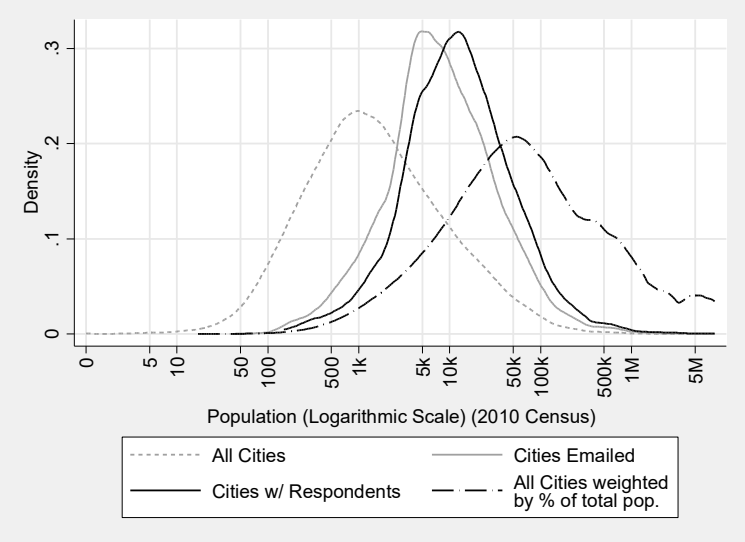


Figure A.2: Density Plot of Municipal Characteristics from Table A3

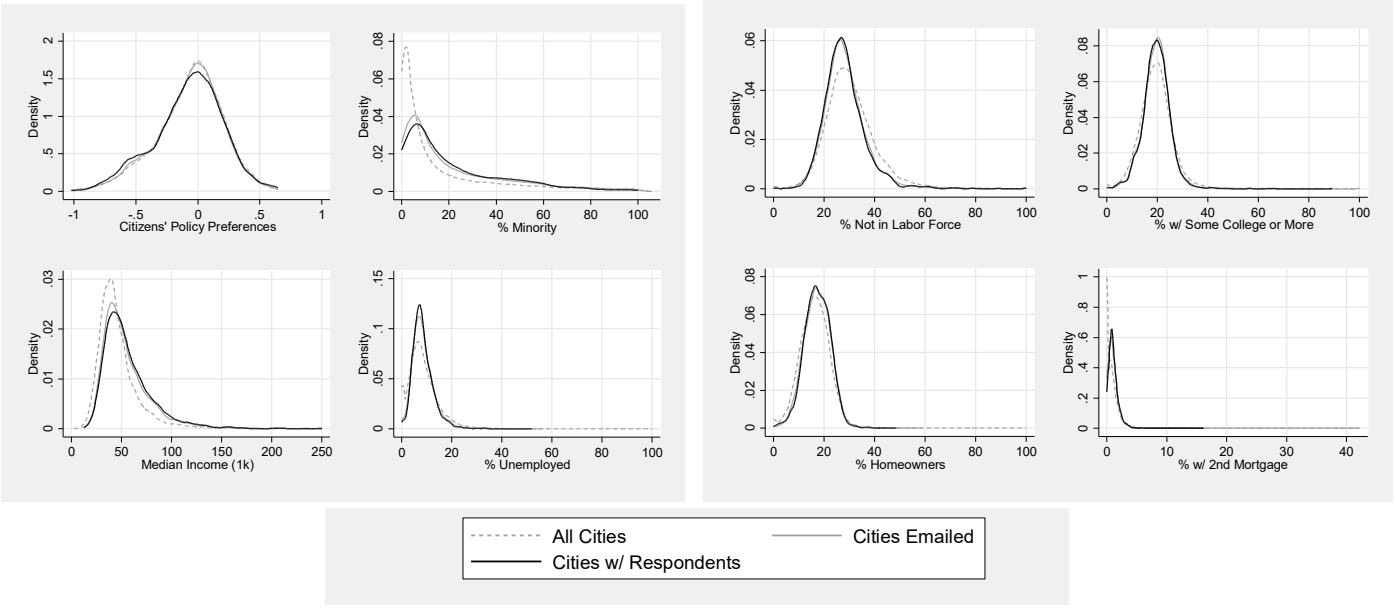
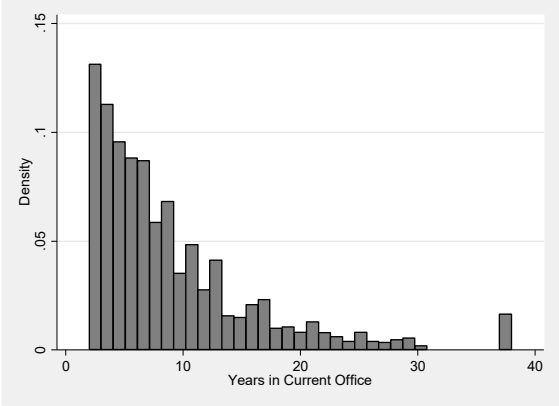


Table A.4: Descriptive Statistics of Officials Emailed and Respondents

		Officials Emailed	Respondents
% Mayors			
In cities without City Managers	Mean	13.4%	18.0%
	95% C.I.	(12.9%, 13.9%)	(16.1%, 19.9%)
In cities with City Managers	Mean	11.2%	12.7%
	95% C.I.	(10.7%, 11.7%)	(11.0%, 14.3%)
% Female	Mean	28.3%	31.5%
	95% C.I.	(27.8%, 28.7%)	(29.9%, 33.0%)

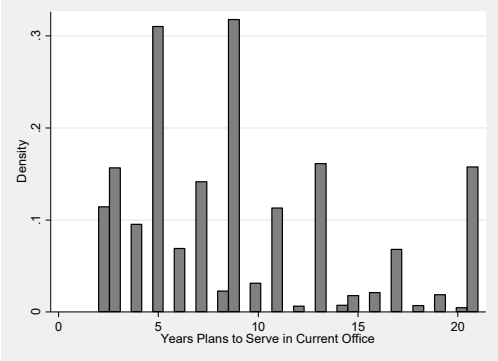
Finally, to illustrate that our sample of officials is diverse in terms of other politically important variables, we provide some descriptive statistics on the sample in table A.5 and figures A.4 – A.5.

Figure A.4: Histogram of Years Served in Current Seat



Notes: Histogram shows response to question: "How many years have you served in your current office?" Response options ranged from 1 to 29 in one year increments and "30 or more."

Figure A.5: Histogram of Years Planning to Serve in Current Office



Notes: Histogram shows response to question: "How many years do you hope to serve in your current office?" Response options ranged from 1 to 19 in one year increments and "20 or more."

Table A.5: Characteristics of Respondents based on Survey Questions and Responses

Q: What party do you identify with?

	%
Republican	35.3
Democrat	34.0
Independent or Unaffiliated	27.0
Other	3.7
TOTAL	100

Q: Generally speaking, would you describe your political views as:

	%
Very Liberal	3.6
Liberal	12.8
Somewhat Liberal	14.3
Middle of the Road	24.6
Somewhat Conservative	21.7
Conservative	20.0
Very Conservative	3.1
TOTAL	100

Q: Are there term limits for your current office?

	%
Yes	19.3
No	80.7
TOTAL	100

Q: Which of the following best describes how individuals are elected to your position?

	%
The elections are NON-PARTISAN (i.e., candidates' party DOES NOT appear on the ballot)	73.0
The elections are PARTISAN (i.e., candidates' party appear on the ballot)	27.0
TOTAL	100

Q: By how many percentage points did you win your last election for this office?

	%
below 1% point	2.3
1 to almost 5% points	7.7
5 to 15% points	18.8
More than 15% points	34.8
I ran uncontested	32.3
I lost or did not run again	4.1
TOTAL	100

Q: When it comes to important issues, elected officials should…	%
(1) Do what their constituents want, even if it conflicts with what the elected official thinks is right.	4.0
(2)	11.4
(3)	24.1
(4)	40.5
(5) Do what they think is right, even if it conflicts with what their constituents want.	20.0
TOTAL	100

Measures of Personality and Ambition

To measure personality in the national survey we use a thirty-one adjective measure of personality (Bem 1981). Respondents saw the following prompt: "Here are a number of personality traits that may or may not describe you. Please indicate how well each of the following describes you." This was followed by a list of the following traits (shown in random order): Outgoing, Helpful, Moody, Organized, Self-confident, Friendly, Warm, Worrying, Responsible, Forceful, Lively, Caring, Nervous, Creative, Assertive, Hardworking, Imaginative, Softhearted, Calm, Outspoken, Intelligent, Curious, Active, Careless, Broad-minded, Sympathetic, Talkative, Sophisticated, Adventurous, Dominant, and Thorough. The choice options to indicate how well each trait described the respondent were "A lot", "Some", "A little", or "Not at all."

In the municipal officials survey, we used the Big Five Iventory-10 (BFI-10) (Rammstedt and John 2007). The BFI-10 uses two items per personality trait and has been shown to "retain significant levels of reliability and validity" compared to a 44-item measure of the Big Five (Rammstedt and John 2007, 203). However, Rammstedt and John (2007, 210) find the losses in reliability are greatest with the two-item measure of agreeableness. To mitigate this, we followed their recommendation of adding a third agreeableness item. Respondents say the following prompt: "please let us know how well the following statements descrive your personality. I see myself as someone who..." This was followed by a list of the following statements (shown in random order): "has few artistic interests," "tends to find fault with others," "is considerate and kind to almost everyone," "is reserved," "tends to be lazy," "is generally trusting," "is outgoing, sociable," "is relaxed, handles stress well," "gets nervous easily," "has an active imagination," and "does a thorough job." Respondents indicated how much they agreed with each statement: "Agree Strongly," "Agree a Little," Neither agree nor disagree," "Disagree a Little," "Disagree Strongly."

To measure respondents' nascent political ambition in the general population study we use a question from Lawless and Fox (2010). We asked them to indicate their "attitude toward running for office in the future." Only 1% of our respondents reported "actively considering" running for public office, 16% said that they were "open to the possibility of holding elective office in the future" leaving 83% who reported "absolutely no interest" in holding elective office at any time in the future.

In the sample of elected officials, we asked respondents to "characterizes [their] attitudes toward running for a higher office in the future". Respondents had four options: "It is something I would absolutely never do."; "I would not rule it out forever, but I currently have no interest."; "It is something I might undertake if the opportunity presented itself."; "It is something I definitely would like to undertake in the future." This is our measure of progressive ambition.

Distribution of Personality Traits

Figure A.6 provides the distribution of personality traits among men and women in the general population who have some political ambition and the sample of local public officials. These plots correspond with the results shown in Figure 1 in the text and in Table A.6 below. Figure A.7, which corresponds with Figure 2 in the text and Table A.7 below, shows the distributions for men and women in the general population as well as the public officials.

Figure A.6: Distribution of Personality Traits by Gender and Political Ambition in the US Population and Among Elected Municipal Officials

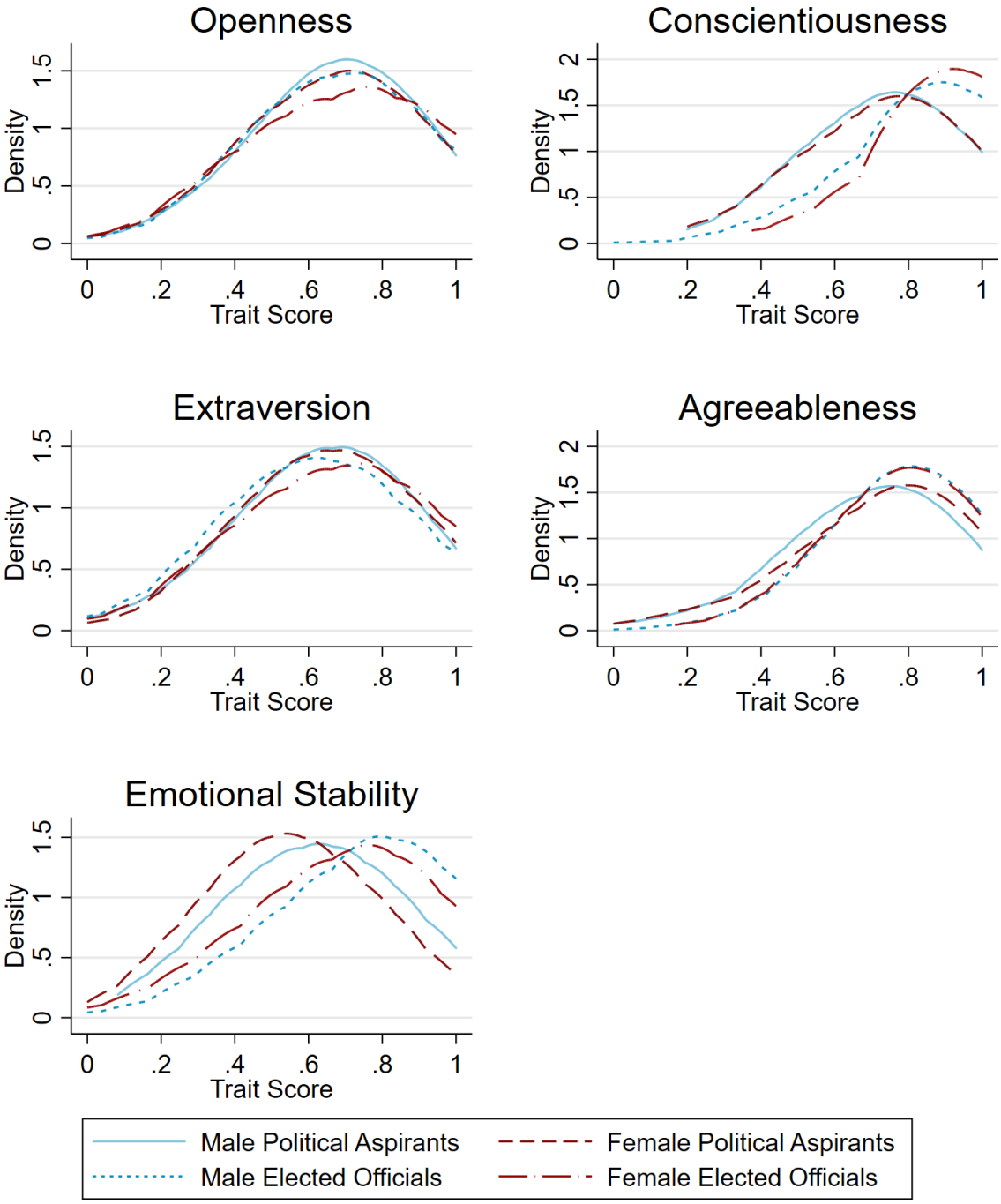


Figure A.7: Distribution of Personality Traits by Gender in the US Population and Among Elected Municipal Officials

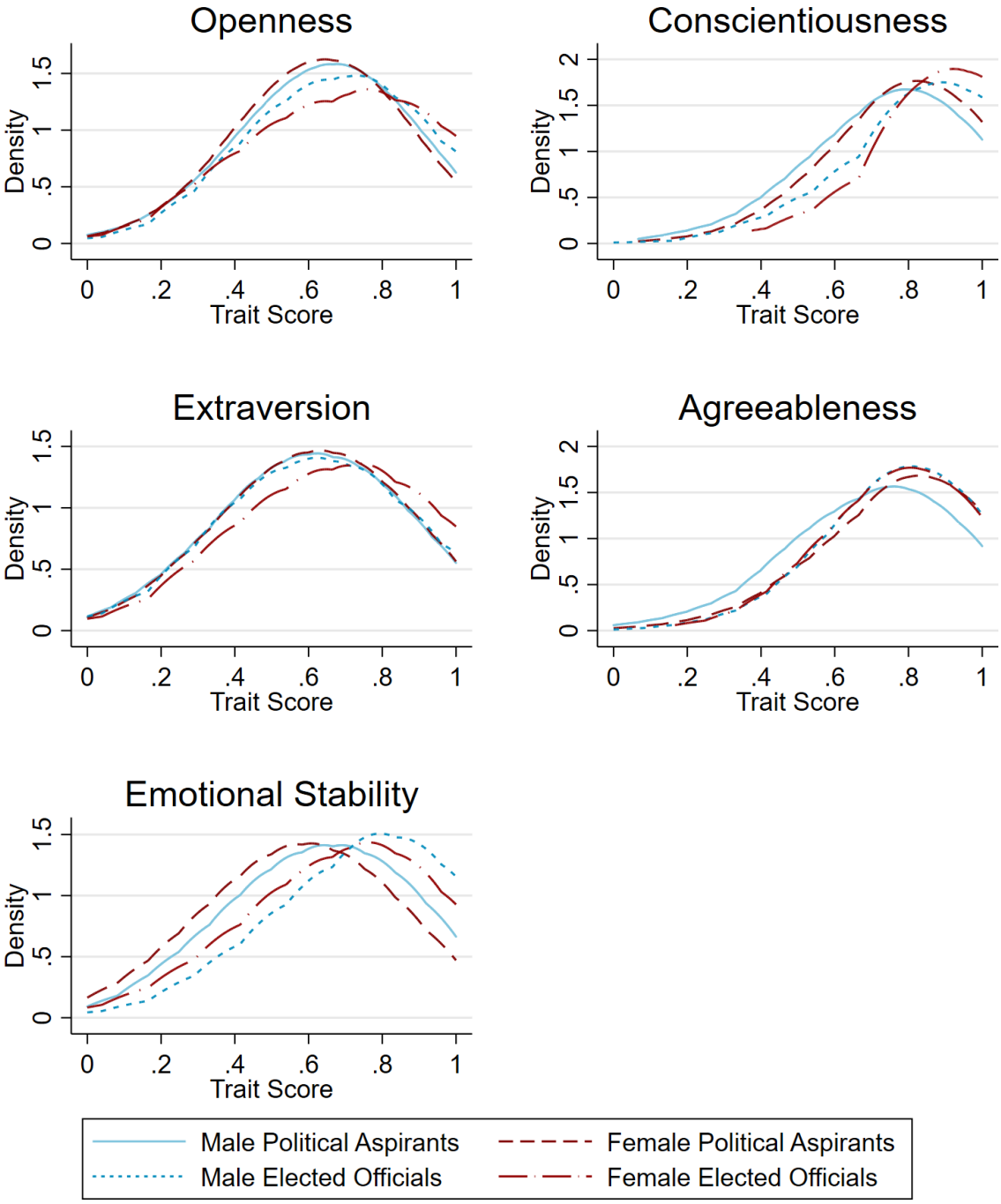


Table A.6: Differences in Personality Traits between Men and Women in the General Population with Political Ambition and among Male and Female Elected Local Officials

		Openness		
	Elected Officials	Political Aspirants	*Difference*	**Difference in Differences**
Women	0.70 (0.23)	0.67 (0.22)	*0.03*	
Men	0.69 (0.21)	0.67 (0.20)	*0.01*	**0.02**
Difference	*0.01*	*0.00*		
		Conscientiousness		
	Elected Officials	Political Aspirants	*Difference*	**Difference in Differences**
Women	0.90 (0.14)	0.74 (0.20)	*0.17***	
Men	0.85 (0.17)	0.74 (0.19)	*0.12***	**0.05***
Difference	*0.05***	*0.00*		
		Extraversion		
	Elected Officials	Political Aspirants	*Difference*	**Difference in Differences**
Women	0.67 (0.24)	0.65 (0.22)	*0.02*	
Men	0.63 (0.23)	0.65 (0.22)	*-0.02*	**0.04**
Difference	*0.05***	*0.01*		
		Agreeableness		
	Elected Officials	Political Aspirants	*Difference*	**Difference in Differences**
Women	0.79 (0.16)	0.73 (0.22)	*0.05***	
Men	0.79 (0.16)	0.70 (0.22)	*0.08***	**-0.03**
Difference	*-0.00*	*0.03*		
		Emotional Stability		
	Elected Officials	Political Aspirants	*Difference*	**Difference in Differences**
Women	0.70 (0.23)	0.56 (0.21)	*0.14***	
Men	0.75 (0.22)	0.62 (0.22)	*0.14***	**-0.00**
Difference	*-0.06***	*-0.06**		

Note: *p<0.05, **p<0.01 two-tailed test. Numbers in each cell indicate each group's mean score on the Big Five personality traits, which are measured on a scale from 0 to 1 where higher numbers indicate higher levels of that trait. Standard deviations are in parentheses next to the means. Difference of means across rows and columns are italicized.

Table A.7: Differences in Personality Traits between Men and Women in the General Population and among Elected Local Officials

		Openness		
	Elected Officials	General Population	*Difference*	**Difference in Differences**
Women	0.70 (0.23)	0.63 (0.19)	*0.07***	**0.02^**
Men	0.69 (0.21)	0.64 (0.20)	*0.04***	
Difference	*0.01*	*-0.01*		
		Conscientiousness		
	Elected Officials	General Population	*Difference*	**Difference in Differences**
Women	0.90 (0.14)	0.80 (0.17)	*0.10***	**0.01**
Men	0.85 (0.17)	0.76 (0.19)	*0.09***	
Difference	*0.05***	*0.04***		
		Extraversion		
	Elected Officials	General Population	*Difference*	**Difference in Differences**
Women	0.67 (0.24)	0.62 (0.21)	*0.06***	**0.04****
Men	0.63 (0.23)	0.61 (0.22)	*0.02*	
Difference	*0.05***	*0.01*		
		Agreeableness		
	Elected Officials	General Population	*Difference*	**Difference in Differences**
Women	0.79 (0.16)	0.79 (0.19)	*-0.00*	**-0.08****
Men	0.79 (0.16)	0.71 (0.21)	*0.07***	
Difference	*-0.00*	*0.08***		
		Emotional Stability		
	Elected Officials	General Population	*Difference*	**Difference in Differences**
Women	0.70 (0.23)	0.58 (0.22)	*0.12***	**0.00**
Men	0.75 (0.22)	0.64 (0.22)	*0.12***	
Difference	*-0.06***	*-0.06***		

Note: ^p<0.10, *p<0.05, **p<0.01 two-tailed test. Numbers in each cell indicate each group's mean score on the Big Five personality traits, which are measured on a scale from 0 to 1 where higher numbers indicate higher levels of that trait. Standard deviations are in parentheses next to the means. Difference of means across rows and columns are italicized.

Full Models and Alternative Models

In Table A.8, we regress elected officials' personality scores (on a scale from 0 to 1) on a host of politically relevant variables to demonstrate that the differences between female and male officials, as reported in Figures 2 and 3, hold even when controlling for a range of variables. The number of observations is lower in the regression results since we do not have the control variables for every respondent who took the personality tests in the survey.

Table A.8: Predicting Differences in Personality between Male and Female Elected Officials

VARIABLES	(1) Openness	(2) Conscien-tiousness	(3) Extra-version	(4) Agree-ableness	(5) Emotional Stability
Gender (1=Female)	0.00	0.05**	0.05**	-0.00	-0.06**
	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Term limits for Current Office (1=yes)	0.00	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Won Previous Election by 5% or Less	-0.01	-0.03*	-0.06**	-0.03**	-0.03*
(1=yes)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
Partisan elections (1=yes)	0.00	0.00	-0.00**	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Anticipated Length in Current Office (in	-0.00	0.00	-0.00*	0.00	0.00
years)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in Current Office	0.00	-0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Probability respondent's seat filled by	-0.00*	0.00	0.00	0.00**	0.00**
similar candidate if respondent left office	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Probability someone like respondent could	0.00	0.00	0.00	-0.00	0.00
win state legislative seat	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Official Holds Mayoral Office (1=yes)	0.02	0.03	0.02	0.03	0.02
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Mayoral Form of Gov't (1=yes)	0.02	-0.01	0.08*	-0.03	-0.00
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)
Manager Form of Gov't (1=yes)	0.04	-0.01	0.06	-0.01	0.03
	(0.02)	(0.02)	(0.04)	(0.02)	(0.02)
Log of Population	0.00	0.00	0.00	-0.01*	-0.00
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
% Pop. Minority	-0.02	-0.02	0.00	0.04	0.01
	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)
% Pop. w/ Some College or More	-0.19*	-0.05	-0.00	0.06	0.18*
	(0.09)	(0.07)	(0.10)	(0.05)	(0.08)
Constant	0.69**	0.81**	0.49**	0.83**	0.67**
	(0.04)	(0.04)	(0.05)	(0.03)	(0.04)
Observations	1,742	1,743	1,744	1,746	1,742
Number of State Fixed Effects Groups	48	48	48	48	48

Robust standard errors (clustered at state level) in parentheses. $^{**}p < .01$; $^{*}p < .05$

References in the Appendix

Bem, SL. 1981. *A Manual for the Bem Sex Role Inventory*. 17th ed. Palo Alto, CA: Mind Garden.

Blake, Robert R., and Jane S. Mouton. 1978. *The New Managerial Grid.* Houston: Gulf.

Cann, Arnie., and William D. Siegfried. 1987. "Sex Stereotypes and the Leadership Role. *Sex Roles* 17(7-8):401-408.

Gerber, Alan S, Gregory A Huber, David Doherty, and Conor M Dowling. 2011. "The Big Five Personality Traits in the Political Arena." *Annual Review of Political Science* 14: 265-287.

Mondak, Jeffery J. 2010. *Personality and the Foundations of Political Behavior*. New York: Cambridge University Press.

Kennedy, Courtney et al. 2016. *Evaluating Online Nonprobability Surveys*. Washington, D.C.: Pew Research Center.

Rammstedt, Beatrice, and Oliver P John. 2007. "Measuring Personality in One Minute or Less: A 10-Item Short Version of the Big Five Inventory in English and German." *Journal of Research in Personality* 41 (1): 203-212.

Tausanovitch, Chris, and Christopher Warshaw. 2017. "Measuring constituent policy preferences in congress, state legislatures, and cities." *The Journal of Politics* 75(2): 330-342.