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Power, Gender, and Group Discussion

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This article reviews the growing literature on the ways in which gender informs our understanding of political psychology and how studies of political psychology shed light on the meaning of gender in society and politics. It focuses on gender gaps in contemporary American politics, where men tend to be more conservative and to engage in more influence-seeking action than women. The article develops explanations for these gaps and tests them with experimental data. The gender gaps in political attitudes and behaviors are not immutable but rather strongly responsive to the context. Two important features of the context are the gender composition of those present and the rules that govern how decisions are made and consequently how individuals communicate.

KEY WORDS: gender gap, deliberation, group discussion, equal status

The gender gap in American politics is elusive and mysterious. Women are more liberal than men on some issues, but not on others (Huddy, Cassese, & Lizotte, 2008; Sapiro, 2003). Similarly, the gender gap in the exercise of political voice appears in some forms of political action but not others and in some settings but not others (Burns, Schlozman, & Verba, 2001; Karpowitz & Mendelberg, 2014). And so, the gender gap has a chameleon quality; now you see it, now you don't. Moreover, the gap is often rather "modest," "negligible," or even "tiny" in size (Burns & Kinder, 2012, p. 150; Huddy et al., 2008, pp. 31, 46). These features make it tempting to leave aside the gender gap and focus on other types of gaps that appear steady and uniformly large. After all, steady and large readily translates into more obviously democratically troubling or consequential for the political system.

But the gender gap is worth the time to understand, because it demonstrates how power—the life-blood of politics—animates the political system. As Sapiro put it:

> The analysis of power is an essential part of the study of politics, and one too often ignored in dominant approaches to political psychology ... it can provide handles on understanding how cultural norms become integrated into the actions of human beings, how people act and interact within different systems of rules and social expectations, why and how systems of stigma operate in everyday life, how people cope with being victims of inequality and stigma, and what is the effect on them. (2003, p. 620)

Power is the sine qua non of politics and thus of political psychology. Consequently, whatever shapes power is relevant for the study of this field. As we demonstrate, gender affects how power is instantiated, reinforced, or undermined when people exercise voice. It does so in ways both overt and subtle, through means that may be simultaneously political, psychological, and social. Thus, understanding gender is a path to understanding the psychology of power in politics.

The association of power and gender is all the more consequential because, as Burns and Kinder (2012) put it, gender is a site of "durable inequality" (p. 140). Gender categories are learned extremely early in life and form a core part of an individual's identity (Burns & Kinder, 2012; Maccoby, 1998). In many societies, including the United States, women and men are raised from birth to inhabit feminine or masculine role expectations respectively, and those expectations entail very different approaches to power (Wood & Eagly, 2010). The unequal distribution of power is thus intimately entangled with gender.

Before we launch into our analysis of these issues we offer a disclaimer. This article presents a slice of research on gender and political psychology, not an exhaustive survey. For excellent surveys, readers can consult Burns et al. (2001), Sapiro (2003), Huddy et al. (2008), Norris (2003), and Pratto and Walker (2004). This article does, however, share important elements in common with those reviews. Like those works, we start with some basic assumptions.

First, what is most relevant about men, women, and politics is the social construction of gender rather than the biological central tendencies that differentiate men and women. As Wood and Eagly (2010) write, gender "refers to the meanings that individuals and societies ascribe to males and females" (p. 630). And as Sapiro explains, gender "is a sorting mechanism used by law, policy, institutional processes, and social custom to differentiate among people and place them in different positions, which, in turn, may create different political interests, preferences, responses, and styles" (p. 605). These social and institutional sorting practices, which create psychological meanings, categories, and expectations, are what concern us here.

Second, this social construction matters because it implicates the distribution and exercise of material, social, and psychological resources. Gender is not simply a sorting mechanism; it is specifically a sorting mechanism that places people on different rungs of society's hierarchy. In other words, it sorts in ways that implicate power and influence. Differences between men and women are important because they correlate with inequality. Power, authority, and influence are fundamental resources. Men are far more likely than women to access and use them.

Third, the key questions that follow from the first two assumptions are how, to what effect, and under what circumstances gender hierarchy changes. The fact that women can and do exercise power, authority, and influence more equally with men under some conditions but not under others means that the gender differences at the heart of our investigation are not immutable. Rather, they are socially and politically constructed. In this sense, gender is a social and political process much more than it is a biological fact, and we seek to trace it.[1] All these assumptions underlie much of the recent research on gender and politics.

However, unlike previous works, we focus specifically on what men and women do in discussion groups. A discussion is composed of speech acts that carry a perspective or a view. The group is important in part because it is the context and setting within which the speech acts occur. When groups make a binding collective decision, they are exercising meaningful political power. But power

[1] Our statements about men or women apply to people who identify as such and who are classified as such by others. Which, if any, of the statements about women apply to transgender women, or which statements about men apply to transgender men, is an important question for future research. In addition, we do not take a position about the biological sources of any of the phenomena discussed here. The role of biology is complex and interconnected with social factors, and social science understanding of it continues to evolve (Wood & Eagly, 2012). For our purposes, what may be most relevant about biology is that people assume that gender is hardwired in biology, that men and women are natural categories indicating something inherent and unchanging about the person (Prentice & Miller, 2006).

relationships can be seen not just at the moment of decision, but in the myriad ways in which the group members interact with each other. Influence and authority are not merely resources that men and women bring to discussion; they are also developed as the group interacts, with individual and collective implications for the discussion and beyond. Thus, focusing on group discussion allows us to study a wide range of politically consequential behaviors. We use discussions of consequential matters of public concern to understand the process by which gender turns into power in its many forms. By focusing on the features of discussion groups, we explore how social interactions produce and reinforce power relationships, which in turn shape disparities in the exercise of political voice.

The Three Gender Gaps

When men and women behave differently in politics, there are three broad types of explanations for the difference.

One type of explanation centers on what men and women want or expect from government—on differences in the substantive issue positions and political attitudes citizens hold. It explains why men and women support different parties, candidates, or policies and does so by referring to a gender gap in preferences over what government should do in general. People make choices about the direction of public affairs in part based on values or interests, and society assigns somewhat different value priorities and tangible interests to men and women. Though variation exists within each gender, on average men tend to be more economically conservative than women; less egalitarian than women; and therefore, more interested in policies and political actors that emphasize these qualities than are women.

The second and third types of explanation focus on what men and women tend to *do* about politics—*how* men and women go about pursuing their views and values, *how* they interact with their fellow citizens regarding matters of common concern, and *how* they make collective decisions. The second and third explanations both look to the *process* of collective decision-making, but they differ in ways we spell out below.

The second type claims that gender differentiates individuals based on their level of interdependence, and as a result, women tend to prefer making decisions through consensus and cooperation and dislike overt conflict or competition. If women are socialized to cooperate and to seek consensus, while men are socialized to exercise agency and to win conflicts, then by implication women may be motivated to participate in decision-making situations when those situations highlight consensus seeking and avoid overt conflict. Women who dislike conflict may be particularly deterred from advocating for their view about matters of common concern. The key variable, according to the second type of explanation, is consensus versus conflict.

The third type of gender-gap explanation also focuses on the process of making collective decisions, but with an emphasis on power inequality rather than on interdependence. As do the other perspectives, this one also begins with the assumption that society socializes men toward agency and women toward prioritizing others' needs. But unlike the other perspectives, this one emphasizes power and the associated concepts of relative status, influence, and authority. This perspective argues that women and men enter the collective decision-making situation with different proclivities to assert their voice, not because women are more consensus seeking and conflict averse, but because they are taught to believe that they personally should not be assertive, especially when interacting with men. It predicts that men are more likely than women to engage in assertive political acts and that women will participate equally with men only in situations that signal their equal status with men. Women with lower confidence in their abilities would be especially reluctant to assert themselves without such a signal. The key variable from this perspective is internalized authority and the closely related confidence in one's competence to exercise voice.

Which of the three types of explanation for the gender gap sheds more light on gender and political psychology? Does gender affect political behavior because men and women tend to have different preferences about government? That is, does gender matter because men and women differ in political ideology, political values, or views about policies and issues? Or does gender matter because men and women tend to have different orientations toward the process of decision-making? And if the latter, is the difference due to women's stronger preference for communal styles and relative aversion to competition and conflict? Or rather, to the socially conditioned gendered proclivity to exercise one's personal authority, to assert oneself and one's views?

Of course, all three of these explanations can be accurate. There is no necessary conflict between them, and they could operate simultaneously. They predict different sorts of outcomes. The first one predicts opinions and attitudes, such as support for a strong welfare state versus laissez faire market forces or support for progressive versus regressive taxation. The others predict behaviors, such as women's tendency to engage in dutiful voting rather than assertively exhort others to take a particular action.

Nevertheless, when it comes to understanding why men and women act as they do in politics, it is worth parceling out the three explanations. Certainly, it is challenging to parse the independent effects because they can be correlated in meaningful ways. Still, it should be possible to measure what one wants from government separately from how one believes one should or can seek it. Our contribution to this volume is focused on understanding how each of these factors contributes to women's ability to access authority in group settings. Diagnosing the relative weight of each of these potential explanations is key to understanding the dynamics of group interaction and, thus, the exercise of legitimate power.

For one, women who decline to speak assertively for a particular preference might be motivated by the absence of an intense preference. Alternatively, but still in line with a preference-based explanation of gender gaps in the exercise of voice, it may be that women tend to follow an efficiency motive of allowing others to engage in costly actions such as public speaking as a means of expressing their preference. As long as someone else voices their preference, they save the cost of taking personal action. These preference-based hypotheses would explain a gender gap in assertive political *action* by referring to the characteristics of *preferences*—their intensity, or the likelihood that one's own preference is shared by others, and thus, the utility of free-riding on others' expression of one's own view. That is, when women have similar preferences to men, they may not participate as much as men because they are content to delegate costly acts of participation to others. On this view, the efficiency motive is not a reflection of women's power disadvantage, or of women's conflict aversion, but about women exercising a quiet form of power by declining to incur the costs of participation.

Alternatively, women may be less assertive than men because of a process-oriented gender gap. On this conflict-aversion view, women may participate less in discussions that are competitive or conflictual and more in the converse situation. Men may seek the opposite or be less affected by this dimension.

Finally, on the gendered-power view, these same patterns can be explained by the gendered social prohibition on women's directive influence and leadership. Women may seek to avoid social sanctions for violating a gender norm that assigns power to men and proscribes women from it. In that case, women may respond to situations that signal to them that they have power by accelerating their participation and to situations that signal their powerlessness by decreasing their participation—and do so much more than men.[2]

[2] These distinct theories can account for the relative quiescence of women and also apply to the other side of the coin: voice. That is, by the same token, a woman who speaks assertively for a particular preference might be motivated by having a particular preference or by her unconcern for minimizing her participation costs, as a preference account would have it. Or alternatively, she might be motivated by practices that underscore the absence of a gender boundary around forceful speech or by a consensus-oriented discussion process.

In sum, we want to know the answer to the following questions: Do women behave differently from men because of their political attitudes and preferences over political outcomes? Or because of their orientations toward conflict, with women avoiding it in favor of prosociality, and men tolerating or eliciting it? Or because of their orientations toward power, with men tending to seek power and women to avoid it?

We test these three explanations against each other. If women's behavior diverges from men's when women's status is low and not when it is high, that tells us that women's lower political authority is an important explanation for the gender gap in behavior. Furthermore, if this effect of women's authority holds when we control on preferences, that is further evidence for the theory of gendered power. Finally, if this effect of authority also holds when we control on aversion to conflict, then the evidence supports a gendered power perspective rather than the cooperative process explanation for the gender gap in behavior.

To conduct this test, we exogenously vary women's status in a decision-making group by altering women's relative numbers in combination with the group's decision rules. Jointly, gender composition and rules can elevate or depress women's status. We then examine the gender gap in behavior during the group's discussion, using a variety of measures of powerful behavior. We then control for preferences and values implicated in the substance of the group's decision.

Finally, we also test a secondary explanation for the gender gap: demographics. On this view, gender in itself carries little independent impact. Rather, it is correlated with resources or experiences indicated by income, education, or age, and these factors in turn explain the apparent effect of gender. Low income and education, and very young and very old age, are associated with less political participation (Verba, Schlozman, & Brady, 1995). Some of these factors are partly responsible for the gender gap in levels of political participation (Burns et al., 2001). According to this perspective, then, women's lower status as women channels them into a lower level of participatory resources, and the resources they do have tend to provide them a smaller participatory boost than men get (Burns et al., 2001). We will test this explanation for the gender gap as well. However, age, income, and education are not essentially reflections of gender. They are shaped much more by factors other than gender. So while we do test their utility as an explanation for the gender gap, we give them a secondary theoretical status.

Gender Gap I: Preferences

A gender gap can be viewed through a lens of preferences about the course of government action. On this view, women are socialized to care for others, men to obtain and exercise autonomy and securing material resources. As a result of these gendered tastes, women tend to enter work roles that involve directly serving the needs of others, while men tend to enter those that involve obtaining resources. That is, gendered role expectations channel men and women toward different lines of work at home and in the workplace, and these experiences may shape or reinforce different values or interests. Women are thus more likely than men to prioritize the care of children, men more likely than women to prioritize maximizing and keeping control over their earnings (Karpowitz & Mendelberg, 2014). From these personal or societal values, preferences and priorities, men and women generate different political preferences about what government should do (Conover, 1988).

Every society divides labor by biological markers of male or female (Sapiro, 2003). Consequently, women's practical concerns and perspectives are heavily shaped by the expectation that they care for the young, the old, the ill, the disabled, and anyone else who needs care. Men learn to be much more concerned than women with earning most of the household income (Brown, 1991). This occupational segregation in the home spills over into the workplace (Parker & Wang, 2013).

Even in the contemporary period, women are much more likely than men to spend time caring for the home and its occupants and to take jobs that entail serving the needs of others (Carnevale,

Strohl, & Melton, 2011; U.S. Bureau of Labor Statistics, 2008). According to the U.S. Census, women are disproportionately in jobs that involve attending to and serving the needs of others, such as secretary, nurse, teacher, retail salesperson, waitress, maid, customer service, or childcare worker (Day & Rosenthal, 2008; U.S. Bureau of Labor Statistics, 2008). Similarly, more than three-quarters of bachelor's degrees in fields like education, health, and social work are granted to women, while more than 80% of engineering degrees are received by men (Carnevale et al., 2011). More broadly, then, men are more inclined than women to choose college majors and occupations that allow them to make money and women to choose those that focus on meeting the needs of others.

The implications of these different educational and career choices can be seen in the gender gap in wages. One year out of college, full-time working women earn only 82% of full-time working men, and two-thirds of this gap is explained by dimensions linked to the masculine breadwinner role—working more hours and selecting into higher paying majors, occupations, and economic sectors (AAUW, 2013). The gender wage gap holds even when controlling on the level of skill (Acker, 1989) or years of work experience (Babcock & Laschever, 2003). An additional factor explaining differences between men's and women's circumstances and experiences is the care of children. Women feel much more responsible for child rearing than men do, and over a third of women who are not in the labor force list child rearing as the reason, more than 10 times the percentage of men who list that reason (Pratto & Walker, 2004).[3]

Thus, gender roles still pull men and women into some different life circumstances, experiences, values, and interests. To be sure, gender roles and expectations have not remained static over the past several decades. There has been marked convergence in important dimensions, such as women's entry into the labor force and educational achievement. However, women's daily life is still much more likely than men's to revolve around serving the needs of others and men's in turn to revolve around securing financial rewards.

This occupational division might imply that women form vastly different views than men of government's proper role. Theories of self-interest certainly expect so (Huddy et al., 2008). Such theories assume that experiences shape incentives, which shape interests, which drive political preferences. In other words, women might lean toward the Democratic Party or support spending on social welfare and progressive taxation simply because they are more likely to work in public sector jobs such as education or social work and are thus more likely to benefit from the policies Democrats tend to espouse. As we noted, such a gender gap is also consistent with theories of socialization. According to that perspective, women are socialized to care for others, and therefore develop personal values and moral reasoning in line with that care orientation, as Carol Gilligan argued (Ford & Lowery, 1986; Gilligan, 1982).[4]

However, the gendered division of labor, and whatever values precede it or interests arise from it, does not produce a deep and consistent gender cleavage in political preferences. Gender gaps in opinions about government tend to be neither large nor consistent across time, measures, and studies (Burns & Kinder, 2012; Huddy et al., 2008; Sapiro, 2003). Women are sometimes found to be more Democratic, egalitarian, communal, and liberal than men (Conover, 1988; Gilens, 1988; Kaufmann & Petrocik, 1999; Schlesinger & Heldman, 2001; Shapiro &Mahajan, 1986), but only somewhat so (Carroll, 2006; Eagly, Diekman, Johannesen-Schmidt, & Koenig, 2004; Feldman & Steenbergen, 2001; Huddy et al., 2008; Inglehart & Norris, 2003; Kaufmann, 2002; Norrander & Wilcox, 2008; Schwartz & Rubel, 2005; but see Sidanius & Pratto, 1999). And these small differences in central tendencies, when they exist, mask considerable individual-level variation within each gender (Sapiro,

[3] A recent study found that "Even in households where women work outside the home, and have similar career demands as their husbands, 41% of women report doing more child care and 30% report doing more chores than their husband. And while younger couples split household chores more evenly, women under 30 still do most of the child care" (Bernstein, 2015).

[4] However, systematic and large quantitative studies do not find a strong, consistent gender gap in moral orientations to care or to justice frames (Jaffee & Hyde, 2000).

2003). Examples abound of women who are conservative, Republican, and individualistic, just as there are many liberal, Democratic, egalitarian men. When it comes to political preferences, gender is the cleavage that doesn't necessarily cleave.[5]

Why are men and women often similar in their preferences about government? The answer may lie with what Burns and Kinder (2012) refer to as the "social organization" of gender (p. 151). Unlike racialized groups, gender groups experience high levels of residential integration and interdependence (Maccoby, 1998). As Burns and Kinder (2012) put it, "... women ... acquire interests and values in common with the men whose lives they share" (p. 151). Women have a high level of linked fate with men (see also Howell & Day, 2000). In that light, their shared views are no mystery.

Nevertheless, preferences, ideology, and partisanship are only one part of the mental life of the citizen. Another, related part has to do with emphasis—with priorities (Crowder-Meyer, 2007). On this view, the gender gap in personal priorities does have an effect—specifically, on the political issues that a person feels are most salient. As Kaufmann and Petrocik put it, the gender gap in American presidential voting is due both to differences in preferences over social welfare issues and to the different weights that men and women put on the same preference (Kaufmann & Petrocik, 1999; see also Howell & Day, 2000). For example, when women are asked to list the nation's most important problems, they tend to rank the needs of children fairly high; men rank them last (Crowder-Meyer, 2007). In the bills they promote and the speeches they make, female legislators tend to prioritize different issues than male legislators (Bratton, 2005; Reingold & Swers, 2011; Swers, 2002, 2013; Volden, Wiseman, & Wittmer, 2013). Similarly, women tend to focus their political activism on children and education, men on reducing taxes (Burns et al., 2001; Karpowitz & Mendelberg, 2014). Women are more likely to prefer government intervention to address the needs of children than lower taxes or prices and men the reverse (Karpowitz & Mendelberg, 2014).

This research leads us to conclude that the sexes do indeed differ markedly in their priorities regarding government policy, whether because of the direct effect of work-related experiences and incentives or because of long-term values acquired through socialization. To be sure, there are some significant overlaps in men's and women's priorities, especially in response to pressing, salient social conditions (economic recession or depression, war, terrorism) (Crowder-Meyer, 2007). But priorities also exhibit some meaningful and consistent gender gaps.

To sum up, previous research offers up two divergent expectations about preferences and their relationship to gender gaps in the exercise of voice, authority, and power. On the one hand, men and women often differ little in their preferences, and so, preferences may not matter much in explaining cases where men and women behave differently in decision-making settings. However, given that men and women differ in their public affairs *priorities*—the importance they assign to particular issues or public problems—we might expect preferences to help explain the gender gap in political behavior when it appears.

Gender Gap II: Aversion to Conflict

A second explanation for the gender gap is that women and men differ in their orientation to conflict or competition. A classic statement of this notion is Gilligan's book *In a Different Voice* (1982), which argued in part that beginning in childhood, women are more likely than men to emphasize the

[5] The gender gap in voting and party identification may be mostly due to the emergence of women who identify as feminist (Conover, 1988) or take feminist issue positions (Kaufmann, 2002), but these attitudes, or their antecedents, may influence men just as much (Cook & Wilcox, 1991; Kaufmann, 2002). The emergence of the gender gap in voting and party identification may be due primarily to the movement of men toward the Republican Party rather than women to the Democratic Party (Kaufmann & Petrocik, 1999; Trevor, 1999), or alternatively, to the movement of women in response to the rise of the abortion issue (Achen & Bartels, in press).

importance of relationships. They are more motivated by their ties to others and thus are more reluctant to break those ties. Subsequent research found that relative to men, women do seem to prioritize relationships in their personal lives (Cross & Madson, 1997), to display a more considerate form of emotional support to spouses in need (Neff & Karney, 2005), and to display somewhat more empathy (Eisenberg, Fabes, & Spinrad, 2006; Feldman & Steenbergen, 2001). From an early age, girls' play seems more oriented to avoiding overt competition and preserving relationships than boys' play (Leaper & Friedman, 2006; Maccoby, 1998), and girls exhibit more helping behavior that expresses kindness than boys do (Eisenberg & Fabes, 1998). This pattern is reinforced across cultures by parenting practices (Barry, Bacon, & Child, 1957; Lytton & Romney, 1991; Whiting & Edwards, 1988). In controlled experiments as well, women are more sensitive than men to social cues and social pressures and more averse to competitive economic situations (Croson & Gneezy, 2009; see also Niederle & Vesterlund, 2007). Some lab experiments uncover more cooperation by women than men (Eagly, Johannesen-Schmidt, & van Engen, 2003), or a bigger drop in performance among women than men in a competitive environment (Gneezy, Neiderle, & Rustichini, 2003), or a more egalitarian leadership style by women than men, further evidence of women's possible tendency toward cooperation (Eagly & Carli, 2003, 2007).

The notion that women are more community-minded than men also receives support from studies of public discourse and public officials. In hearings about zoning to allow Walmart to build its store in the community, women were more likely than men to raise communitarian themes (Karpowitz & Frost, 2007). In interviews, local female council members tend to emphasize themes of connection to others and collegiality (Beck, 2001), and studies of state legislators show that even after controlling for a variety of other factors, women spend more time than men building coalitions, both within and across parties (Epstein, Niemi, & Powell, 2005). Women tend to say that they favor or practice a collegial and facilitative style of leadership, and some direct observation of female political leaders confirms this self-report (Dodson & Carroll, 1991; Flammang, 1985; Kathlene, 1994, 2001; Thomas, 2005). Some scholars have argued that women's preference for consensus seeking helps to explain the greater legislative success in Congress that female representatives enjoy in some contexts (Jeydel & Taylor, 2003; Volden et al., 2013).

However, as with gender differences in general, these differences, too, are often "modest" (Huddy et al., 2008). Moreover, controlled game-theory experiments find that women are not more cooperative than men (Croson & Gneezy, 2009). Some of the findings of women's cooperativeness might be the result of women seeking to avoid setting off sanctions for gender nonconformity or an artifact of being observed by researchers and thus seeking to conform to observers' stereotypes of femininity. The notion that women are more communal is a core dimension of widespread stereotypes about women (Kite, Deaux, & Haines, 2007, pp. 208–209; Rudman, Greenwald, & McGhee, 2001). Women may be reluctant to violate those expectations given that they may be sanctioned for it (Cuddy, Fiske, & Glick, 2004; Rudman & Glick, 2001). In other words, women may be more likely to verbally endorse than to actually implement ideals of feminine collegiality (Huddy et al., 2008).

In sum, the evidence is mixed. Some evidence exists to suggest that women may be more oriented to interdependence, cooperation, consensus seeking, and nonhierarchical styles of collective decision-making. They may feel less at ease than men about participating within political settings or when people attempt to reach a collective decision that involves overt conflict. When men act more assertively than women, that gender gap may be caused by women's greater discomfort with formal conflict.

On the other hand, much of the evidence for this notion comes from interviews or reactive research situations where women may endorse or act on socially approved, feminine norms of consensual decision-making in order to conform to gender stereotypes, or to avoid triggering sanctions for violating norms proscribing female power. In such settings, it may be difficult to separate a genuine preference for consensus seeking from a strategic response to settings of persistent gendered

powerlessness, or relatedly, from the internalized resignation to avoid power seeking. A taste for consensus may also be correlated with powerlessness, making it difficult to determine if it is preferred for its own sake or because it avoids sanctions for seeking power. And while women may be more relationship-oriented in their personal lives, they may not be in political settings, with the attendant assertiveness. Margaret Thatcher, for example, employed to great political success an aggressive form of verbal jousting, conflict, and confrontation (Keohane, 2010), and other well-known female leaders like Angela Merkel are equally forceful in their political style (Thompson & Lennartz, 2006). Thus, aversion to conflict may—or may not—explain much of a gender gap in assertive political behavior.

Gender Gap III: Power and Authority

A third way to view gender gaps is through a lens of gendered power. As Pratto and Walker (2004) write,

> With the possible exception of childbearing, no aspect of social life is more strongly associated with gender than power. In no known societies do women dominate men. In all societies that accumulate wealth, men, on average, enjoy more power than women, on average, and this appears to have been true throughout human history. (p. 242)

Women are socialized to occupy a lower social rank than men and thus to avoid attempts to exercise overt power, particularly over men, while men are socialized to seek overt power, especially over women (Eagly, 1987; Eagly & Wood, 2012; Pratto & Walker, 2004; Ridgeway, 2001; Ridgeway, Backor, Li, Tinkler, & Erickson, 2009; Wood & Karten, 1986). This theory of gender focuses heavily on the rank, status, or power inequality that society expects and produces based on gender. On this theory, men are designated as more suited to and deserving of resources because of their rank, and chief among those rank-distributed resources is power to direct the actions of other people below them in the hierarchy. Women are consequently much less likely than men to act in ways intended to directly influence men and may express lower levels of confidence in their ability to do so.[6] That is, women are less assertive than men because they are attributed—and self-attribute—lower competence on any but feminine tasks.

Politics is a quintessentially masculine domain (Burns et al., 2001) and therefore likely to produce a confidence gap—especially when it comes to actions that implicate the exercise of power or authority. In line with that prediction, while women are more likely than men to turn out to vote, they are much less likely than men to speak up for their views or attempt to persuade someone to their own political point of view (Karpowitz & Mendelberg, 2014). The former corresponds to duty; the latter to assertiveness. Women do more of the former and men more of the latter because women are socialized to follow, men to lead. Women have a better vocabulary than men (Verba et al., 1995) but a greater aversion to public speaking (Behnke & Sawyer, 2000; Lustig & Anderson, 1990). Studies of potential candidates find that men have a higher opinion of their qualifications to seek leadership positions than do comparable women (Fox & Lawless, 2011; Lawless & Fox, 2010). These findings support the claim of gender-role theory that power is associated with men and not with women and that women encounter social sanction for crossing this boundary (Butler & Geis, 1990; Carli, 1990; Carli, LaFleur, & Loeber, 1995; Eagly & Carli, 2007; Eagly & Karau, 2002; Eagly, Makhijani, & Klonsky, 1992; Heilman, Block, & Martell, 1995; Heilman & Okimoto, 2007; Ridgeway, 1982; Rudman, 1998; Rudman & Glick, 2001).

[6] That is not to say that no other source of rank matters; to the contrary, organizational roles can trump gender in shaping dominance and subordinate behavior (Moskowitz, Suh, & Desaulniers, 1994; Ridgeway, 1982).

For these reasons, women may be less likely than men to develop a sense of confidence in their capacities or to value their abilities or their contribution as highly as men do (Instone et al., 1983; Karpowitz & Mendelberg, 2014; Major, McFarlin, & Gagnon, 1984; Pajares, 2002; Preece & Stoddard, 2015). When compared to objective markers of achievement or capacity, women tend to underrate themselves, and men do not, especially on dimensions considered masculine (Beyer & Bowden, 1997; Wigfield, Eccles, & Pintrich, 1996). That applies especially to their ability to lead or influence others. The results can be seen not only in attitudinal measures but also in behavior. For example, Kanthak and Woon (2014) found in a controlled experiment that women are more reluctant than men to stand for election to represent their group, even when they had the same objective qualifications as men. In a field experiment with politically active partisans, women were only half as likely as men to respond to an invitation to participate in a training session for prospective political candidates (Preece & Stoddard, 2015).

Moreover, women are more likely than men to interpret ambiguous or negative signals of their qualifications or performance as a negative reflection on their inherent talent (Babcock & Laschever, 2003). When women receive such feedback, they are more likely than men to hold back, withdraw, or avoid the attempt to achieve, assert, or influence. For example, women are much less likely than men, given the same low grade in an introductory economics course, to pursue further economics course work (Horvath, Beaudin, & Wright, 1992). For this reason, women respond more strongly to assurances of their worth than do men (Bylsma & Major, 1992). In fact, Wood and Karten (1986) erased the gender gap in influence-seeking behaviors during group discussion in part by randomly providing positive information to female participants about their competence.

This theory of gendered power gaps emphasizes that all these ill effects obtain especially, or even exclusively, when women interact with men. Again, the reason is that gender gaps are about a power or status inequality, with men accorded higher status than women by virtue of their gender. Even dominant-personality women exhibit conversational dominance behaviors only in conversation with low-dominance women, not with low-dominance men (Aries, 1998; Carbonell, 1984; Davis & Bilbert, 1989; Nyquist & Spence, 1986).[7] Experimental studies of discussion demonstrate that women have a lower status than men do unless they are talking about stereotypically feminine topics (Ridgeway & Smith-Lovin, 1999). In one notable example, Wood and Karten (1986) assembled four-person discussion groups and studied their behavior. Women were less likely than men to inform, to express an opinion, and to attempt to direct the group's action. Or consider the study of competition by Gneezy et al. (2003). That study found that women actually did better when competing against other women than they did without competition. It was only when the competition entailed a contest against men that women did badly. That is, women are not conflict-averse, nor do they perform more poorly in all competitive situations—only those that put them in the position of violating power-gender roles by conflicting with or competing against men.

Experimenting with Gender

We cannot conduct a full experimental test of all three gender-gap explanations here. Instead, we focus on one of the three: the gender gap in power. Our primary analytical strategy is to vary women's status in a group and observe the effects on acts of power, authority, and influence. We raise or lower women's status by arranging women and men in discussion groups that vary in two dimensions that affect status: the balance of women's numbers relative to men and the decision rule by which the group must reach a decision. Women are empowered either by comprising the group's majority when

[7] In addition, men are more likely than women to attribute less influence to women than to men and to discount female leaders' leadership ability or effectiveness (Djupe, Sokhey, & Gilbert, 2007; Foschi & Freeman, 1991; Koenig, Eagly, Mitchell, & Ristikari, 2011).

groups decide by majority rule or by comprising the numerical minority in groups using the unanimity rule, which makes decision-making contingent on securing the assent of minorities. The main evidence of the gender gap in power, then, would be the existence of a large gender gap between men and women in conditions where women's status is low and a smaller or nonexistent gap in conditions where rules and numbers equalize women's status with men's.

To test the other two gender-gap explanations, we then add controls for measures that index those explanations—variables that deal with preferences and variables that address conflict aversion. We examine both group and individual characteristics that could explain the gender gap and point either toward preferences or toward conflict attitudes. To be clear, we have not experimentally manipulated preferences or conflict attitudes (an approach that should be the focus of additional study, as recommended by Bullock, Green, & Ha, 2010), but we can explore whether controlling for those alternative explanations mutes or otherwise modifies the effect of women's relative status on the gender gap in participation and influence within the group.

Experimenting with gender is not an obvious way to go. Gender is often taken to be an exogenous variable, a set of physical attributes that generate closely tailored psychological perceptions, attitudes, expectations, and experiences. Nevertheless, it is possible to randomize certain aspects of gender. And doing so forces researchers to more thoroughly grapple with the conceptual meaning of gender. What are its important dimensions? In what ways are the correlates of gender really about gender and not about ancillary or secondary side effects, outcomes not so much of gender itself as of forces that coincide with gender? What aspects of gender are objective, and which are more subjective, perceptual, and attitudinal? And finally, what aspects of gender are malleable and open to intervention in a situation? These are interesting and difficult challenges for theory as well as methodology.

We are concerned here with one facet of these questions: how the objective numerical balance of gendered bodies in an interacting group, combined with objective rules that, while gender neutral on their face, can disproportionately empower women within the group, shape the allocation of gendered power through patterns of social interaction and communication. By randomizing the numbers and rules, we assign a given individual higher or lower amounts of status in the group. Objective gendered facts set in motion behavioral scripts that enact power.

Our experimental procedures were adapted from a previous study by Frohlich and Oppenheimer (1990, 1992) designed to better understand group decisions about income redistribution (for full details, see Karpowitz & Mendelberg, 2014). Recruitment materials advertised a study of "how people make decisions about important issues" and promised the opportunity to earn some money. We recruited women and men—both students and adult members of the community—at two different locations. One location was a conservative, religious community in the Mountain West, while the other was a liberal, secular community on the Atlantic seaboard. Our sample is demographically diverse in terms of age, partisanship, income, and other such characteristics, though consistent with the fact that the study was conducted at universities, participants tended to be highly educated. However, one important exception to this diversity is race. We expected race and ethnicity to pose potentially substantial and complex interactions with the already-large set of experimental conditions, and so, we only include Anglo White participants.[8] Because we randomized participants to conditions within each location, but not across locations, we control for experimental site in all of our analyses.

Participants were randomly assigned to five-person groups that varied in both composition and decision rule. (For a full discussion of randomization procedures and checks, see Karpowitz & Mendelberg, 2014.) The experiment itself consisted of three parts. First, participants were taken to private

[8] Key treatment effects were replicated among racially representative samples, but much of this discussion awaits a full test that varies racial composition along with gender composition (Karpowitz & Mendelberg, 2014).

computer terminals, where they answered questions about themselves, their political and social attitudes, and their expectations for group discussion. They were also told that later in the experiment, they would be asked to perform work tasks and that their income from the experiment would be tied to their performance on the tasks. In addition, participants were introduced to several different principles for redistributing income earned among the group members (Rawlsian maximization of the incomes of those who earned the least; setting a minimum guaranteed income; imposing a limit on the difference between the maximum and minimum income; and no redistribution at all) and were given some background information about each principle and the values and purposes behind it. Support for those at the low end of the earnings spectrum would be financed by taxes on those who earned more. To be sure that all participants understood the redistributive principles well, experimenters administered a brief quiz. When participants missed a quiz question, they were told that their answer was incorrect, were given additional opportunities to answer correctly, and ultimately were provided with the correct answer (as well as the reasoning behind it).

After the private opinion survey and quiz, participants were brought together as a group and were asked to have a face-to-face discussion in which they were to deliberate about and then choose the "most just" principle of redistribution, *one that would apply to their group's earnings and, hypothetically, that they would feel comfortable imposing on society at large*. The former was designed to ensure that participants took the discussion and decision-making seriously. Experimenters instructed participants that the group had to talk for at least five minutes, though most groups exceeded that minimum standard substantially. The average group talk time was 25 minutes, and a few groups talked for nearly an hour. In addition, content analysis shows that the discussions were substantive, with participants weighing the advantages and disadvantages of each principle of redistribution, pondering the plight of the poor and the legitimacy of higher earnings, exploring the importance of incentives for hard work, and bringing their own life experiences to bear (see examples in Karpowitz & Mendelberg, 2014, Chap. 4). If groups chose to set a minimum guaranteed income, they had to specify that minimum—that is, to set a specific dollar threshold below which no one in the group would be allowed to fall. At the time of the group discussion, participants were not told the precise nature of the work tasks, only that some would likely perform well, while others were expected to perform poorly. This approach was meant to introduce some uncertainty in the mind of each participant about where he or she might fall in the income distribution. Collective decisions were made according to the randomly assigned decision rule, majority or unanimity, with voting occurring by secret ballot.[9]

In the third part of the experiment, participants returned to their private computer terminals, answered questions designed to assess their experience during the group discussion, and performed the work tasks (which turned out to be correcting spelling errors in a difficult text within a time limit). At the conclusion of the work tasks, they answered a few final questions about their opinions and experience, were paid, and debriefed.[10]

Because individuals were randomly assigned to groups of between 0 and 5 women and one of two decision rules, our study is a fully crossed 6 (gender composition) x 2 (decision rule) between-subjects design. Each cell of the experiment includes between 6 and 10 groups, and a total of 94 groups (470 individuals) are included in the analyses that follow. Much of our focus will be on the 64 groups and 320 individuals who were assigned to mixed-gender groups. Our study thus includes more

[9] Experimenters did not moderate the group's interaction. They read the group instructions at the beginning of the period, answered questions, and supervised the voting process at the end, but otherwise removed themselves from the table where the group discussion occurred.

[10] Experimenters used the group's chosen principle of redistribution to calculate participants' actual take-home pay, which ranged between $10 and $70. At the conclusion of the session, experimenters debriefed participants about the goals of the experiment and answered any questions the participants had. In all, a typical experimental session lasted between 90 minutes and two hours total.

groups than is typical in group-level laboratory studies, though our statistical power is still somewhat limited.[11]

Measures of Influence-Seeking Behavior

Power has many faces (Bachrach & Baratz, 1962; Dahl, 1961; Gaventa, 1980). That may be all the more true when it comes to gendered power, given the pervasive and deep reach of gender. Our aim is to explore the gender gaps that exist within the many ways that people establish and exercise gendered power. The experimental design we employ allows us sufficient control over measurement that we can systematically record a fuller range of these pathways of influence. (See the supplemental information for summary statistics and full details on the construction of all variables used in the analysis.)

We begin with the simple act of speaking. Taking the floor in itself asserts authority (Karpowitz, Mendelberg, & Shaker, 2012). To be sure, it is possible to exert influence without saying anything. In fact, the most powerful need say little—their superior power is so deeply internalized that everyone is already guided by it. However, in democratic decision-making, voice is power. Thus, we expect that the typical path to influence in a discussion billed as democratic begins by engaging in the back-and-forth of group conversation. To that end, we measure the number of speaking turns and number of seconds each person spoke. Because group conversations varied in length, we computed each person's speaking time as a proportion of the group's full conversation (*Proportion Talk*). In groups of five people, if the conversation were perfectly equally distributed, each individual would account for exactly 20% of the total talk time. Such exact sharing of time is an implausible standard, but in a five-person conversation in which both men and women speak in proportion to their presence in the group, the *average* individual-level *Proportion Talk* for each gender would be roughly equal (and close to 0.20). One potential path to locating gendered gaps in authority would be identifying conditions in which men's average talk time exceeds women's.

Still, perhaps increased talk indexes nothing more than chattiness or even the level of annoyance one provokes in others. For this reason, we also examined the deliberators' perceptions of each other's influence. After the discussion period, we asked each group member to privately indicate the most influential person in the group, and we then counted the number of "influence votes" each individual received.[12] Our previous work found that this measure of perceived influence is highly correlated with talk time, for both men and women (Karpowitz & Mendelberg, 2014; Karpowitz et al., 2012). In group settings, the silently influential individual appears to be the exception. To exercise greater authority in the eyes of others within deliberating groups, it is typically necessary to speak up.

Even when considering the influence that talk begets, talk time alone may still be an incomplete indicator of authority. Deliberators can build power not merely by holding the floor, but also by what they say when they hold it. Recall that prior to the group discussion, we asked participants to indicate privately their preferred principle of income redistribution. We can then analyze what was said during the discussion period, matching each participant's comments to their predeliberation attitudes. Publicly advocating for principles of redistribution other than the one they privately preferred may thus be an indicator of a lack of power within the group—a participant's public statements do not align with his or her private opinions. Alternatively, it is also possible that such behavior is a measure of deliberative open-mindedness and a willingness to be flexible as the group searches for a collective decision. We

[11] In other words, our research design has the potential to identify new insights into the relationship between gender and power but more remains to be done, including studies with more groups and studies that experimentally manipulate other features of the groups.

[12] For purposes of this measure, we focused only on votes received from other members of the group and did not count an individual's vote for himself or herself. However, the patterns we identify here are unchanged if own votes are included in the analysis.

have previously shown, however, that women's tendency to mute the expression of their prior, private preference is profoundly affected by women's status in the group (Karpowitz & Mendelberg, 2014). For example, under majority rule and large numbers, women rarely endorse redistributive principles they did not privately prefer, and they do so far more often where they are outnumbered by men. Men, on the other hand, tend to be less sensitive to these group conditions. We therefore examine the distance between private and publicly expressed preference as another consequence of gendered power.

Finally, an indirect but important aspect of political behavior is the assertive speech act. Here we focus on interruptions. As Sapiro (2003) puts it, "Verbal and nonverbal communication and social interaction all have 'rules of the road' that are often followed nonconsciously but reflect the social dominance of those involved; they indicate the communications 'right of way'. Higher status people... make more noise; interrupt others; control the duration and timing of communications; initiate and change topics; and control the level of familiarity. Lower status people are perceived as rude or insubordinate when they assert equality with a higher status person in these matters" (p. 620). Accordingly, we examine interruptions as a particularly relevant form of conversational power. We employ several measures of interruptions. One measure is the negative proportion of interruptions received. Because a negative interruption claims the floor from the speaker to express disapproval or opposition, higher scores on the measure indicate that the interrupter is asserting power in a way that undermines the current speaker's authority. We focus on the negative proportion of interruptions one receives from the men in the group as an indicator of gendered power dynamics, following our previous finding that this measure is particularly responsive to the conditions of women's authority in the group. A gender gap in this measure thus represents a gender gap in how men police the conversational dynamics. Second, we also explore more positive forms of interrupting behavior. These are likely to bolster the influence of the speaker by expressing support or solidarity with what is being said. (For more on positive and negative interruptions, see Mendelberg, Karpowitz, & Oliphant, 2014). The measures of interruptions thus round out the measurement of actions that express voice and instantiate influence.

Results

Gender Differences in Predeliberation Attitudes and Characteristics

Our interest is in understanding how gender gaps in each of the dependent variables we have listed above change as women's status changes across our experimental conditions. But before turning to that question, the first step is to review differences between the men and women in our sample prior to discussion.[13] Given patterns of socialization and the evidence we have reviewed to this point, modest but meaningful differences between men and women in preferences, conflict aversion, and power are likely to be found at the outset of our lab experiment. Table 1 highlights gender differences across a host of different attitudes and characteristics that correspond to the three gender gaps reviewed above.

We begin with the preferences explanation for the gender gap. Consistent with the findings from the studies reviewed above, we find small to moderate differences between the sexes, with the women in our study tending to be somewhat more egalitarian, liberal, and likely to believe that government has an important responsibility for providing jobs and a good standard of living. They also expressed slightly more warmth toward the poor than men. These differences are not large: other than the feeling thermometer toward the poor, which ranged between 0 and 100, variables were recoded to a 0–1 scale, so the mean difference in attitudes range between 5 and 9 percentage points,

[13] The only exception is the participant's self-reported ideology (that is, liberalism or conservatism), which was collected at the end of the experimental session, just prior to payment and debriefing. It is possible that these self-reports were influenced by the experience of the experiment itself, though the average gender difference for this variable is similar in magnitude to the measure of egalitarianism.

Table 1. Gender Differences in Attitudes and Characteristics

	Women	Men	Difference	*t*	*p*
Measures Related to Gender Gap I: Preferences					
Egalitarianism	0.549 (0.011)	0.479 (0.011)	0.071 (0.015)	4.61	<0.001
Liberalism	0.506 (0.016)	0.440 (0.016)	0.065 (0.023)	2.90	0.004
Government Responsibility for Jobs	0.553 (0.016)	0.459 (0.016)	0.093 (0.022)	4.22	<0.001
Warmth of Feeling Toward the Poor	64.46 (1.27)	59.66 (1.72)	4.79 (1.80)	2.66	0.008
Maximize the Floor	0.125 (0.020)	0.088 (0.020)	0.037 (0.028)	1.29	0.197
Set a Floor	0.655 (0.032)	0.542 0.032)	0.114 (0.045)	2.52	0.012
Set a Range	0.117 (0.023)	0.155 (0.022)	−0.039 (0.032)	1.22	0.222
No Redistribution	0.099 (0.023)	0.210 (0.023)	−0.112 (0.033)	3.39	0.001
Preferences Matched Group Majority	0.625 (0.32)	0.487 (0.32)	0.138 (0.045)	3.04	0.002
Measures Related to Gender Gap II: Conflict Aversion					
Comfort with Disagreement	0.590 (0.016)	0.704 (0.016)	−0.114 (0.023)	4.98	<0.001
Prosociality	0.716 (0.013)	0.637 (0.013)	0.079 (0.019)	4.25	<0.001
Measures Related to Gender Gap III: Power and Authority					
Confidence	0.525 (0.011)	0.633 (0.011)	−0.108 (0.016)	6.72	<0.001
Negative Feedback	0.200 (0.011)	0.129 (0.011)	0.071 (0.015)	4.63	<0.001
Demographic Characteristics					
Income	0.280 (0.020)	0.342 (0.019)	−0.062 (0.028)	2.23	0.026
Education	0.678 (0.012)	0.648 (0.011)	0.029 (0.016)	1.82	0.070
Age	29.37 (0.76)	25.92 (0.76)	3.45 (1.08)	3.21	0.001

Note. Cell entries in the Women and Men columns are predicted values for each gender, generated from OLS regressions that include a control for experimental location (not shown); standard errors in parentheses. The difference column, *t*, and *p*-values indicate the effect of the gender variable in the OLS regression.

and the sample includes both conservative, inegalitarian women, and liberal, egalitarian men. Nonetheless, on average women who participated in the study tended to be somewhat more concerned about inequality, felt somewhat closer to those who have the least, and were somewhat more open to government intervention to promote equality.

These gender differences are mirrored in more specific preferences about the principles of economic redistribution that were at the heart of the group discussions. Women were more likely than men to prefer a floor constraint below which no one in the group would be allowed to fall. This was by far the most popular choice among both women and men, which is why women tended to enter the discussion with preferences that were more likely to match the group's predeliberation majority than did men. This redistributive principle was also the most common group choice, though the groups differed substantially in the actual amount of the floor constraints they set. More men than women preferred no redistribution whatsoever, a choice that was the least popular alternative among female participants.

The second gender gap explanation also finds initial support. Men and women in our sample differed in their attitudes related to conflict and maintaining social ties. Women expressed lower levels of comfort with disagreement ("I feel uneasy and uncomfortable when people argue about politics") than men. Women also expressed more feminine attitudes on another measure of aversion to conflict, specifically demonstrating more prosocial attitudes than men in response to a question about whether they "easily put themselves in the shoes of those who are in discomfort." Again, these gender differences are modest in size—8–11 percentage points—but they are nonetheless statistically robust, and they are consistent with previous work, as we reviewed above. Though there is considerable diversity within each gender, women are more likely than men to say that they prize harmonious social relationships and express sensitivity to the feelings and needs of others.

Next, we turn to the third gender gap, power, and authority. As we reviewed above, women are likely to experience lower levels of confidence in their capacities than men do, and in this case, the

women in our sample expressed lower levels of confidence in their political capabilities and their ability to participate successfully in group-discussion settings. The logic of the relationship between confidence and power holds that gender is socially constructed such that women have less authority and thus less confidence, especially in areas that implicate public authority, in their ability to be authoritative. Whether because of sensitivity to negative feedback or because of a general tendency toward lower efficacy in areas of public speaking or political decision-making, the lower the person's self-confidence, the less likely she is to engage in assertive acts in a decision-making group. This pattern of gendered authority would show up most strongly in situations where women's status is low, where the social sanctions from women asserting authority would be the highest.

Following this logic, we asked the participants a series of Likert-style questions about their political efficacy ("I feel that I have a pretty good understanding of the important political issues facing us today" and "Sometimes politics and the government seem so complicated that a person like me can't really understand what is going on"), their ability to participate in group discussions ("I am capable of participating effectively in group discussions about important political issues" and "I am frequently frustrated by my inability to express my opinions to others"), and their general level of confidence in their performance ("I am confident in my abilities, even when confronting tasks I haven't done before"). These items have good psychometric properties and scale together well in a single "confidence index" (see the online supporting information for more detail). Men in our sample score about 11 percentage points higher than women on this scale—again, modest, but meaningful differences. That is, women entered the discussion harboring more doubts about their efficacy, including their ability to participate effectively in the group's deliberation.

As we reviewed above, power differentials might be especially relevant in settings where women receive negative signals about their abilities or competence. Recall that prior to the group discussion, we gave the lab participants a quiz about the principles of redistribution they were to discuss. In the process of answering the quiz questions, all participants were eventually told the correct answer to the quiz and the reasons why it was correct. This means that at the time of the discussion, knowledge about the principles should have been roughly equal—or at least that all participants had reached a threshold level of understanding. But those who missed any given question on the first try were told that they had answered incorrectly and were given another chance to respond. We counted the number of times each participant missed a question on the first try and summed these into a measure of "negative feedback" on the quiz. Women received slightly more negative feedback on the principles quiz than men—the equivalent of about one additional incorrect answer, compared to the male average. Once again, the difference is not large, but it is statistically robust.

Finally, we also examined gender differences in important socioeconomic characteristics. The women in our sample tended to report having lower household incomes than men, despite the fact that the women who completed the study were slightly better educated and a little older. We also explored other potential differences between men and women and found few differences.[14] Consistent with previous studies, we can thus conclude that the men and women in our sample differ with

[14] For example, on average women score about 1 percentage point higher than men on a measure of risk aversion, but that difference is not statistically significant. Nor does risk aversion make a difference when included as a control variable in the regression analyses below. A person's level of risk aversion derives from a utilitarian model in which people make decisions based on a cost/benefit calculation and on the chances (risk) of negative outcomes. This could be relevant to all three gender gaps. When making decisions about how generously to redistribute to the poor, for example, a risk-averse person would be more inclined to decide for generosity in order to avoid the negative outcome of ending up poor. In this sense, risk aversion is related to preferences. On the other hand, the risk-averse person who also dislikes conflict may be less inclined to provoke such conflict by stating opinions that will bring disagreement to the group. Or a risk-averse person sensitive to status and power may be disinclined to upset or otherwise roil existing status arrangements. Whatever its relation to the three gender gaps, we find little evidence that risk aversion makes a significant difference when including the analyses below. To be sure, our measure may understate gender differences in risk aversion. For work that finds a sizable gender gap in risk aversion, see, for example, Dohmen et al. (2011) and Charness and Gneezy (2012).

respect to some important attitudes and opinions, but with respect to others, the genders are quite similar. And even when they differ, average differences are modest, and considerable within-gender variation is present.

All in all, these results serve several purposes. First and most basic, they reassure us that participants in our study shared many of the gendered characteristics that have been found in a host of previous studies. Second, these results also mean that all three gender gaps we outlined above are plausible. Women do enter the discussion with a somewhat different set of political preferences than men, feeling less comfortable with conflict than men, and having lower levels of self-confidence about their ability to contribute to the group's discussion than men.[15]

Which Gender Gap?

We begin with the test of the explanation we are best positioned to test: gender gap III, the gendered power explanation. Our study was designed to vary women's status in the group, as indicated by the combination of decision rule and gender composition, and to gauge the consequences for women's relative exercise of voice and influence. Nonetheless, our aim here is to test all three of the gender-gap explanations against each other. The first two gender gaps predict that the gender gaps in power and authority are not actually a function of the status created by group conditions, but they emerge instead because of a gender gap in political beliefs and attitudes or because of a gender gap in attitudes about conflictual and competitive decision-making.

To that end, we use a series of statistical models of the effect of rules and numbers on women's and men's behavior. The first and most basic set of models estimates the effects of rules and numbers without any controls (except for experimental location and outliers).[16] Each combination of gender composition and rule is indicated by a dummy variable, and the set of these indicators is included in the model (leaving one out as the reference category). Using dummy variables allows us to capture nonlinearities in the effect of gender composition. We estimate the model for men and women separately in order to clearly contrast the effect of women's status on women against its very different effect on men. Because individual observations are nested within groups, we employ cluster robust standard errors in these and all subsequent individual-level models.[17]

We begin by demonstrating the treatment effects of our manipulation of women's status in the group on the measure of speech participation, which we introduced above. Karpowitz and Mendelberg (2014) and Karpowitz et al. (2012) show that the interaction of decision rule and gender composition has a powerful effect on women's verbal participation in the group's discussion. Those results are reproduced (in somewhat different form) in Panel A of Figure 1, where the dependent variable is *Proportion Talk*. Dots indicate the predicted estimate of women's talk from the basic model described above. Triangles are men's estimated talk from the same model, restricted to men.[18] The gender gap can be seen in the figure as the difference between the estimates for men and women. Spikes indicate 90% confidence intervals, and bolded spikes denote 83% confidence intervals, which we include as a simple way to approximate whether point estimates are statistically distinct from each other (see

[15] At the same time, the fact that self-reported political attitudes, beliefs about themselves, and even demographic characteristics are correlated with gender may complicate our efforts to tease apart the mechanisms through which power is produced during group discussion, reducing the efficiency of our attempts to isolate the independent effects of each variable by inflating the standard errors around our estimates. For this reason, additional experimentation is needed. For example, in future studies, experimenters might break the connection between gender and liberalism or egalitarianism by leveraging the diversity within genders and manipulating both the group's gender composition *and* its political composition independently.

[16] For more information, see Karpowitz and Mendelberg (2014).

[17] Results are robust to other modeling approaches, such as multilevel random-effects models.

[18] Estimates for women are produced from the base model in Table A2 and for men from the base model in Table A3 in the supporting information.

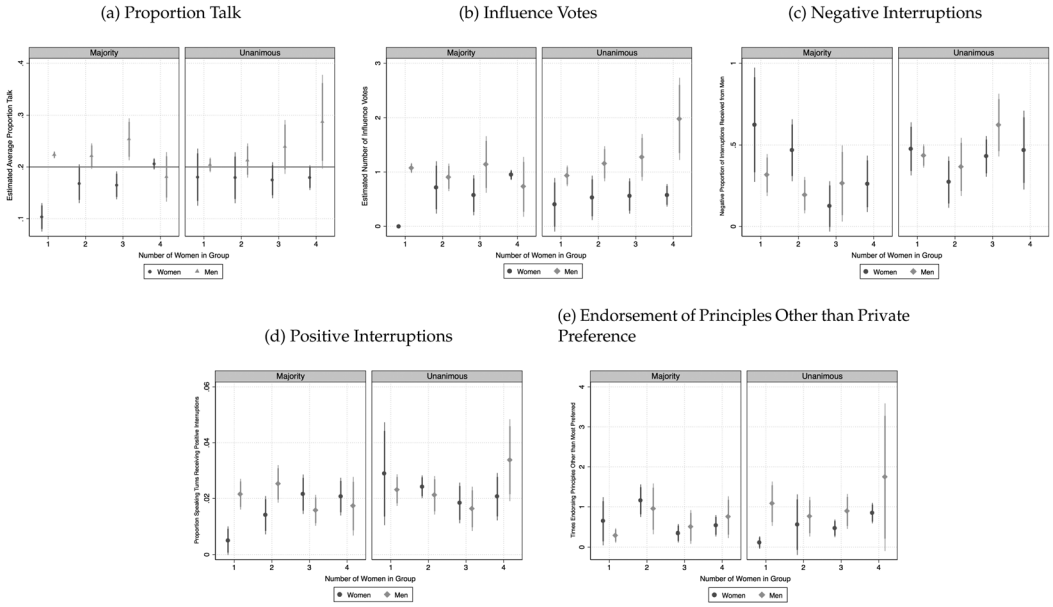

Figure 1. Effect of experimental conditions on men and women: key dependent variables. Predicted values from the baseline models in Table A2 and Table A3 for Panel A and in Table A4 and Table A5 for Panels B-E. The dependent variables are men's and women's Proportion Talk, influence votes received (votes for self removed), proportion of all negative and positive interruptions from men that are negative, proportion of speaking turns receiving a positive interruption, and the number of times advocating principles other than the principle most preferred prior to deliberation. Individual-level dependent variable with controls at the individual and group level. Points represent the estimates for men and women for the dependent variable in each experimental condition. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

Bolsen & Thornton, 2014; Goldstein & Healy, 1995; Payton, Greenstone, & Schenker, 2003).[19] In any given pair of estimates, the estimates are statistically distinct from each other at the 95% confidence level if the bolded spikes do not overlap.

The figure shows that randomizing the relative status of women and men powerfully changes the speaking behavior of men and women, and thus, strongly affects the gap between women's and men's participation in group discussion. When women's status is low, women participate far less than men; when women's status is higher, the gap in verbal participation narrows or evaporates. In groups that decide by majority rule, for example, women's status would be lowest when one woman is surrounded by four men. In such groups, women tend to participate far less than men and far less than the 20% standard of individual equality in a group of five.[20] Men's average speaking time easily exceeds the 20% equality standard. Put differently, despite the fact that the woman makes up 20% of the group, she only accounts on average for a little more than 10% of the conversation, while the remaining four men collectively take up about nearly 90% of the conversation. When the decision rule vests power in majorities and does not give special protection to minorities, which is the purpose of majority rule, women are at a disadvantage when they are outnumbered.

[19] Simple visual inspection of overlap between 90% or 95% confidence intervals is not a reliable way of showing the statistical significance of point estimates and will produce Type II errors (see Bolsen & Thornton [2014] for an explanation and examples). Instead, 83% confidence intervals offer a rough visual approximation of whether two estimates would be statistically distinct at the 95% confidence level in a two-tailed difference of means test.

[20] Recall from the discussion above that in a group of five, equality would mean that the average individual *Proportion Talk* for each gender is close to 0.20.

As the number of women in the group increases, women's average *Proportion Talk* also increases, though it is only when women form a supermajority—80% of the group—that the gap in participation evaporates. Even in this condition men do not participate significantly less than women; the difference between men and women is not statistically significant. This pattern of results suggests that the gender gap in talk time is not symmetrical for men and women: women's participation falls far below that of men in some conditions, but men's participation never falls below a level that is statistically equivalent with women's.[21]

Gender gaps in participation are also highly sensitive to decision rule. The right portion of Panel A in Figure 1 summarizes these results separately for men's and women's talk time. The confidence intervals of the point estimates for women easily overlap the 20% line and also overlap the estimates for men, even when women are vastly outnumbered by men. In other words, in groups with four men and one woman, a very large gender gap exists when groups decide by majority rule, but none exists under unanimity. We take this as powerful evidence that the participation of women and men in discussion groups is sensitive to the status that the interaction of numbers and decision rule confers. When the decision rule empowers minority groups, as unanimity does, then women speak up even when their numbers are low. Furthermore, increasing the number of women in the group does not fundamentally alter this dynamic, not only because women are doing well as the minority, but also because the decision rule grants power to men when they are in the minority. In other words, women use the power of unanimity to go from a severe participatory deficit to equality, while men leverage the rule to speak far more than their equal share. Thus, a gender gap emerges in unanimous groups with many women.[22]

The presence or absence of this gender gap is meaningful not just because it indicates that women participate in group decision-making far less than men in settings where women's status is low but also because the gender gap in talk time is closely followed by a gender gap in perceived influence. Recall that immediately after the group discussion, we asked each participant which member of the group was "most influential" in the decision-making process. We then counted the total number of votes each group member received as a measure of influence in the group.[23] Men's and women's estimated votes received from other group members can be seen in Panel B of Figure 1, and the results in many ways parallel the pattern we identified for talk time.[24] In sum, the experimental conditions manipulate the relative status of women and men, which affects the gender gap in talk time, which in turn shapes the extent to which women are seen as equally influential members of the group.[25]

Figure 1 shows similar effects on the interruption measures of influence. Panel C focuses on the negative proportion of interruptions issued by men. In majority-rule groups, women receive a relatively high proportion of negative interruptions in groups with one or two women, and more importantly, women receive, on balance, a much higher proportion of negative interruptions from men than men receive from other men. In groups with a majority of women, by contrast, women receive about the same proportion of negative interruptions as men. In unanimous rule groups, no pronounced

[21] See Karpowitz et al. (2012) for the original report of these results.

[22] Figure 1 highlights the results of a baseline model, analyzing the genders separately, but all of the patterns described here are robust to the inclusion of controls in those models. Results when controls are added can be seen in Figure A1, which presents estimated values from the models in Tables A2 and A3 in the supporting information. If anything, controlling for egalitarianism makes the effects of the experimental conditions even more pronounced. No matter what set of controls we use, the core pattern of responsiveness to the experimental conditions remains.

[23] Some participants voted for themselves, but these votes are not included in the analysis so that we could show a cleaner measure of influence in the eyes of others. Still, the patterns are very similar if votes for self are included.

[24] Furthermore, Karpowitz and Mendelberg (2014) and Karpowitz et al. (2012) show that the group-level gender gap in speech participation is a powerful determinant of the gender gap in perceived influence.

[25] Formal mediation analysis (Baron & Kenny, 1986; Imai et al., 2010) shows that the effect of the experimental conditions on the gender gap in perceived influence is mediated by the gender gap in talk time. See Karpowitz and Mendelberg (2014, pp. 134–137) for more details.

gender gaps exist in any gender-composition condition.[26] In Panel D, the dependent variable is the proportion of all speaking turns that receive a positive interruption from either men or women. Here again, the pattern shows that women in majority-rule groups with few women receive less positive affirmation than do men, but this gender gap disappears in groups with many women. Under unanimity, the lone male in groups with four women receives more positive affirmation than do the other women, but otherwise, unanimous groups show little evidence of a substantial gender gap in positive interruptions.

Finally, Panel E of Figure 1 shows the pattern of effects on men's and women's likelihood of endorsing principles other than those they privately prefer. To the extent that this measure represents conformity to group pressures, and not sincere opinion change as a result of deliberation, this measure, too, would respond to women's changing status and authority. Panel E shows that the results for this variable are somewhat weaker than for the other dependent variables, and the gender gaps are rarely large or statistically robust. Still, the patterns are roughly consistent with the preceding results. In majority-rule groups with one woman, for example, women endorse principles different from their private preferences somewhat more often than men, but in unanimous groups with one woman, where women's status is enhanced by the decision rule, women are much less likely than men to go against their private preferences.

The Robust Effect of Status on the Gender Gap

The results so far give us reason to believe that changing the status of men and women by manipulating the group's decision rule and gender composition has a profound effect on the behavior of men and women in groups. While some of these results have been presented in greater detail elsewhere (Karpowitz & Mendelberg, 2014; Karpowitz et al., 2012), what has not been presented before is that the key evidence of a power explanation for women's underparticipation relative to men—that is, for the gender gap in authoritative participation—is not muted or undermined by the inclusion of a host of controls for rival gender-gap explanations. With the aim of testing those alternative explanations, we now estimate models in which we pool men and women in the same model and directly measure the gender gap—the effect of gender—in each experimental condition. We do this by adding a set of interactions for individual gender with each combination of gender composition and rule. That is, we estimate the triple interaction of individual gender, gender composition, and rule.

To a baseline model that controls only on experimental location and outliers, we add a series of controls on the covariates of gender, where each control tests a competing explanation of the gender gap. Specifically, we first add one set of controls for Gender Gap I—namely, preferences (such as attitudes about equality and redistribution). We then replace those controls with a different set of controls for Gender Gap II—aversion to conflict and prosociality. Finally, we replace those controls with controls for Gender Gap III—indicators of internalized gender power, such as confidence in one's capacities to contribute to the discussion.[27]

Adding individual-level controls for factors correlated with individual gender, such as political attitudes or demographic characteristics, allows us to see whether the signals about women's relative status and authority generated by gender composition and rule affect the gender gap in the behavior of the group members because they indicate women's relative status, or instead, because of other explanations. If the presence of controls does not substantially change the ability of the numbers and rules to

[26] We cannot estimate the proportion of negative interruptions received by men from men in groups with only one man because there are no other men for the lone male to interrupt. Panel C of Figure 1 shows, however, that in majority-rule groups with four women, the balance of interruptions received by women from men is more positive than negative.

[27] We also examine the effect of controls for demographics, yet another, though less definitive, alternative explanation for the gender gap.

shrink the gender gap in the dependent variable, then the case for a causal story other than women's relative power is substantially weaker. In other words, if controls for predeliberation attitudes and characteristics in the model have little to no effect on the explanatory power of individual gender across the experimental conditions, then we can conclude that our treatments matter because of women's lower legitimate power, not because of those other factors.[28]

Each of these control models includes the control at the group level in addition to the individual level. The former is included as an interaction with the decision rule, analogous to the interaction of decision rule and gender composition. For example, in addition to controlling for individual-level comfort with disagreement, we also control for the number of people in the group with high levels of comfort, and we interact that aggregate measure with decision rule.[29] This guards against the possibility that gender composition is merely a proxy for group-level differences in the covariates of individual gender and again pinpoints the effect of women's relative status rather than the spurious effect of the covariates of that status. If they do not affect the interaction of individual gender and women's status, then we can conclude that gender composition is "working" because it varies the relative numbers of women and men, not because it varies the correlated numbers of egalitarians and inegalitarians, liberals and conservatives, and so on.

In sum, taken together, the group- and individual-level controls serve an important function. In essence, these models allow us to see the effect of gender as women's status varies, while simultaneously controlling for other possible differences between men and women—and other group-level compositions—that might explain the patterns we see.[30] This approach thus allows us to home in on our core question—whether or not the presence of controls for factors that are correlated with gender weakens or otherwise changes the effects of gender in each experimental condition.

Figure 2 summarizes the results for the *Proportion Talk* dependent variable when various measures of political attitudes are included in the model. Points below the zero line indicate the presence of a gender gap that favors men, and points above represent a gender gap that favors women. Consistent with the results already shown in Figure 1, in the model without controls gender differences are smaller in settings where women's status is more equal to men's—unanimous rule with few women or majority rule with many women—and larger in places where women's status is lower—unanimous rule with many women (a setting that empowers the minority men) and, especially, majority rule with few women.

Most importantly, though, Figure 2 indicates that the presence of controls for individual-level and group-level preferences exerts little to no effect on the basic pattern of gender-status effects.[31] These controls include egalitarianism, liberalism, attitudes about the role of government, warmth of feeling toward the poor, preferences about principles of redistribution, and even the relationship between predeliberation individual preferences and the group's majority preference. In other words, the gender gap is profoundly affected by the experimental conditions, and this effect does not appear to be a function of political attitudes that are correlated with individual gender or gender composition. The latter

[28] Randomization tests confirm that those other factors are balanced across the conditions. Thus, the principle of randomization leads us to expect that results are not driven primarily by differences in the levels of those variables across the conditions.

[29] High levels of comfort is defined as scoring above the scale midpoint. In other variables, we define high scores as those that are above the sample median. In each case, consistent with our gender composition variable, which is a count of the number of women in the group, we count the number of group members possessing certain attitudes or characteristics. See the online supporting information for full question wording and details of variable construction.

[30] The logic of controlling for socioeconomic characteristics is similar. If women participate less than men not because of the status conferred by group factors such as gender composition or decision rule but rather because of their lower levels of education, income, or other characteristics, then controlling for those characteristics would reduce or eliminate the gender gap.

[31] One of the control variables we include in our models—liberalism—was collected *after* the deliberation occurred, but this, too, makes little difference in the dynamics we observe.

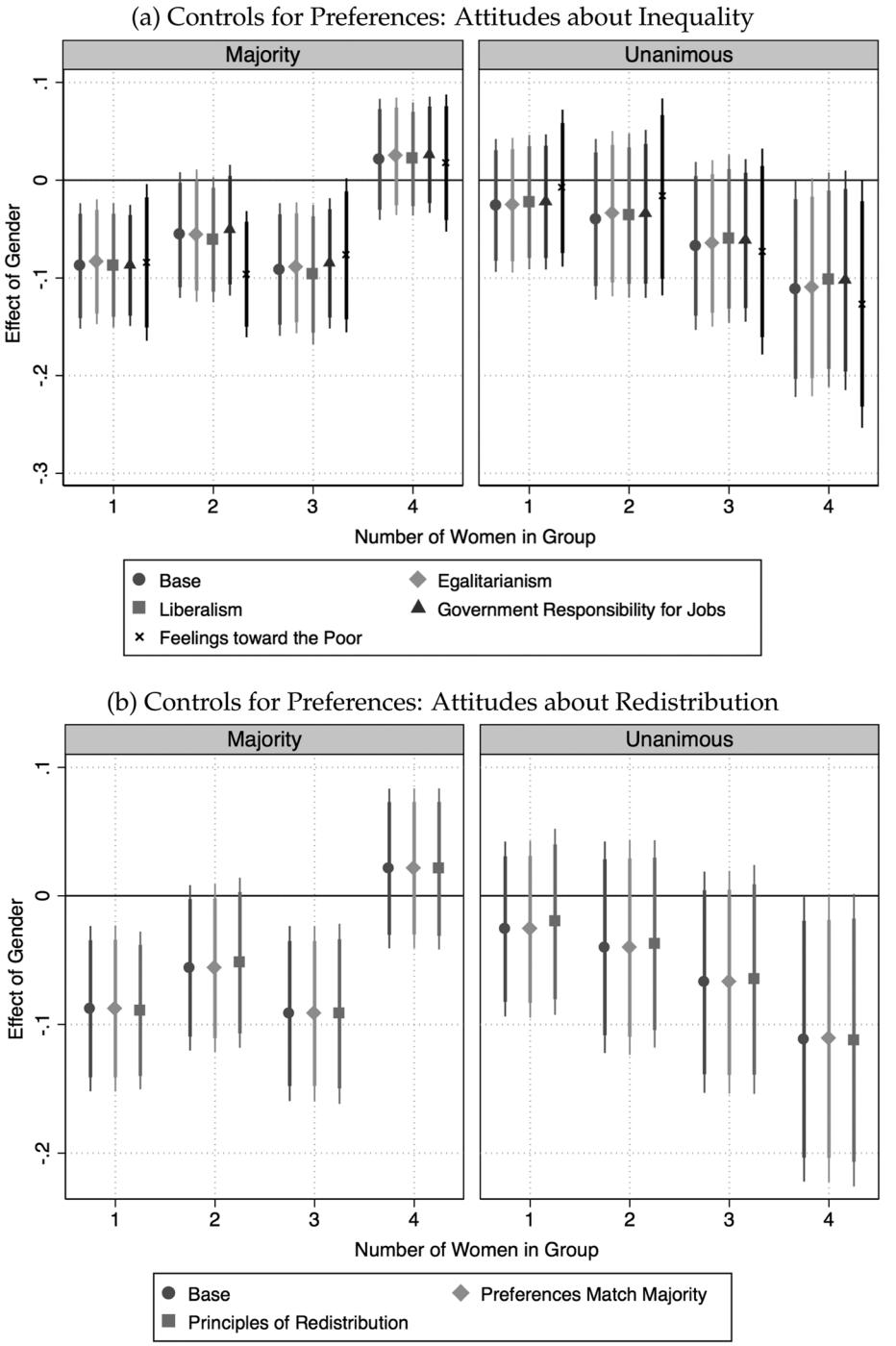

Figure 2. Effect of gender on proportion talk across experimental conditions, controlling for Gender Gap I. Predicted values from Table A6 and A7. The dependent variable is the subject's *Proportion Talk*, and models include controls for participants' attitudes about inequality and the redistribution of income. Point estimates represent the effect of gender on the dependent variable. Individual-level dependent variable with controls at the individual and group level. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

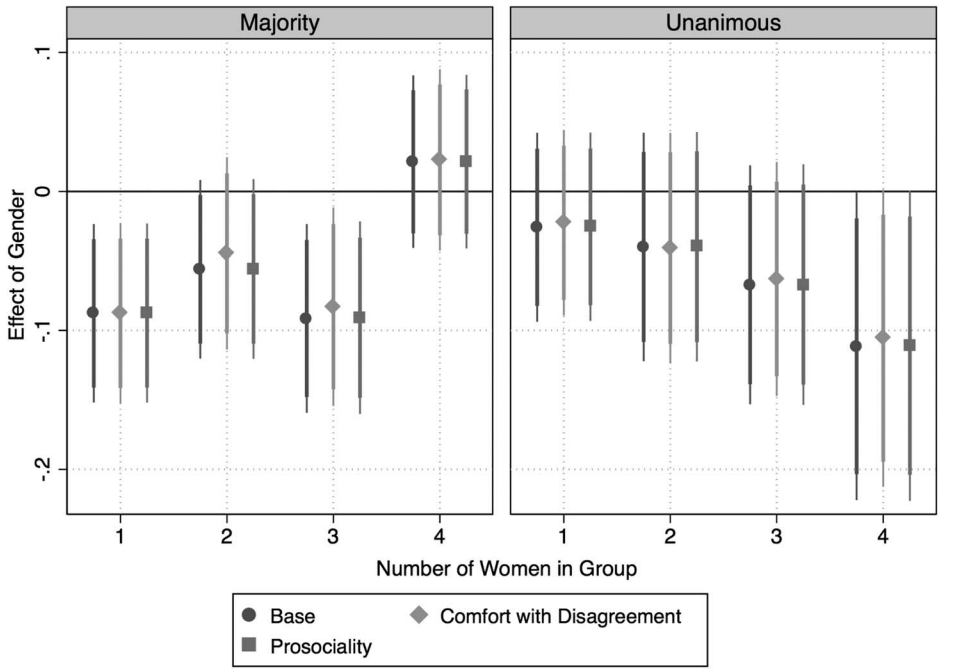

Figure 3. Effect of gender on proportion talk across experimental conditions, controlling for Gender Gap II. Predicted values from Table A8. The dependent variable is the subject's *Proportion Talk*, and the models include controls for measures of conflict aversion and prosociality. Point estimates represent the effect of gender on the dependent variable.Individual-level dependent variable with controls at the individual and group level. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

finding is important because it refutes the possibility that women fail to speak as much as men not because they have lower status but because they are being efficient—there is no need to speak if others also share their preferences. Controlling for individual opinions about redistribution and the relationship between one's private opinion and the prediscussion private preferences of the group, or the group-level distribution of preferences, causes little to no change in the basic pattern of results.

In Figure 3, we repeat this exercise, replacing the preference-based alternative explanation of Gender Gap I with the conflict-based alternative explanations connected to Gender Gap II: prosociality and comfort with disagreement. The figure shows some slight flattening of the gender gap in models that control for conflict aversion, but the effect is small. It would be difficult to make the case that comfort with disagreement fundamentally alters the pattern. Again, the addition of both individual- and group-level controls fails to explain away the effect of women's status, as indexed by the experimental conditions, on women's patterns of participation in group discussion.

Figure 4 shows the results when we replace the conflict-based explanations of Gender Gap II with the power-based explanations of Gender Gap III. The only control that comes close to muting the effects of the conditions on the gender gap is related to the power and authority explanation of Gender Gap III: predeliberation confidence. In Figure 4, we see that in groups with two or three women, the estimated gender difference moves noticeably toward the zero line when confidence is included in the model (the light gray diamond). Though the change is not dramatic, it is present in both the unanimous and majority rule conditions. Similarly, possible evidence that controlling for

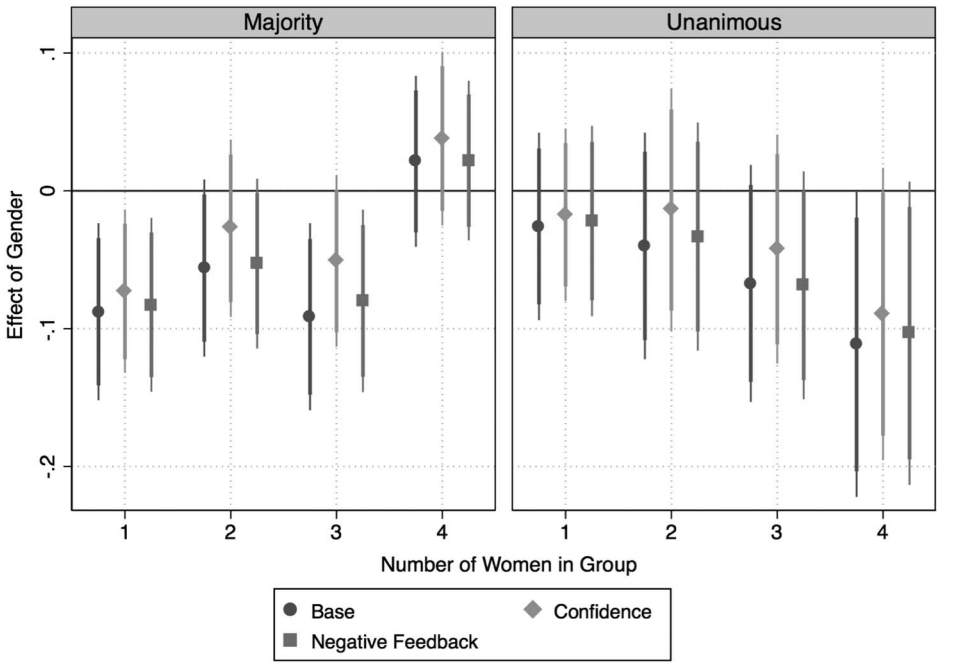

Figure 4. Effect of gender on proportion talk across experimental conditions, controlling for Gender Gap III. Predicted values from Table A9. The dependent variable is the subject's *Proportion Talk*, and the models include controls for measures of confidence and negative feedback. Point estimates represent the effect of gender on the dependent variable.Individual-level dependent variable with controls at the individual and group level. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

confidence mutes the effect of gender can be found when the dependent variable is influence, not talk time (not shown), though the effect for that dependent variable is concentrated in the majority-rule condition. Moreover, the effect of confidence in both the talk time and influence votes models is large and statistically significant (see Tables A5 and A7 in the supporting information). This is only suggestive evidence, not conclusive, because the change in the effect of the conditions is modest; but it is an indication that the power explanation is worth pursuing further. The one thing that may weaken the effect of treatment of status—confidence—is itself a measure of internalized socialization into a subordinate position and thus related to a gender gap in power.[32]

The results in Figures 2–4 are essentially unaffected when we replaced these models with models that interact individual gender with the other group-level indicators, such as the number of egalitarians or the number of group members with high levels of confidence (see Figure 2 in the supporting information). If anything, including these interactions in the model highlights the extent to which confidence is related to women's participation in the group. Overall, though, these results allow us to conclude that the differing effect of gender across the experimental conditions is not a function of the interaction between gender and the other group-level controls.

As a final check, we also analyzed models with controls for demographic characteristics including age, income, and education, but these, too, have little to no effect (see Figure A3 and Table A11 in the online supporting information). The difference between men and women in each of the experimental conditions cannot be explained away by these factors either.

[32] The measure of negative feedback, however, does not affect the results; the experimental effects are largely impervious to the addition of this control.

Other Indicators of Changing Status

If, as we hypothesize and as the evidence for the gender-gap talk time appears to indicate, the effect of the experimental conditions is to change the status of women and men in the group, then this effect on other actions that reflect power and authority should also be robust to the inclusion of controls. To investigate that possibility, we focus on women's perceived influence in the eyes of others, the balance of positive and negative interruptions women receive from men, the proportion of speaking turns that receive positive interruptions (see also Mendelberg et al., 2014), and the extent to which women argue in favor of principles of redistribution they did not privately prefer prior to the group's discussion. In Figure 5, we present representative results for these dependent variables, this time showing only one or two indicators of alternative sources of the gender gap for the sake of presentational parsimony. We use egalitarianism and support for liberal principles of redistribution as measures of the preferences gap; comfort with disagreement for the conflict aversion gap; and confidence for the power gap. We follow the same models as we did to construct Figures 2–4, in each case estimating the effect of gender in the baseline model and in presence of individual- and group-level controls for the attitudes and predispositions that are correlated with gender.

Figure 5 shows that in every case, the gender gap is affected by the experimental conditions in ways that are consistent with the power explanation: the basic interaction of gender composition and decision rule affects women's perceived influence in the eyes of others (Panel A of Figure 5); the balance of positive and negative interruptions (Panel B), the proportion of speaking turns that receive positive interruptions (Panel C), and the extent to which women argue in favor of principles of redistribution they did not prefer prior to the group discussion (Panel D). For each outcome, the pattern of women's behavior and others' behaviors toward them differ across the group's gender composition and across the decision rule, and in each model, the inclusion of controls makes little difference in the result.

Take, for example, women's perceived influence ratings by fellow group members, as seen in Panel A of Figure 5. In groups where women's status is lowest—groups with few women that decide by majority rule—the gender gap in influence is severe, and women receive far fewer influence votes than men. As we saw in Figure 1, in groups with only one woman, women receive essentially no influence votes from their fellow deliberators (see also Karpowitz & Mendelberg, 2014). The gender gap in women's influence shrinks, however, as the number of women increases, and even favors women slightly in the condition where women's status is greatest—majority rule with many women. Under unanimity, as the number of women in the group increases, women's influence falls slightly, relative to men's, and the gap is largest in groups where one man is surrounded by many women.

Women's changing status as conferred by gender composition and decision rule can also be seen in the interruptions results (Panels B and C of Figure 5). Under majority rule, for example, in groups with few women, women receive more negative interruptions than men, and that result is impervious to the controls. But in groups with a majority of women, that gender is indistinguishable from zero, as it is in most groups assigned to unanimous rule.[33] Controls make little to no difference in these patterns.

With respect to the percentage of speaking terms that receive positive interruptions from either men or women, the results are consistent with our expectations. Women receive less positive reinforcement—signals of affirmation, support, and active listening—than men in majority-rule groups with few women, but that gender gap evaporates in groups with more women. Under unanimity,

[33] Because groups with four women include only one man, we cannot estimate a gender gap in negative interrupting behavior in those groups. Also, in groups with three women, the gender gap favors women, a result that is not predicted by our theory.

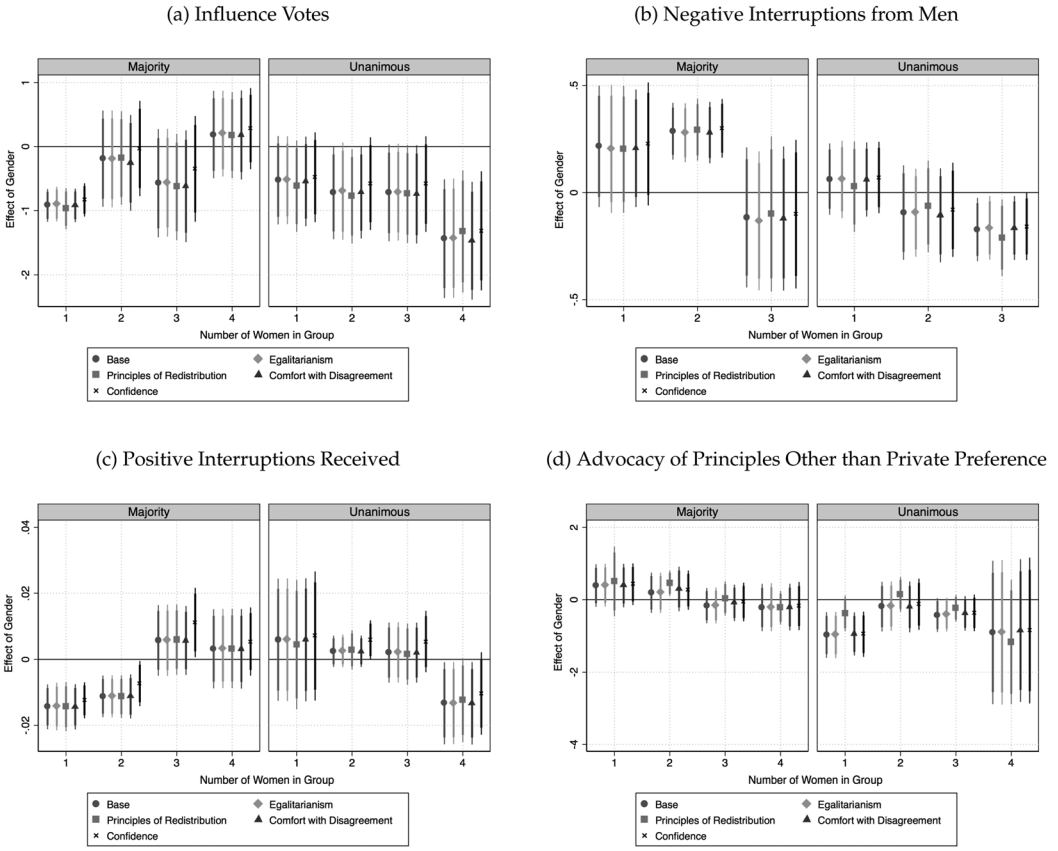

Figure 5. Effect of experimental conditions on gender gap in other indicators of status, with controls. Predicted values from Tables A12, A13, A14, and A15. Dependent variables are the subject's influence votes received, negative interruptions received from men, positive interruptions received, and an indicator of whether the subject advocated principles other than his or her privately expressed preferences. Models include controls for egalitarianism, preferences about principles of redistribution, comfort with disagreement, and confidence. Point estimates represent the effect of gender on the dependent variable. Individual-level dependent variable with controls at the individual and group level. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

women receive at least as many positive interruptions as men, except in groups with four women and one man—the same groups where the gender gap in talk time is more pronounced as a result of the lone male taking up much more than his share of the conversation. Thus, women's changing status is evident not only in women's behavior but also in the behavior of other group members toward them. Most importantly, none of the controls appear to make much difference in these patterns, with the possible exception of confidence, where controls appear to affect the gender gap slightly in several different conditions.

Finally, women are slightly more likely than men (but only slightly and the effect is not always statistically distinguishable from zero) to express support for principles of redistribution other than what they privately preferred prior to the group discussion in groups where women's status is lower, at least under majority rule. Under unanimity, women are equally or less likely than men to express support for principles they did not privately prefer no matter what the gender composition of the group.

The important point here is that once again, the inclusion of controls that index the preferences or conflict explanations for the gender gap make little to no difference in the basic pattern of findings. In

other words, women's tendency to be seen as influential, their experiences of interruptions, and their reluctance to articulate their own preference is not merely a function of their political attitudes or their comfort with disagreement. We find some suggestive evidence that predeliberation confidence helps to explain some of the gender gap, but none of the controls can fully explain away the gender gaps that wax and wane across the experimental conditions.

Group-Level Analysis of Gender Gaps

As a final test, we move to group-level analysis exclusively. This approach allows us to model the gender gap in each dependent variable as a function of both the experimental conditions and group-level measures of each of the three gender gaps we have theorized as potential explanations: preferences, conflict aversion, and authority. In this sense, it is the most direct test of how each of the three gaps affects the gender disparities in our experimental groups and whether accounting for these gaps explains away the effects of the experimental treatments.

Again, we begin with our measure of speech participation, regressing the group's gender gap in talk time on the experimental conditions and on controls for group-level gender gaps in attitudes, conflict aversion, and confidence.[34] We generate the group-level gender gap in the control variables by subtracting the average score among women in the group from the average for men. For the egalitarianism measure, we take the absolute value of the difference, which allows for a direct test of whether the gender gap is a result of efficiency: women speaking less than men because they share the political opinions of men. Table 2 shows the results. First, the base model replicates the familiar interaction of decision rule and an indicator of the number of women in the group.[35] Under majority rule, the gender gap is largest in groups with few women and grows smaller as the number of women increases; under unanimity, the gender gap is largest in groups with many women. More importantly, while the estimated effect of the gender gap in egalitarianism is in the same direction as the efficiency hypothesis would predict—the gender gap is smaller when the opinions of men and women diverge and larger when their opinions are similar—it falls short of standard levels of statistical significance ($p = 0.26$, two-tailed).[36] And most important for our purposes, the inclusion of the control for the gender gap in political attitudes makes no difference to the effect of the experimental conditions. If anything, it strengthens the effect slightly.

Model 3 of Table 2 repeats this setup but replaces the preference controls with conflict aversion. It reveals a marginally significant effect for conflict aversion, with the gender gap in participation increasing when men are more comfortable with disagreement than women. Even so, the core effect of the experimental conditions is also robust to this control. The effect is perhaps slightly smaller than in the baseline model, but the essential dynamic remains.

The largest and most statistically robust effect comes when confidence is included in the model. As the gender gap in confidence grows larger, so too does the gender gap in talk time. Thus, the gender gap in talk time is at least partially explained by the fact that in some groups, men come to the discussion with higher levels of confidence than women. In addition, when all three controls are included in the same model (see Model 5 of Table 2), only the gender gap in confidence remains large and statistically significant ($p = 0.05$, two-tailed). Again, though, the effect of the experimental conditions remains significant, even with the inclusion of all controls. As we saw in the previous models, all of these results are consistent with an explanation that focuses on power and authority.

[34] The gender gap in talk time is defined as men's group-level average *Proportion Talk* minus women's group-level average *Proportion Talk*.

[35] We use a measure of the number of women in the group instead of dummy variables for each gender-composition condition in order to make the interaction between gender composition and decision rule easy to identify.

[36] There are also no statistically significant effects if the gap in preferences is operationalized as the simple difference between men's and women's average levels of egalitarianism, not the absolute value of the difference.

Table 2. Determinants of the Gender Gap in Proportion Talk, Group-Level Data

	(1) Base	(2) Egalitarian	(3) Conflict Aversion	(4) Confidence	(5) All
Majority Rule	0.174**	0.181**	0.164**	0.152**	0.158**
	(0.078)	(0.078)	(0.076)	(0.074)	(0.075)
Number of Women in Group	0.028	0.024	0.025	0.022	0.017
	(0.019)	(0.020)	(0.019)	(0.019)	(0.019)
Majority x Number of Women	−0.069**	−0.070**	−0.067**	−0.064**	−0.064**
	(0.028)	(0.028)	(0.028)	(0.027)	(0.027)
Gap in Egalitarianism (absolute value)		−0.198			−0.185
		(0.174)			(0.167)
Gap in Comfort with Disagreement			0.115*		0.069
			(0.065)		(0.068)
Gap in Confidence				0.249**	0.203*
				(0.095)	(0.103)
Constant	−0.002	0.037	0.006	−0.010	0.033
	(0.056)	(0.065)	(0.055)	(0.053)	(0.063)
Observations	64	64	64	64	64
R-squared	0.144	0.163	0.189	0.236	0.263
Control for Experimental Location	Yes	Yes	Yes	Yes	Yes
Control for Outlier	Yes	Yes	Yes	Yes	Yes

Note. Dependent variable is the group's gender gap in Proportion Talk. Cell entries are OLS regression coefficients from models that include a control for experimental location and outlier group (not shown); standard errors in parentheses. ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$.

Taking all of these results into account, we conclude that the effects of gender on patterns of speech participation cannot be fully explained by any of the control variables we examined. Instead, the difference between men and women is shaped by the experimental conditions, which vary the status of men and women in decision-making groups. The variable whose inclusion appears to dampen the effects of status on talk time the most—confidence—is itself an indicator of expected influence and authority, though even there, the effects of group composition and decision rule persist. When it comes to women's patterns of speech participation, the experimentally manipulated group-level conditions, which alter the relative status of women and men, are driving our results.

We find similar results for the other key dependent variables (see Tables A16–A19 in the online supplementary information). With the lower statistical power of group-level data, the interaction of decision rule and gender composition is most statistically robust for the measures of influence and positive interruptions. Nonetheless, the inclusion of controls for the gender gaps in egalitarianism, comfort with disagreement, or confidence never fundamentally change the effects of the experimental conditions on any of the dependent variables. For the gap in influence votes, though not for the other variables, the gender gap in confidence is again independently important. Consistent with our previous work (Karpowitz & Mendelberg, 2014; Karpowitz et al., 2012), the gender gap in talk time swamps the effect of the experimental conditions on the gap in influence, suggesting that talk time mediates perceived influence in the eyes of other group members. At the group level, we find no other indications that gender gaps in preferences, conflict aversion, or confidence substantially alter the effects of decision rule, gender composition, or the interaction between the two.

All of this evidence speaks in favor of the power model, not the preferences or the conflict aversion models of the gender gap. The variation in women's participation, the content of their discussion, or even the extent to which others recognize their influence is not explained away by controlling for factors like women's political attitudes or their other characteristics. Instead, the results yield substantial clues as to how the group-level conditions construct power and authority. Specifically, the results show how the conditions of group discussion affect the power dynamics

within the group. Low status in the group leads to lower levels of participation—women speak up less often, accounting for less of the conversation than their already low proportion of the group's members. They also speak differently, becoming slightly more likely to speak up in favor of principles of redistribution they did not privately prefer prior to the deliberation. In groups where women's status is higher, women close the gap in talk time, they are more likely to be seen as influential by other members of the group, and their improved status is confirmed by more frequent positive affirmations from other members of the group.

The Moderated Effect of Gender

Our analysis so far has relied on the inclusion of controls in the model to see if they explain away the gender gap in speech participation or other indicators of changing status, but another way to test preference or conflict-aversion models against power models is to ask whether the effects of gender depend on the other characteristics of the participants. This approach involves testing whether the gender gap differs by the other characteristics of the participants. Up to now, we asked whether gender moved the *level* of associated variables and thereby explained the gender gap. Now we ask if gender moves the *effect* of the same associated variables, thereby explaining the gender gap. Put differently, we want to pinpoint how and for whom gender matters within each condition.

Before presenting the results, a methodological caveat is in order. Unlike our experimental conditions, for which we can make causal claims about the effects of status and power, the interaction between gender and predeliberation attitudes or attributes that index our three gender gaps is, essentially, an observational result. In that sense, the evidence that follows is only suggestive: Even if we find meaningful interactions, we cannot definitively say that the control variables *caused* women's behavior. For that, further experimentation in which each moderator—egalitarian attitudes, confidence, or comfort with disagreement—is primed or otherwise experimentally manipulated would be needed. Still, exploring these interactions can yield clues as to where further experimentation might be fruitful.

Figure 6 presents the effects of gender on talk time as moderated by egalitarianism, comfort with disagreement, and predeliberation confidence. To produce these effects, we followed the same analytical strategy as before, regressing *Proportion Talk* on the triple interaction between gender, decision rule, and gender composition, but this time we run the models separately for participants who score high and low on our measures of egalitarianism, comfort with disagreement and confidence.[37] We then assess the effect of gender for the high and low scorers within each experimental condition. For example, Panel A shows the effect of being a woman on talk time as moderated by egalitarianism. As in previous figures, values below the zero line represent gender gaps that favor men, while those above zero are points where women speak more than men.

We showed earlier that women in our sample were slightly more likely than men to endorse egalitarianism values, and so more women than men will be on the low end of the variable's distribution, and more men than women will be at the high end of the distribution. Similar differences exist for conflict aversion and confidence. Nevertheless, in this analysis, high levels of egalitarianism, comfort with disagreement, and confidence are operationalized in the same way for both men and women. In other words, we are comparing men and women with similar levels of each dependent variable, not defining high and low within each gender.

[37] High and low levels of each variable are operationalized the same way we did in earlier models: high levels of comfort are defined as scoring above the scale midpoint. For egalitarianism and confidence, we define high levels as those that are above the sample median. Alternative analytical strategies, such as regressing the dependent variable on the triple interaction between gender, gender composition, and individual-level scores for egalitarianism, comfort with disagreement, and confidence (separately by decision rule) produce very similar results.

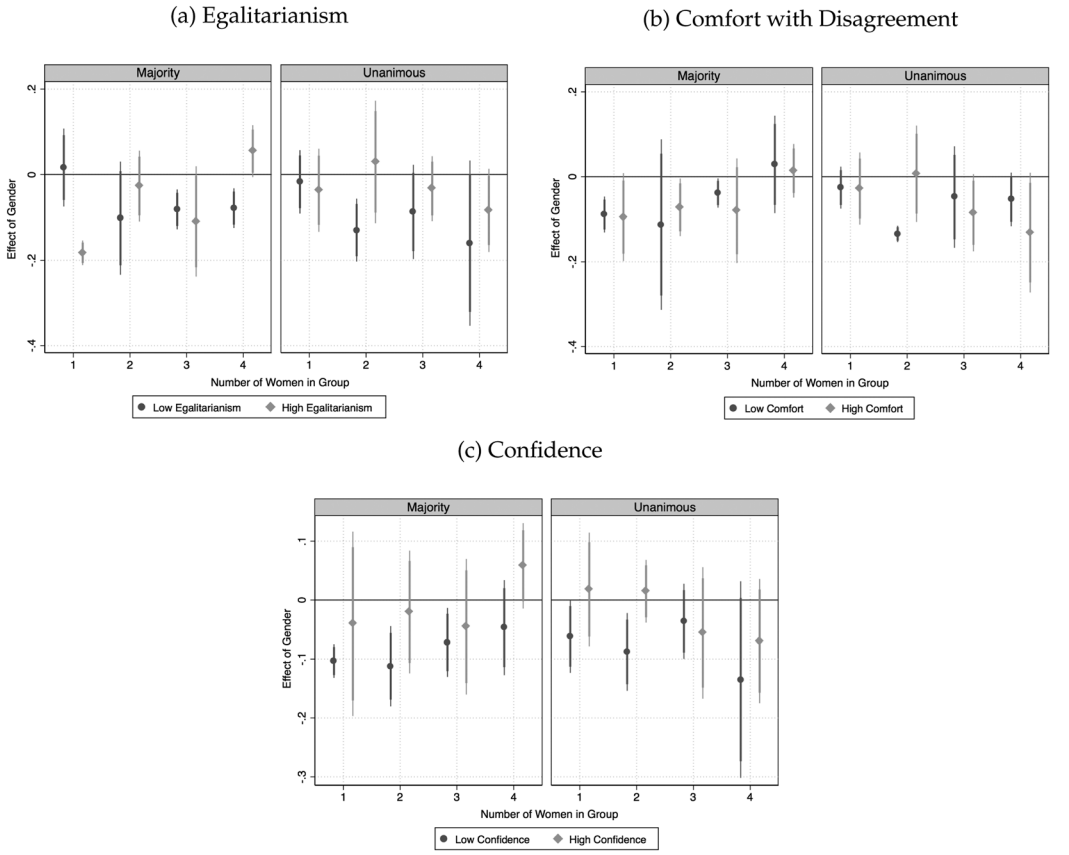

Figure 6. The moderated effects of gender. Predicted values from Table A20. Individual-level dependent variable with controls at the individual and group level. Point estimates represent the effect of gender at high and low levels of the moderator variable. Spikes represent 90% confidence intervals, and bolded spikes represent 83% confidence intervals.

Panel A reveals that in majority-rule groups where women's status is lowest, the most egalitarian women speak far less than their male counterparts with similar levels of egalitarianism. By contrast, there is no statistically significant gender difference in the speaking patterns of the least egalitarian participants in those groups. In other words, in low-status settings, the effect of gender leads women with more stereotypically female attitudes (in this case, high levels of egalitarianism) to drop out of the conversation more often than their male counterparts.

In majority-rule groups with four women, however, highly egalitarian women speak more than egalitarian men, while there is no statistically significance difference in the speaking patterns of men and women with the least egalitarian attitudes. In groups with two or three women, the pattern is less clear, and under unanimity rule, there is no statistically significant difference in the gender gaps between those with the most and least egalitarian attitudes in any gender composition condition. Thus, the evidence in Panel A, while not conclusive, suggests that under majority rule, a gender gap that disadvantages women is found among respondents with the most egalitarian values when women are disempowered, but when women's status improves, the most egalitarian women talk more than their egalitarian male counterparts.

In Panel B, the gender gap in talk time does not appear to be moderated by comfort with disagreement. That is, the effect of gender is roughly similar for respondents at both high and low levels of comfort with disagreement. The only exception to this pattern occurs in unanimous groups with

two women, where the gender gap is greater among more conflict averse participants. Other than this result, however, the gender gap in speaking time does not differ based on the respondent's comfort with political argumentation.

Finally, the strongest evidence is again found with respect to confidence. Under majority rule, the effect of gender is large and statistically significant among low-confidence participants (but not those with the greatest confidence) in every experimental condition except the one where women's status is greatest: groups with four women. There, the effect of gender among low-confidence participants is indistinguishable from zero, and high-confidence women appear to speak even more than high-confidence men (though the confidence interval also overlaps zero). In none of the conditions is the effect of gender among low-confidence participants statistically distinguishable from the effect among more confident participants, meaning that we cannot be sure that gender works *differently* based on levels of confidence. In that sense, our finding is only suggestive, not conclusive. Nonetheless, we can conclude that under majority rule, the gender gap in talk time is concentrated among respondents with low levels of confidence, while the effect of gender is never statistically significant among more confident participants. When women do not comprise a supermajority of the group, it is low-confidence women who are dropping out of the conversation, relative to men with similar concerns about their ability to participate effectively. Put more simply, in every majority-rule case but the one in which women's power is clearest due to numbers, low-confidence women are substantially less likely to participate at rates commensurate to low-confidence men.

Under unanimity, we again find a statistically significant gender gap among low-confidence participants in groups with one or two women, though the estimated effect of gender is somewhat smaller than corresponding groups under majority rule. In addition, the estimated effect of gender among high-confidence participants in unanimous groups with one or two women actually favors women (though again, the confidence intervals overlap zero). Thus, while a gender gap persists among the least-confident participants in the study even in the presence of the increased status provided by the decision rule, hints about the effect of decision rule on both high- and low-confidence participants can be seen by comparing the estimated gender gaps under unanimity to the corresponding experimental conditions under majority rule.

We also explored whether the effect of gender differed by confidence or other attributes for influence votes, patterns of interruptions, or the content of discussion, but we found little evidence that preferences, conflict aversion, or confidence consistently moderated the effect of gender across the conditions for those dependent variables.[38] Still, with respect to talk time, it is clear that part of what accounts for women's lower levels of talk when their status is low is that the women who came to the discussion suspicious of their own ability to participate respond most powerfully to the status cue. While low-confidence women nearly always speak less than high-confidence women, their participation is especially low when the group setting makes their authority deficits especially salient. Given these suggestive results, more fully exploring the relationship between status and confidence by experimentally manipulating both of those variables would be a productive next step.

Conclusion

At the outset, we asked three questions about the differences between the participation and influence of men and women in group settings. First, does gender affect political behavior because men and women have different preferences and attitudes about government action, such as political ideology, egalitarian values, or preferences over redistribution? Or does it, instead, emerge from women's desire for more collegial and collaborative, as opposed to competitive and conflictual, forms of

[38] Results available from the authors.

collective decision-making? Alternatively, do women and men behave differently because they are socialized to have different levels of authority, and women thus occupy a lower status in a group where they interact with men?

All three perspectives emerge from a general theory of gendered socialization. The gender gap in preferences, conflict, and authoritative power is rooted at the start in society's hard and fast classification of individuals into the categories of female or male. Each category gets assigned a different set of expected traits, one set emphasizing service, the other agency.

Yet there are important differences between these gaps. The first gap emphasizes differences in preferences and priorities that may emerge from occupational experience inside or outside the home, or incentives and economic interests. The second gap has to do with patterns of interpersonal communication and expectations surrounding conflict and the search for community. The third and final gap emphasizes differences in the proclivity to behave assertively when communicating with others, especially others of the opposite sex. As Sapiro (2003) explains it, a pervasive norm in many societies is that "women cannot lead men" (p. 603).

We tested these three perspectives on the gender gap against each other by examining whether the effect of being a man or a woman on an individual's political behavior varies with women's status. We constructed that status by the combination of rule and numbers. We then showed that women's status substantially affects women's level of assertive participation and perceived influence, the affirmation or negativity they received from others in the group in the form of interruptions, and their tendency to advocate ideas they did not privately endorse. We found that gender matters when the interaction of rule and numbers signals that women's status is low, and its effects evaporate as women's status increases. These results help shed light on the mystery of the gender gap. The gender gap may be inconsistent in part because it is highly responsive to circumstances. Those circumstances that signal women's equal legitimate power can shrink the gap to nothing.

Most importantly for present purposes, the experimental results are impervious to controls for political preferences and conflict aversion. Controlling on attitudes and preferences about which men and women differ, including egalitarianism, liberalism, feeling toward the poor, views about the proper goal of government, or even the specific principles of redistribution that were at the heart of the discussion never erodes the effect of individual gender as it interacts with group-level status. In other words, neither the somewhat more liberal political attitudes of women, nor the distribution of such attitudes in the group, can explain the changing effects of gender across the experimental conditions. The same is true of controls for conflict aversion or a sense of fellow feeling for others (and of controls for demographics).

The only control that has even a modest effect on the overall pattern of results is itself related to status and authority: women's confidence in their ability to participate successfully in discussions about politics. In addition, when confidence is tested as a statistical moderator of the effect of gender, we find that it is low-confidence women who tend to participate far less than comparable men, while differences between high-confidence men and women are small to nonexistent. In other words, we have some evidence that the effect of women's status in group settings operates through their tendency to be regarded—and to regard themselves—as less capable, especially in tasks relating to politics. All of these results are consistent with a gendered authority perspective.

Earlier, we noted that experimenting with gender was not an obvious way to go. We have shown, though, that our attempts to experimentally vary women's status by changing the balance of men and women in the group and the rules by which the group makes decisions can have profound effects on the behavior of men and women in discussion settings. These results are not altered by the inclusion of controls at the individual and group level for attitudes and characteristics that are themselves correlated with gender. But our results also suggest the need for considerable additional experimentation. Despite the fact that our best efforts to pursue alternative explanations through experimental controls

did not explain away our findings, the best way to fully test whether preferences, conflict aversion, or even confidence is driving our results is to exercise further experimental control over these variables. For example, experimenters might randomize interventions that boost women's confidence, with the expectation that it would shrink or eliminate the gender gap, especially where women's status is low relative to men's.

We began this article by noting the importance of power to an understanding of political psychology and the importance of gender for understanding power. We attempted to show that a framework that focuses on gender requires understanding power and thus ends up speaking back to investigations of power. Future research could productively move the field forward by further investigating—especially using experimental methods—the social, psychological, and political factors at the intersection of gender and power.

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's website:

Appendix A

A.1 Variable Construction

A.1.1 Predeliberation Measures

A.1.2 Postdeliberation Measures