Women's authority in political decision-making groups

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A R T I C L E   I N F O

A B S T R A C T

Formal decision-making groups are ubiquitous, and they make decisions that govern every aspect of life, yet women are vastly underrepresented in them. How effective are women in these groups, where their numbers still lag far behind men's? We address this longstanding question, focusing on detailed measures of women's influence in natural and controlled settings. The answers shed light on related questions as well: How high do the numbers have to rise before women exercise equal influence? Do women need a different critical mass in different types of settings? We also address a newer question: how do other features of the group help or hinder women's equal leadership? Can they ameliorate the negative impact of low numbers? Women's relative number matters to women's ability to exercise leadership in small groups, but the procedures that groups use also matter, and condition the effects of numbers.

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1. Introduction

In the immediate aftermath of President Barack Obama's re-election, in January 2013, the *New York Times* ran a front-page story critical of the president's "all-male inner circle" and featuring a photo of the president surrounded entirely by male advisors (*New York Times* 1/2013). The story generated a flurry of negative coverage for the Obama administration. Shortly after, the White House provided a different photo, showing the president surrounded by a substantial number of women advisors. The outcry over women's absence and the quick response to demonstrate sensitivity to women's inclusion are telling. Clearly, many now perceive women's presence in these and other groups of decision-makers as an important characteristic of a legitimate political system – indeed, as a necessary requirement of democracy.

A global movement to put women in official positions has contributed to these norms of democratic representation for women. The UN and other international governance organizations have formally issued calls for equal female representation in decision-making bodies, and the European Union and many of its member countries have legislated minimum quotas for women on various government and corporate boards (Baldez, 2004; Beckwith, 2003; Dahlerup, 2006, 2012; Franceschet, Krook, & Piscopo, 2012a; Krook, 2009; Norris, 2006; Pande & Ford, 2011).

While these norms have come hand in hand with growing numbers of women in decision-making groups, the numbers still lag far behind men's. For example, the US Congress has ten times the number of women that it had in the 1960s, but women still compose only 20% of US Senators and 19% of US Representatives (Center for American Women and Politics, 2015b). At the subnational level, women make up only 24% of US state legislators – a significant increase over the 5% average in 1971 or the 15% average in 1985, but still well below parity. In only two states – Colorado and Vermont – do women account for more

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than 40% of state legislators, and in fully half the states, women occupy less than 20% of legislative seats (Center for American Women and Politics, 2015a). These percentages are similar in US city and county councils (Crowder-Meyer, 2010). And world-wide, the situation is not much different: the average is only 20–25% (Karpowitz & Mendelberg, 2014, chap. 1).[1]

What difference do these percentages make in decision-making groups? How high do the numbers have to rise before we see equal influence? Can women exercise influence equally with men despite low numbers? And more importantly for our purposes, how do other features of the group or social context regulate the impact of numbers on women's ability to exercise leadership, influence, and authority?

We argue that women can exercise and build influence through at least two channels: equal participation in the discussion and experiencing equal affirmation while speaking. The more that women engage in these behaviors, the more they influence others and the more women's influence cumulates to authority, which is perhaps the core characteristic of leadership. Authority is the expectation of influence, and the more often women instantiate influence, the more they build authority.

Additionally, our argument is that women's influence can shape group dynamics and outcomes. Women can participate and influence equally with men, and when they do, they also tend to articulate some views that differ from men's views. Groups where women exercise equal influence do tend to make different decisions from groups where women do not exercise such influence. And groups in which women participate actively, advocate for their distinctive perspectives, and help move the group's collective decision also have effects that spill over beyond the immediate discussion at hand: women in these groups build their store of authority. Influence thus begets leadership.

However, the bad news is that the mere presence of women does not consistently lead to these felicitous outcomes. Just because women are at the table does not mean they exercise their voice or that they are heard. Specifically, the bad news consists of two parts. First, in the type of setting common in politics, where dynamics are adversarial and women are few, women are often far less influential. Second, when women are many, they do not always carry equal influence with men in the group (nor with scarce men in other groups).

But the good news is that in large part, this gender inequality can be corrected under the right discussion rules and procedural norms. This is what institutional arrangements can do for equality – they can affect how people interact and thus how much voice and influence women have. These rules can help women exercise voice and influence, which builds their authority and allows them to exercise leadership down the line. All this matters for the very nature of democratic decision-making, because when women are not full leaders, the discussion and ultimately the decision fail to represent the distinctive priorities of half the world's population.

This argument applies not only to government officials, but also to any formal decision-making group. Many people take part in meetings where individuals gather to make collective decisions (Karpowitz, 2006). In fact, the meeting is a backbone not only of democracy, but of everyday life.[2] Meetings are a key way in which people interact and make decisions. The role that women play in meetings matters, therefore, for women's authority and leadership in society, writ large.

2. The literature on representation: Why does women's presence matter?

In conceptualizing women's influence in formal settings it is useful to rely on concepts developed in the literature on political representation (see, for example, Mansbridge, 1999; Pitkin, 1967). The first concept is *symbolic representation*, which refers to general respect, dignity, and authority. One important way that women's presence in formal decision-making matters is by shaping the perception that women are competent to make decisions, that women are well suited to exercise power. When women are under-represented in decision-making, that reinforces stereotypes of women as less capable, and less authoritative. These stereotypes affect not only people's impressions of women leaders, but also their views of women in general. If women don't participate in public affairs, then they will not be viewed as worthy of being listened to in other areas of life – settings such as marriage, the workplace, and voluntary associations such as clubs, committees, community boards, and so on. As Sapiro wrote, when women are not represented in government, women become "subjects" rather than "citizens" (1983). Women's full participation and representation in decision-making affects the level of basic human dignity and respect accorded to women as a social category. Thus, a dearth of women in leadership matters because it undermines women's overall "symbolic representation" in society – the perception that women deserve equal authority and equal status.

A second important concept is *substantive representation*. This type of influence is another reason why women's presence matters. Women and men tend to have some different priorities. Though gender roles have changed, women are still more involved than men in care-giving (Parker & Wang, 2013). As a result, women tend to place more weight on human needs and the needs of vulnerable populations – the populations that they are disproportionately expected to care for. If women are not fully present and fully represented in decision-making, then those priorities will not get a full hearing. Society expects and channels women from an early age to orient to the care of others, so it is no surprise that women tend to go into college majors and occupations that involve health, education, psychology, or social work. Despite strides toward gender diversity, many of these occupations are still

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[1] In only 26% of countries do women exceed 30% of the lower chamber of the national according to the Inter-Parliamentary Union (downloaded 8/14/15, http://www.ipu.org/wmn-e/classif.htm).The percentage of women on U.S. corporate boards has been stuck at around 19% for almost a decade (through 2014), while the percentage of female chief executives is even lower, at around 15%, according to figures by Catalyst (Catalyst, 2013; Dhir, 2015; Swanson, 2014).

[2] A fact noted long ago by the French observer Alexis de Tocqueville (2006, 249–250).

over 75% female. For example, 85% of bachelor's degrees in engineering are held by men; 77% of bachelor's degrees in education and 85% of degrees in health are held by women (Carnevale, Strohl, & Melton, 2011). According to the US Census, women are disproportionately in jobs that involve serving the needs of others, such as secretary, nurse, teacher, retail salesperson, waitress, maid, customer service, or child care worker (Day & Rosenthal, 2008, 4–5). And of course, women are still expected to take primary responsibility for the care of their own children.

We don't mean to exaggerate the differences between men and women, to essentialize gender differences and reify traditional stereotypes, or to imply any specific origin for them. Some fathers spend most of their time caring for their children and very little time earning income, and some mothers spend most of their time earning income and comparatively less time caring for their children. Still, the data do reveal a central tendency, an average difference, and this matters for the views women are likely to express when their authority is affirmed.

We have direct evidence on priorities from research by political scientist Melody Crowder-Meyer. She examined data collected by the National Election Studies, a nationally representative survey of American adults (Crowder-Meyer, 2007). She looked at a question that asks respondents to indicate what they view as the nation's most important problems. She found that women are about twice as likely as men to mention the needs of the poor and children. In fact, women are *more* likely to mention children than to mention immigration, taxes, outsourcing of jobs, or energy and gas prices. Strikingly, children rank *last* in men's stated priorities. Men and women do share important priorities, such as a strong economy, but they also diverge in their priorities on the issues that pull gender roles apart – caring for vulnerable populations versus finance.

This is only one way to measure priorities, but no matter how one measures them, the same pattern emerges. For example, we looked at results from a national survey by political scientists Nancy Burns, Kay Schlozman and Sid Verba, who surveyed a large number of people who have taken some form of action in politics, such as working with others to solve a community problem. They found that most women activists are active on issues of education and children. Most men activists are active on issues of taxes – even if they are fathers (Burns, Schlozman, & Verba, 2001). So most women who act do so to improve the lives of children; most men who act do so to reduce taxes. If people reveal their priorities by what they actually do, then the priorities of many women lie with the needs of children, while the priorities of many men lie with finances, at least when it comes to public affairs.

All this means that if women are not participating in the discussion, then there are fewer people at the table who prioritize the needs of vulnerable people. When women are not well represented, then the discussion will not fully reflect these priorities, and the decisions will follow suit.

In sum, women's full influence and representation in formal decision-making groups may matter in two ways: First, it can shape *symbolic* representation – when women are not fully present, women may not be viewed as fully competent, authoritative, and worthy of respect in all aspects of life. Second, women's presence can shape *substantive* representation. If women are not fully present and fully represented, then women's distinctive priorities may not be voiced, and those priorities may not shape the decisions of decision-making bodies.

3. Gender role theory and the consequences of women's low numbers

Why would women's low numbers in a decision-making group inhibit women's influence in the group's discussion and decision? Why would women need a high critical mass? One important answer to those questions is that women walk into the room with less authority. That assertion draws on general theories that locate gender as a source of social roles and expectations that distribute power, and, in some variations, overall worth in society (Carli, 1990; Eagly, 1987; Eagly & Wood, 2011; Glick & Fiske, 1996; Pratto & Walker, 2004; Ridgeway, 2001, 2009). Society socializes people to view power as a masculine trait and powerlessness as a feminine trait. Women may learn to conform to gender norms by incurring negative reinforcement when they seek influence. Through subtle and overt signals about appropriate norms, women tend to find it difficult to maintain social approval and exercise power simultaneously (Amanatullah & Morris, 2010; Butler & Geis, 1990; Carli, LaFleur, & Loeber, 1995; Eagly & Carli, 2007; Eagly, Makhijani, & Klonsky, 1992; Heilman, Block, & Martell, 1995; Heilman & Okimoto, 2007; Ridgeway, 1982; Rudman, 1998; Rudman & Glick, 2001).

The traces of that correlation of gender and norms about who is entitled to exercise power can be seen in politics. From a young age, women are much less likely than comparable men to consider running for elected office (Lawless & Fox, 2010). For example, Kanthak and Woon (2014) show that when asked to volunteer to represent a group, women are just as likely as men to step up; but when asked to run for election to represent a group, women are far less likely than men, even when their objective qualifications are better than men's. That is, women are reluctant to occupy a role that entails the overt declaration that one is seeking power in the group, but are comfortable engaging in the identical behavior as long as it is cast as volunteering to help the group. In addition, Preece and Stoddard (2015b) find that among a gender-balanced sample of highly engaged members of a political party, women were half as likely as men to respond to an invitation to attend a free candidate training seminar (see also Preece & Stoddard, 2015a). Similarly, when it comes to voters, men's political ambition was raised by the prospect of being recruited as a candidate, while women's self-reported ambition was unaffected. Women tend to volunteer to help but to avoid asserting their leadership, especially in competitive, political settings, because they are often reluctant to appear to violate gender roles by acting in an authoritative way (Karpowitz & Mendelberg, 2014, chap. 2).

In sum, gender affects the likelihood not only of standing for election to leadership positions, but more generally, the tendency to assert one's views during group decision-making, and thus the chances of being effectively heard.

4. Why might women's numbers matter?

A group's gender composition may be an important determinant of women's relative power. Kanter (1977a) argued that women's status equality depends heavily on their relative number, and there are some compelling demonstrations of women's empowerment as their relative number increases (Aries, 1996; Johnson & Schulman, 1989; Sackett, DuBois, & Noe, 1991, 265; Schmitt & Hill, 1977).

One reason may be that when there are many women, the group develops a norm of more inclusive, cooperative, intimate, and "nice" interaction (Dindia & Allen, 1992; Eagly & Carli, 2007, 124–130; Hannagan & Larimer, 2010; Maccoby, 1998; Miller, 1985; Smith-Lovin & Brody, 1989). In groups with many women, women may act out a norm of agreeableness, and this means that women are more likely to be affirmed (by female fellow members) for expressing their views.[3] Women may feel more comfortable speaking their minds when they are positively reinforced while doing so, and when they see other women positively reinforced. Similarly, the more women, the less often a woman will be negatively interrupted while speaking, and so, the lower the level of negative reinforcement for speaking one's mind (Karakowsky, McBey, & Miller, 2004). Men as well as women may be affected to the norm of agreeable interaction in groups with many women, and conversely, by the opposite norm in groups with few women.

A second reason that women's numbers may matter is that when there are many women, there are fewer people around who project competence and who therefor appear to women to be more qualified than they are. Women tend to under-estimate their abilities relative to objective indicators and relative to men's self-estimation (Beyer & Bowden, 1997; Bylsma & Major, 1992; Major, McFarlin, & Gagnon, 1984; Pajares, 2002; Wigfield, Eccles, & Pintrich, 1996). This confidence gap shows up in decisions to take roles of political leadership specifically (Fox & Lawless, 2011, 59–62). Lawless and Fox (2010) found that the most powerful predictor of the gender gap in deciding to run for elected office is self-confidence. These gaps play out in interaction in mixed-gender groups (Ritter & Yoder, 2004). For example, Wood and Karten (1986) showed that in group interactions, women are less likely than men to give opinions and make suggestions, and that this gap shrinks when women's confidence is boosted. Men walk in with more confidence in their abilities, and they are more likely than women to project it in their behavior during mixed-gender interactions. That is likely particularly true in domains considered masculine, such as formal power (Ridgeway & Smith-Lovin, 1999). Therefore, the more men, the more that the women present come to believe that by comparison with the majority, they lack a worthy contribution. In sum, the more women, the more those women might speak up and carry influence.

5. Women's influence in American political institutions

What is the state of women's numbers, influence, and authority in American political decision-making groups? Let us begin with a portrait of women in U.S. legislatures and other official decision-making bodies. The current, 114th U.S. Congress is a microcosm of the situation elsewhere. While women compose 19% of its members, only 5% of committee chairs in the House of Representatives are women.[4] In the Senate, the situation is not much better: only 10% of committee chairs are women, though women compose twice that number of Senators. In other words, women's ability to occupy formal positions of power does not easily follow from women's rising numbers in a decision-making group. This disparity is partly the result of partisan differences in women's representation: at both the state and national level, the gender gap in women's representation is much greater in the Republican Party than in the Democratic Party (Carroll & Sanbonmatsu, 2013; Pearson & Dancey, 2011b; Sanbonmatsu, 2002; Wolbrecht, 2000). So when Republicans hold power, as they do in the current Congress, an especially large gender disparity in leadership positions may be expected. Still, party is not the only factor. The last time the Democrats held the House of Representatives, Nancy Pelosi held the House speakership, but only 14% of the committee chairs were women, even though women made up nearly 22% of the Democratic caucus.[5]

Party differences aside, some research leads to the conclusion that women are less individually influential or talkative when they are in the numerical minority. This evidence fits the "critical mass" argument from Kanter's classic work (1977a, 1977b, 1977c). According to Kanter's model, the social status of an identity group within an organization is heavily dependent on its relative number. Social identity groups in a numerical minority experience extremely low status and negative stereotyping, which improves once the group reaches a critical mass, and equalizes once full balance comes about.

One type of evidence consistent with this explanation is found in women's experiences during legislative committee hearings. For example, Winsky Mattei (1998) conducted an in-depth study of witnesses testifying before the all-male Senate Judiciary Committee during David Souter's Supreme Court confirmation hearings. She found that compared to male witnesses, women

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[3] In addition, Hannagan and Larimer (2010) argue that group composition cues gendered process strategies within groups. Specifically, they use evidence from a lab experiment to show that groups dominated by women tend to pursue median outcomes, while groups dominated by men do not.

[4] Until the 1970s, congressional committee chairs were determined by seniority. More recently, however, committee chairs are chosen by majority party leaders within each chamber. In the 114th Congress, for example, committee leaders in the House were chosen by vote of the House GOP Steering Committee, consisting of the party's elected leaders and other important GOP representatives. Their choices were then approved by the full GOP conference: http://thehill.com/homenews/house/224621-house-gop-picks-all-male-slate-of-new-committee-chairs. After the minority party chooses its committee leaders (called ranking members), the full House approves the party recommendations. The process is roughly similar in the Senate: http://www.senate.gov/artandhistory/history/common/briefing/Committees.htm#3.

[5] In the 111th Congress, 17% of House members were women (56 Democrats and 17 Republicans): http://www.cawp.rutgers.edu/fast_facts/levels_of_office/documents/house10.pdf.

were disadvantaged in speaking time, experienced more hostile interruptions, were questioned more critically, and had more difficulty interrupting senators to take the floor. Similarly, Kathlene's (1994) study of Colorado state legislative committees showed that in that setting, where women were a minority, the social dynamics of committee meetings worked starkly against women, even after accounting for factors like party affiliation, formal leadership roles, length of time in office, and interest in the issue. Female committee members waited longer to speak, spoke for less time, and contributed fewer total speaking turns than men, leading Kathlene to conclude that female legislators "may be seriously disadvantaged in committee hearings and unable to participate equally" (1994, 573; see also Beck, 2001 for a case study of similar dynamics in a suburban town council). These studies converge on the conclusion that women tend to be disadvantaged in formal decision-making settings, participating in discussions less often and exercising less influence and authority in part because of their low numbers, which tend to prompt dominance behavior from men.

However, some evidence, including from these same studies, questions the improvement from women's rising numbers. In fact, in Kathlene's (1994) study, increasing the number of women on the committee did not solve the problem. On committees with a higher proportion of women, male committee members became more vocal and more verbally aggressive during the hearings, while female committee members spoke fewer words and waited until later in the hearing to engage. Male witnesses also adopted a more aggressive style when the committee chair was a woman. Such backlash can be seen with respect to other forms of behavior, too. Kanthak and Krause (2010) use evidence on financial resources to show that as the proportion of women in the party's caucus increases among U.S. House members, male legislators increase their campaign contributions to their fellow male partisans and decrease the contributions to their female colleagues. Outside the US context, researchers have documented the lack of a clear correlation between women's numbers and women's empowerment in various countries (Franceschet & Piscopo, 2008; Franceschet, Krook, & Piscopo, 2012b; Franceschet et al., 2012a; Htun & Weldon, 2010; Krook, 2009).

Broadening the scope to include meetings attended by ordinary citizens, Bryan's (2004) thorough study of Vermont town meetings replicates both the severe gender inequalities in participation seen elsewhere and the mysterious futility of rising numbers. With a sample of nearly 1400 meetings, he finds that though women composed nearly half of the meeting attenders on average, they contributed only about 28% of the speaking turns. More than half of men attending meetings spoke; only about one-third of women did. Consistent with these findings, Karpowitz, Monson, and Preece (2015) use data from a conservative state to show that Republican neighborhood precinct caucus meetings are evenly divided by gender, but tend to elect far more men than women to important positions as delegates to the state nominating convention. Thus, women appear to face persistent gaps in participation and power in legislative and other important settings of public decision-making, and these gaps are rarely bridged merely by increasing the number of women in the decision-making group.

Further complicating the simple story that would equate authority with numbers, some research finds that despite being few, women can exercise as much or more influence than men do in legislative settings – enacting their preferred legislation, providing resources to constituents, and articulating their views in formal speeches. For example, Anzia and Berry (2011) have shown that women in Congress sponsor and co-sponsor more bills than men do, and deliver about 9% more funding to their districts. They attribute this success to the fact that successful female candidates for Congress must overcome both potential discrimination and women's tendency to underestimate their own qualifications (Fox & Lawless, 2005), meaning that those women who win office are exceptionally qualified and confident (see also Epstein, Niemi, & Powell, 2005; Pearson & McGhee, 2013). At the subnational level, Bratton and Haynie (1999) examine six states across three decades and find that women are generally as effective as men at achieving passage of their legislative proposals (see also Saint-Germain, 1989; Thomas & Welch, 1991; Thomas, 1995).

With respect to the question of *how* women contribute to political decision-making, a long line of research on women in legislative (and other) settings shows that women's leadership styles tend to be different from men's – more collaborative, collegial, and consensus-oriented than men's more individualist and competitive styles (Dodson & Carroll, 1991; Duerst-Lahti, 2002a, 2002b; Jewell & Whicker, 1993; Kathlene, 1994; Rinehart, 1991; Rosenthal, 1998; Thomas, 1995). For example, Epstein et al. (2005) conduct a large survey of state legislators and show that women are more likely than men to report spending time building within-party and across-party coalitions, even after controlling for other factors. They were also much more likely than men to report spending time in constituency service (see also Richardson & Freeman, 1995). At the local level, women in Beck's (2001) study of municipal councils similarly expressed a desire to "strive for collegiality" and serve constituents (p. 567) and a discomfort with partisan conflict and posturing.

Such differences in leadership style may also interact with the larger political context in ways that affect women's ability to achieve legislative success. Volden, Wiseman, and Wittmer (2013) theorize that when women are in the minority party, women's tendency to emphasize cooperation becomes a valuable resource because minority parties can only get things done when they reach outside the party and build coalitions with majority legislators. When legislators are in the majority party, by contrast, such coalition-building and consensus-seeking are less valuable strategies, as majority parties do not need to reach across party lines in order to pass legislation. Consistent with these hypotheses, Volden et al. (2013) find that women are more successful than men at pushing bills they sponsor through the process when they are in the minority party, but comparatively less successful when their party holds the majority. Jeydel and Taylor's (2003) study of the 103rd through 105th Congresses uncovers a similar pattern. Both of these studies highlight the importance of attending to the larger decision-making context when trying to understand women's authority and influence.

To this point, then, we have shown evidence that women face some persistent deficits of authority and influence in formal political institutions, but not always. Under some conditions and with respect to some forms of authority and influence,

women appear to be equally and sometimes more effective than men. Moreover, women's increased effectiveness is not solely a function of their increasing numbers. More women does not always help, and having few women does not always hurt. When or how gender composition makes a difference to women's authority is, in part, a function of other features of decision-making context.

In addition, recall our dual criteria for why women's presence might matter. Even if equal voice and influence do not obtain, does it matter if women do not express views different from men's? Some argue that gender equality in influence would not make much difference to legislative outcomes. The main point in that argument is that gender does not shape preferences as much as non-gendered forces such as partisanship, the preferences of constituents, seniority, or formal leadership roles, which may overwhelm gender differences. In official decision-making bodies, this line of thinking goes, women do not hold, and would not advocate if they did, views substantially different from men's. For an example of this approach, see Philip Bump's (2015) analysis, in which he explores the absence of changes in Congressional legislation if the gender composition within each party were flipped. On this perspective, women's institutional roles as legislators or as members of partisan teams take precedence over nearly everything else. Put differently, in a world where parties are especially polarized, partisan differences and other political constraints may swamp gender.

While the power of party is large, that does not mean that women's views or the substance of their actions are the same as men's. Earlier, we highlighted evidence that women's priorities differ from men's in the general public. A long line of research in both state and national contexts reinforces this point by showing that female legislators tend to prioritize issues and interests that are distinct from those of their male colleagues, though the specific definitions and operationalizations of those issues has varied widely by study (Bratton, 2002; Bratton & Haynie, 1999; Burrell, 1994; Carroll, 1994; Walsh, 2002; Dodson & Carroll, 1991; Gerrity, Osborn, & Mendez, 2007; Htun & Weldon, 2010; Poggione, 2004; Reingold, 2000; Saint-Germain, 1989; Swers, 2002; Thomas, 1995; Thomas & Welch, 1991; Weldon, 2002, 2011). Some define these distinctive "women's issues" as those where there is a large gender gap in attitudes; others look to issues championed by interest groups focused on women or issues where women of both parties tend to agree; still others focus on issues that are likely to be especially salient to women, such as the legislation focused on the needs of children, family, and women (for overviews, see Bratton, 2005; Reingold & Swers, 2011; Volden, Wiseman, & Wittmer, 2014). A more recent approach argues that women's issues should be defined "endogenously," by exploring the set of issues to which female members of Congress tend to devote more legislative attention than men (Reingold & Swers, 2011; Volden et al., 2014).

Though the differences in the definitions of women's issues are important, the key point for our purposes is that multiple studies also converge on the conclusion that female legislators do emphasize a different set of issues and concerns than men, even after controlling for the effects of other forces like political parties. For example, Pearson and Dancey (2011b) find evidence that among both Democrats and Republicans, women literally speak differently from men, raising the needs of women much more often when they give speeches on the floor of the House (see also Hall, 1996; but see Gerrity et al., 2007). Similarly, Osborn and Mendez (2010) show that female senators are more likely than their male counterparts to make floor speeches about issues of direct relevance to women, such as family and women's health.

Among the most comprehensive treatments of these questions in Congress comes from Michele Swers (2002, 2013), who tracks women's influence on policy from the early agenda-setting phase through final roll call votes. She defines "women's issues" as those "issues that are particularly salient to women because they seek to achieve equality of women; they address women's special needs, such as women's health concerns or child care; or they confront issues with which women have traditionally been concerned in their role as caregivers, such as education or the protection of children" (2002, 10). Analyzing members of the House in the 103rd and 104th Congresses, Swers (2002) finds that regardless of party and even after controlling for other legislative influences and constraints, women are more likely to advocate for such issues than their male partisan colleagues, and they are most likely to advocate for such issues at the early, bill sponsorship stage, when their agenda-setting efforts are least constrained by other forces like party demands, seniority, or committee responsibilities. In the Senate, women also advocate for such issues, though there, too, such advocacy is constrained by features of the institutional context, especially party reputations and the demands of party loyalty in a polarized legislature. As Swers summarizes, among Senators, "gender is a fundamental identity that interacts with traditional influences on legislative behavior like partisanship and ideology to shape legislative priorities" (2013, 5).

What are the results of women's advocacy on behalf of their distinctive priorities? Again, the results vary by study. To take just a few examples, Thomas and Welch (1991) conclude from their sample of twelve state legislatures that bills sponsored by women that focus on women's issues (defined as the needs of children, families, and women) are more likely to pass than male-sponsored bills about men's issues (which leaned heavily in the direction of economic and business concerns). Bratton (2005) finds that individual women in state legislatures are generally equally or more effective than men in passing bills dealing with women's issues, even in the absence of a critical mass of women, though consistent with Kanter's (1977a) arguments about critical mass, the legislature's overall focus on women's issues tends to increase as the number of women rises. At the federal level, Swers (2002) shows that women's ability to successfully advocate for women's issues in the House is mediated by elements of the political context, such as whether or not they are members of the majority party and other institutional constraints or strategic, electoral considerations. In the Senate, women make use of voter stereotypes about women to enhance their credibility on women's issues, but such stereotypes may also constrain women's efforts to lead on other, more "masculine" issues (Swers, 2013). Volden et al. (2014) find that women's effort on behalf of women's issues (defined as issues to which women give the most legislative time and attention relative to men) turns out to be less successful than are men's efforts on behalf of their own interests. And of special relevance to our focus on meetings, the

authors trace the institutional bias against women to what happens in committees – the settings Kathlene (1994) finds can be especially hostile to women.

On the whole, the literature on women's leadership in Congress and other formal legislative bodies at the state or local level provides tantalizing but contradictory results. Though it seems clear that women tend to have set of policy interests and concerns that are distinct from those of men, women's power to affect outcomes on those and other issues is less clear. Sometimes women exert equal influence on legislative outcomes (or even exceed men's), but other times they do not. Other contextual factors of the political and group context interact with women's presence to shape their ability to lead.

One civic setting where the effect of group composition can be seen clearly is judicial decision-making. Though individual-level analysis of judges turns up few consistent gender effects (Ashenfelter, Eisenberg, & Schwab, 1995; Segal, 2000; Songer, Davis, & Haire, 1994), the story is much different when the gender composition of judicial panels is included in the analysis, and these effects appear to be robust to controls for ideology and other similar factors. For example, Massie, Johnson, and Gubala (2002) demonstrate that when judicial panels include at least one woman, the panel is more likely to take a pro-plaintiff position in criminal procedure and civil rights cases. Farhang and Wawro (2004) reach similar conclusions with respect to employment discrimination cases, and Peresie (2005) finds that in sex discrimination and sexual harassment cases, judicial panels with more women are also more likely to find for the plaintiff (see also Farhang & Wawro, 2010). Boyd, Epstein, and Martin (2010) also conclude that the presence of women on three-judge panels matter for sex discrimination cases, though not for other types of cases. Collins, Manning, and Carp (2010) show that women vote more liberally in criminal justice cases, but not in labor and economic regulation cases, when more female judges are present in the city where the district court is located. Thus, at least with respect to some issues, small individual-level differences between men and women may be amplified by the gender context of the group, and women's presence in group decision-making bodies can affect the group's outcome.

Why do higher numbers sometimes but not always lead to commensurate increased influence, and why do low numbers sometimes produce disproportionately high influence? What institutional features help women close the gap? And how does women's lower influence matter – do women articulate preferences different from men's? To answer these questions, we need to turn to a more controlled research design to understand the conditional effects of women's numbers.

6. Institutional arrangements, decision rules and norms of interaction

As the findings from Congress and the state legislatures make clear, group gender composition on its own is an insufficient explanation for women's ability to exercise authoritative influence. Instead, the key is to bring other institutional features of the group and political context into view. Such features can interact with gender composition, enhancing the authority of women even when they are few or constraining such authority when women are better represented. The lesson is that the same decision-making body can interact in different ways, depending on the procedures and other features of the decision-making context. Moreover, groups may find it easier to exercise control over their procedures than to change their gender composition (Gastil, 2010). So, what procedures might help?

In our studies, we examined rules that determine how many votes are needed for a decision, because such rules not only affect the substance of the decision but also the behavior of individual group members and the style and dynamics of interactions among the members. As we have argued elsewhere, a group's decision rule "can set in motion a set of social scripts, cancel individual habits, and produce particular styles of interaction" (Karpowitz & Mendelberg, 2014, 88; see also Gastil, 1993; Mansbridge, 1983; Walsh, 2007). Put differently, rules help to shape the expectations for social interaction; they establish norms for how group members engage with each other. Though no single rule is likely to be a panacea for all that might ail any given group, rules can establish an expectation of equality and respect that elevates women's status or they can reinforce competitive hierarchies that tend to disadvantage women.

Two of the most common rules are majority rule and unanimity, and both rules are employed in meetings, councils, and committees that make consequential political decisions at nearly every level of government. Majority rule is found in many formal settings of political and social decision making, from the local school board or town council to the Supreme Court to the halls of Congress. Unanimous rule is most commonly a feature of juries, but it and close variants are also found in many other settings, including the UN Security Council and some courts of appeals. Even when a group does not require formal unanimous rule, it may use a consensus process as its de facto norm, and such practices are not uncommon (Karpowitz & Mendelberg, 2014).

Why and when would such procedures elevate women's status during group interaction and discussion? Unanimous rule has the potential to elevate the authority of women because it sets in motion a process of consensus and inclusion. As Mansbridge (1983) has argued, unanimity prompts a norm of equal respect. Under unanimity, every member of the group is needed to make a decision. Although classic work on preference minorities shows that they may face challenges persuading the preference majority (Cialdini & Goldstein, 2004; Cialdini & Trost, 1998; Moscovici, 1980, 1985), unanimity can ameliorate this problem by signaling that the minority views must be attended to and incorporated into the group's decision.[6] This implication of the rule, in turn, affects many aspects of the group discussion. For example, experimental studies have shown that individuals in groups using unanimous rule are more likely to change their opinions as a result of the discussion (Hastie, Penrod, & Pennington, 1983), articulate more expressions of agreement (Nemeth, 1977), engage in more cooperative behavior (Bouas & Komorita, 1996), and share information more fully (Mathis, 2011). Gastil explains the basic idea this way: the drive for consensus "assumes

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[6] Of course, in conditions of severe conflict, it is possible that majorities will attempt to pressure minorities into submission (Falk, 1982; Gero, 1985; Mendelberg, 2002), but the point of unanimity is that the rule itself gives minority views resources to resist such pressure.

that the minority viewpoint is crucial, so members may go out of their way to draw out quieter group members. Listening may also be enhanced, since consensus relies upon members understanding and considering what each other says" (1993, 52). Perhaps for these reasons, preference minorities report that they prefer consensus procedures (Kerr et al., 1976). Unanimity thus sets in motion a process of inclusion, cooperation, and consensus building that empowers those who are outnumbered in the group.

We expect that these signals and benefits of unanimity apply equally well to *social identity* as to *preference* minorities. We thus predict that unanimous rule mitigates women's low status in the group when women are the numerical minority. In other words, we expect that consensus pressures create norms of inclusion that benefit women when they are few, prompting them to participate and to exercise influence. When groups create a space for each person to speak they signal that the group holds each person in respect. This can help women when they are few, because even the few have dignity and equal status.

Of course, these same dynamics will benefit men when they are in the minority, and that fact also has implications for gendered patterns of participation. Specifically, men may leverage consensus procedures to elevate rather than to equalize their individual influence. Consensus rules grant a veto power to each person, but women and men tend to use it for different ends. Men will likely tend to use that veto power to exercise still more individual power than they ordinarily do; women will tend to use the veto power to reach equality with the other members.

By contrast, majority rule sets a different set of expectations for group members. Majoritarian procedures emphasize numerical power, competition, and conflict instead of inclusiveness and cooperation. It is the "classic adversary method" (Mansbridge, 1983, 265) and is premised on the notion that conflict is at the core of group decision-making. By setting the expectation that consensus is not needed and thus not all conflicts need to be fully resolved to *everyone's* satisfaction, majority rule signals that the majority exercises legitimate power on its own and does not need to bend to minority preferences. In Gastil's words, "majorities have no short term need to hear minority opinions" (2010, 99), and this fact may create norms of competition, self-interested behavior, or zero-sum thinking (Gastil, 1993). What is more, this emphasis on competitiveness and conflict may be uniquely attractive to men, who tend to emphasize individual agency over cooperation (Miller, 1985; Smith-Lovin & Brody, 1989). More generally, if unanimous rule brings all members into the discussion, majority rule generates norms of competitive power. Thus, majority rule elevates women's influence when women are the numerical majority, but when they are the minority, women are likely to face a disadvantage under that rule. Put differently, majority rule implicitly gives permission to women to exercise power as women, but only when they outnumber men.

In sum, when women are the numerical minority, they will be less empowered under majority than unanimous rule; and when they are the numerical majority, they will be much more empowered under majority than unanimous rule. The unanimity rule enhances women's power when they are a minority (relative to majority rule), but as women's numbers grow, the numerical advantages that are found under majority rule are offset by unanimity's grant of power to the minority. In this sense, we predict a pattern in which the effects of numbers depend on rule. Large numbers of women create increased participation and influence for women, but only under majority rule.

7. The deliberative justice experiment

To put these predictions to the test, we ran a set of studies we call the Deliberative Justice experiment. We adapted this experiment from Frohlich and Oppenheimer's (1992) study of how a group decides how much income to redistribute to its poorest members through government tax. In society, people have to make these sorts of choices frequently – how much should we give to the poorest among us; how much should the well off support the less well off; how much should each person keep or give from their own earnings rather than give to the collective for redistribution.

We recruited student and community participants at two different locations – both mid-size cities, but one a conservative, religious place and the other a liberal, secular town – to come to the lab for a study about "how people make important decisions." Recruitment materials promised participants that they would take home some income. Participants were randomly assigned to 5-person groups that varied in their gender composition and decision rule.[7] Once participants arrived at the lab, we took them through the following procedure. First, we directed each participant to a private computer terminal, where we asked some questions aimed to assess relevant attitudes, including their attitudes about redistribution and their confidence in taking part in group discussion. We then introduced them to different principles for income redistribution (including the option of not redistributing any income at all) and gave some background information designed to ensure that all participants understood the basic values and purposes behind different approaches to income redistribution. We also asked participants which principle of redistribution they privately preferred, if any.

Once everyone had familiarized themselves with these principles and disclosed their pre-discussion preferences about the principles, the participants came together as a group and engaged in face-to-face discussion, with the goal of choosing the "most just" principle of redistribution. Participants were randomly assigned to a seat at a small conference table, and group discussions were recorded via a 6-channel digital system that allowed each participant's verbal participation and important elements of the group's discursive dynamic to be measured to the micro-second. The recording system thus allowed us to calculate precisely each individual's participation rate, the length of the full group discussion, the number of interruptions given and received by each participant, the content of each participant's comments, and the extent to which those comments matched the participant's privately expressed pre-discussion preferences.

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[7] Details of randomization procedures and other elements of the study can be found in Karpowitz and Mendelberg (2014).

Group discussions were driven by the participants themselves, and groups appeared to take the decision-making process seriously. Participants were told they needed to talk for at least 5 min, and the average discussion time was approximately 25 min, with participants exploring principles of redistribution and their implications for their own lives and for society. Researchers set up the recording equipment and were available to answer questions, but they sat apart from the group and did not actively moderate the discussion, other than asking the opening question – "Which principle of redistribution is most just, and why?" When the group indicated it was ready to end discussion and vote on a principle of redistribution, the researchers stepped in to logistically execute the voting process. Voting occurred by secret ballot, according to the decision rule (majority or unanimity) that was randomly assigned by the researchers prior to the start of the experimental session.[8] The results of the vote were announced as soon as voting was complete.

If the group chose to redistribute its members' earnings, participants were also asked to set a minimum guaranteed income, which would be applied to their own earnings in the experiment and hypothetically to society as a whole. This minimum income would thus form a safety net, financed by taxes on the highest earners, below which the least well off in the group would not be allowed to fall. At the time of the group discussions, group members did not know what, exactly, the work task would be. This "veil of ignorance" about the task introduced uncertainty about which participants were likely to be the best earners and which participants might need assistance. After the discussion and voting on a decision, participants returned to their private cubicles, where they answered questions designed to evaluate the group discussion, including their assessments of their own efficacy in the discussion and their judgments about which group member was the most influential member during the discussion. They were then informed of the work tasks (which turned out to be correcting spelling errors in a difficult text), performed several rounds of work tasks, and were paid their post-tax and redistribution incomes. At the conclusion of the experimental session, which tended to last between 90 min and two hours, participants were debriefed and had an opportunity to ask questions about the purposes of the research.

Our study is thus a 6 (gender composition) x 2 (decision rule) between-subjects factorial design, with each participant randomly assigned to groups of between 0 and 5 women and groups randomly assigned to either the unanimous or majority decision rule. Within each cell of the experiment, we have 6–10 groups, with a total of 94 groups (470 individuals) completing the study. Because gender composition and decision rule are randomly assigned, the research design allows us to understand how the interaction of these two features causally affects the group's discussion dynamics and collective decision.

8. Selected results from the deliberative justice experiment

8.1. Verbal participation

Full results from the experiment can be found in Karpowitz and Mendelberg (2014), but here, we review some of the key findings.[9] One initial question is whether women and men speak at similar rates in these sorts of discussions. A simple standard of equality would be for women's floor time to equal their proportion of the group. For example, if women comprised 20% of the group, they would meet this standard if they accounted for 20% of the floor time. We find that in the condition most common to political decision-making groups – few women and majority rule – groups fell far short of this benchmark of equality. Women's proportion of talk time improved as the number of women in the group increased, but only when groups included four women did the gender gap in women's participation fully evaporate. Men, on the other hand, never faced a serious deficit of speaking time, even when they were far outnumbered by women. These patterns signal women's authority deficit: under majority rule, men nearly always reached our standard of equality; women did so only when they far outnumbered men.

But there is some good news. Women's patterns of participation in groups where they were far outnumbered by men were very different when the group was instructed to decide by unanimous rule. For example, under unanimity, the average woman in groups with four men took up a nearly equal share of the conversation. Women thus responded to the unanimity rule's consensus cue by becoming much more active contributors to the conversation. In addition, women's participation in unanimous groups was little affected by the group's gender balance – they came close to our standard of equal participation no matter how many women were in the group. Men, by contrast, leveraged the power of the unanimity rule to significantly increase their floor time in groups where they were outnumbered by women. For that reason, under unanimous rule women's share of floor time did not dramatically increase as the gender composition of the group increased.

Decision rules and gender composition thus interact to affect the participation of men and women in group discussions. Our argument is that these group-level features affect the group's norms about how much authority women should exercise – or in other words, the "gendered expectations for participation and interaction in the group setting" (Karpowitz, Mendelberg, and Mattioli, 2015, 159). Thus, we need to show that the patterns in speaking behavior are not merely functions of differences in the attitudes or preferences of the group members (which may be correlated with gender). Though in this research design we did not exercise experimental control over the balance of preferences in each group, we have explored multiple different ways of operationalizing preferences, and when they are included in the models, none of those controls cause the basic pattern to evaporate. Regardless of whether we control for the number of egalitarians in the group, the group's specific preferences about principles of redistribution, whether or not the individual's pre-deliberation preferences match the group outcome, or general political ideology, the crucial interaction between gender composition and decision rule remains (see Karpowitz & Mendelberg,

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[8] Researchers made the random assignment via roll of the dice.
[9] See also Karpowitz, Mendelberg, and Shaker (2012); Mendelberg, Karpowitz, and Goedert (2014), and Mendelberg, Karpowitz, and Oliphant (2014).

2014; Karpowitz et al., 2012). Controls for age, income, and education do not eliminate the patterns either. In other words, even when we test these gendered patterns against multiple competing explanations, the results hold. As we have written elsewhere, "Women do not speak less than men when their numbers are small because they hold preferences different from men's. Rather, they do so because they are women" (Karpowitz, Mendelberg, and Mattioli, 2015, 159).

Perhaps, though, these results are found only in the lab and do not obtain outside the experimental setting. To test that possibility, we collected a sample of school boards of varying gender compositions from all across the United States. We carefully examined the patterns of motions and speaking turns by male and female board members found in the official minutes of each board. The boards we examined used majority rule only, but the relationship between speaking turns and the board's gender composition was nearly identical to the relationship we found in majority-rule groups in the lab. When women made up 20% of the board, the average woman accounted for a little more than 13% of the speaking turns (the same result we found in the lab). Women's participation increased with women's increased presence on the board, only reaching equality with men when women formed a super-majority of the board. The depth of women's participatory deficit was striking: in 40% of meetings where women were outnumbered by men, their proportion of speaking time was *less than half* their proportion of the group. This relationship held even after controlling for other possible explanations, including board size, the experience and education of the members, features of the school district, and region of the country (Karpowitz & Mendelberg, 2014, chap. 9; Karpowitz, Mendelberg, and Mattioli, 2015). Women who held a formal position of leadership, such as board chair, did speak more often, but attaining such a position was itself partly a function of the board's composition. Moreover, the benefits of female leadership did not spill over to other women on the board. Thus, even in contexts where women were elected to speak on behalf of others, their participation in group meetings and deliberations lagged well behind men's when they were disadvantaged by numbers and decision rule.

Consistent with our theory about the interaction of numbers and groups, the pattern was quite different in a different setting in which groups did not use majority rule. In addition to the school boards, we also re-analyzed Walsh's (2007) data on civic race-dialog groups. These groups do not require a formal group decision, but focus instead on reaching a collaborative and cooperative understanding of each other's perspectives. Though these groups are not perfectly analogous to the unanimity condition in our lab experiment, they do explicitly emphasize procedures of discussion that are similar to the conversational norms we expect in unanimous rule groups. And in these settings, participatory patterns looked much the same as the unanimous groups in the lab. We found no evidence of a yawning participatory deficit for women when they were outnumbered by men, and women's participation did not increase dramatically as the proportion of women in the group grew. In fact, as we found in the lab, their participation declined slightly. Thus, outside the experimental setting, in school boards and civic dialog groups, we found evidence that was wholly consistent with the patterns we uncovered in the lab. Rules shape norms of discussion, which in turn condition the effect of numbers. Majority rule places women at a disadvantage when they are the numerical minority, but helps them when they outnumber men. Unanimity or consensus procedures give space for women's participation when they are few, but can actually undermine women's authority where women's relative numbers are high.

8.2. Perceived influence and self-efficacy

How does any of this relate to women's ability to lead? Perhaps women's silence is a result of an efficient sort of authority – they do not need to speak because they are already getting their way or are able to influence the group with few words. In the Deliberative Justice studies, we examined this possibility by asking participants questions to identify the "most influential" group member after the discussion period had ended, then creating a measure of perceived influence by tallying how many votes each individual received. We also asked questions about the each participant's own sense of efficacy, such as whether their opinions were "influential in shaping the group discussion and final decision" or whether their "voice was heard" by the other members of the group.

Our results show that women's relative quiescence signals powerlessness rather than efficient authority. With respect to both efficacy and perceived influence, the relationship between speaking time and authority is positive, very large, and robust to controls for preferences and pre-deliberation confidence in one's ability to participate effectively in group settings (Karpowitz & Mendelberg, 2014, 130–135). Both women and men in our experiment built self-efficacy when they talked more, though this effect was substantially larger for women than for men. The effect of talk was even larger on the influence participants had in the eyes of other group members. Both men and women who held the floor longer were much more likely to be identified by the other group members as the "most influential" group member. The magnitude of this effect was similar for both genders. This means that active use of voice translates nearly directly into perceived influence. Speech matters because it builds authority, and silent authority is the exception, not the rule.

Once again, the interaction of gender composition and decision rule is at the heart of the story. As with speaking time, we found a dramatic deficit in perceived influence for women when they were outnumbered by men in majority-rule groups, even after taking women's relative group presence into account. Women's perceived influence built as the number of women in the group increased – but only under majority rule. Unanimous rule cushioned the deficit for women when they were few but did not confer additional benefits to as women's numbers rose. These dynamics can be seen clearly by examining whether a woman or man received the most influence votes. In groups of one or two women (where women compose 20% or 40% of the group), a woman was significantly more likely win the vote under unanimity (25%) than under majority rule (13%). When women outnumbered men in the group, however, the effect reversed, and a woman was more likely to receive the most votes

under majority rule (73%) than under unanimity (53%). A formal test of mediation (see Karpowitz & Mendelberg, 2014, 136–138) confirms that the experimental conditions affected women's perceived influence, and they did so through floor time.

The experimental conditions exerted similar, though somewhat smaller, effects on self-efficacy. Women were more likely to report feeling that their "voice was heard" in the discussion when women outnumbered men in the group, but again only under majority rule. In groups deciding by unanimity, the trend ran in the opposite direction, with women feeling more efficacious in groups where women were outnumbered by men. These effects are modest in size – in part because no one left the lab setting feeling deeply alienated by the experience – but evidence of the expected interaction between gender composition and decision rule is nonetheless present (Karpowitz & Mendelberg, 2014, 132–133).

The interaction of gender composition and decision rule thus profoundly affects patterns of verbal participation, which in turn affect how the group members see themselves and each other. Participants in a deliberating group generate both self-efficacy and influence in the eyes of others by speaking up, and the extent to which they speak up (or don't) is in part a function of the group-level conditions in which they find themselves. Thus, women's standing in the group and their ability to lead – and more broadly, the political and social psychology of women's authoritative influence – cannot be understood apart from the institutional and social contexts in which collective decisions are made.

8.3. Content of speech

Women's authority is not merely a function of speaking time, however. Earlier, we showed that women tend to prioritize a set of issues and articulate a set of concerns that differ systematically from men's concerns. Among both legislators and the mass public, women's concerns tend to focus more than men's on the needs of families, children, the poor, and other disadvantaged populations. To explore how the experimental conditions affected the content of women's comments, we counted the specific words that participants used during the discussion (see Karpowitz & Mendelberg, 2014, 167–198 for details). We defined a large dictionary of "care issues" words associated with family, children, the needy, and the poor – and contrasted them with the more business-oriented "financial issues" (taxes, salary, prices, etc.) that tend to be relatively greater concerns for men.

We found that women's propensity to raise care issues varied dramatically with the group's decision rule and gender composition, in ways that parallel the findings for floor time and influence. In other words, when empowered by the group context, women not only spoke *more*, they also spoke *differently*. When women were outnumbered by men under majority rule, they raised care issues half as often as they raised financial issues. When women comprised the numerical majority in groups assigned to use a majority decision rule, they mentioned care issues more than twice as often as they referenced financial issues (see Karpowitz, Mendelberg, and Mattioli, 2015 for additional details). These results are not merely a function of the fact that women were talking more: no increase appeared for financial issues or for a placebo category of words related to the rich or wealthy. In addition, we again found a very different pattern under unanimity. In those groups, women invoked care issues nearly as often as they did when fully empowered as a majority under majority rule regardless of the number of women in the group.

In addition to specific words about vulnerable populations such as children or the poor, we also tracked participants' expressed preferences to concretely assist the poor during the discussion. Recall that as part of the experiment, groups were to make a decision about how to redistribute money earned during the experiment and whether to set a minimum guaranteed income or safety net below which no one in the group would be allowed to fall. The vast majority of the groups chose to set a safety net, but the generosity of the minimum income varied dramatically across the groups. We again find that the interaction of gender composition and decision rule shape what women say in profound ways. In majority-rule groups with one or two women, women's average maximum endorsed safety net was a little over $24,250, but it rose to $30,900 in groups with three or four women – a large and statistically robust difference (Karpowitz & Mendelberg, 2014; additional details can be found in Karpowitz, Mendelberg, and Mattioli, 2015).[10] Under unanimity, women advocated average safety nets above $30,000 regardless of the gender composition of the group. Thus, when women were empowered either by decision rule or by high numbers (the same conditions where they felt greater self-efficacy, were seen as more influential in the eyes of other participants, and spoke more about 'care issues'), they advocated substantially greater assistance to the poor than when numbers and rule combined to place women at a disadvantage. Men generally advocated floor amounts that were lower than those endorsed by women, but in the conditions where women were more empowered and spoke more often, men's generosity also increased.

The extent of women's empowerment and disempowerment can also be seen in their patterns of preference falsification. Prior to the group discussion, we asked all participants to tell us privately which principle of redistribution they favored. We then tracked what they said about those principles during the discussion. We found that when women were outnumbered by men under majority rule, they were dramatically more likely to advocate for principles *other* than the one they privately preferred. As women's empowerment increased by dint of numbers or rule, their endorsement of these non-favored principles dropped dramatically (Karpowitz & Mendelberg, 2014; Karpowitz, Mendelberg, and Mattioli, 2015). Men were not affected by the experimental conditions in the same way. When they were outnumbered, they tended to speak in favor of their privately expressed preferences *more* often. When numbers and rules worked against women's authority, women not only spoke less, but when they did speak up, they articulated views inconsistent with their private preferences.

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[10] The federal poverty line for a family of four at the time of the study was about $21,000.

8.4. Interruptions

Our theory also holds that women's authority is further built (or undermined) by group norms of interaction. In other words, authority is not merely a feature of individuals but of group dynamics. A robust sense of group rapport, for example, is one way in which deliberators show respect and grant status to each other. Groups that do not develop such rapport are missing this important way of signaling that they see each other as having standing – in other words, that they see each other as authoritative speakers whose words are worthy of regard.

We explored these possibilities by looking inside the "black box" of deliberative interaction to examine the interrupting behavior of group members. The lab setting allowed us to measure each participant's speaking turns very precisely, including every time when one group member broke in to interrupt a fellow participant who had held the floor.[11] Following previous work (Li, 2001; Smith-Lovin & Brody, 1989; Stromer-Galley, 2007), we coded each interruption as positive or negative. Positive interruptions build the speaker's status by signaling active listening, support, cooperation, or solidarity. They may include words like "yeah," "uh-huh," "that's right," or "I agree." Negative interruptions – which tend to include words like "no," "I'm not sure about that," or "I disagree" – do the opposite. They detract from solidarity by seizing the floor to express disagreement or change the subject, placing the interrupter in a position of dominance. Previous work has shown that interruptions reflect gender hierarchies, with men being more likely than women to interrupt negatively (see Anderson & Leaper, 1998 for a meta-analysis). The pattern of positive and negative interruptions can thus be seen as an indicator of equal status in discussion.

As with our other measures, we again found a powerful relationship between the experimental conditions and patterns of interruptions, but only for interruptions received by women from men.[12] These dynamics can be seen, first, in the proportion of interruptions received that are negative. In majority-rule groups with few women, more than half of the interruptions women received from men were negative, but when women outnumbered men under majority rule, less than 19% of interruptions directed to women from men were negative.[13] Under unanimity, there was no meaningful linear effect of gender composition, and the proportion of negative interruptions received by women never exceeded 50%. A second variable – the ratio of women's to men's positively interrupted speaking turns – reinforces these findings and underscores women's isolation when they are disempowered. When women were outnumbered by men under majority rule, they received positive affirmations at a rate that was only 40% of men's. When the group's gender composition or its decision rule changed, women received positive validation at a rate that was equal to or greater than men's (Karpowitz & Mendelberg, 2014; Karpowitz, Mendelberg, and Mattioli, 2015; Mendelberg, Karpowitz, and Oliphant 2014).

These patterns also correlate with women's subsequent self-efficacy and authority. Women who received few negative interruptions and many positive interjections had a greater sense that their opinions were influential during the discussion, and they received more influence votes from the other members of their group (Karpowitz & Mendelberg, 2014, 222–226). Such positive validation mattered more for women than for men, whose self-efficacy and influence votes were much less affected by the interrupting behavior of the other group members. Positive validation in the form of supportive interruptions was especially powerful for women who came to the discussion least confident in their ability to participate effectively.

These results show that women's experience in deliberating groups – and the extent to which group discussion builds women's status – varies dramatically based on the procedural conditions of discussion. Numbers and rules can support women by building norms that are much more affirming than not. Importantly, these changes in the conversational dynamic occur because *men change their behavior toward women* as the group's rules and composition change. The pattern of positive and negative interruptions found in the group indicates the presence or absence of group rapport and thus signals status for individuals within the group. When men outnumber women under majority rule, the experience for women is far more negative than positive, with male dominance seen in their more negative interrupting behavior. When rule or numbers tilt the balance of power away from men and toward equality, men respond with more affirming and supportive interruptions, with both genders then receiving positive feedback at approximately equal rates.

8.5. Group decisions

In the end, the most consequential indicator of women's authority is whether or not they are able to move the group in the direction of their preferences. In the context of our lab experiment, the group's eventual decision was also affected by factors other than gender dynamics, such as the political ideology of the group members. Even so, we still found a relationship between the experimental conditions – which, as we have just shown, affected women's status – and the group's outcome. Under majority rule, groups tended to establish a substantially more generous safety net when there were many women in the group than when they were few, even after controlling for other factors (Karpowitz & Mendelberg, 2014, chap. 9). And consistent with our earlier findings, when women were few, unanimous rule boosted their influence over the group's bottom line: the group's safety net

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[11] Specifically, we defined an interruption as occurring when a speaker held the floor for at least 1.5 s, a second speaker talked for at least 1 s, and there is an overlap of at least 0.5 s (see Karpowitz & Mendelberg, 2014, 206–209 for details). Special software identified all such instances, and human coders then confirmed these as interruptions or not (a cough, a sneeze, stray noises in the room, etc.).

[12] Interruptions from women toward women, from men toward men, and from women toward men were not affected by the experimental conditions – only the pattern of interjections from men toward women.

[13] These are the average dyadic proportion received by each member of the group, excluding neutral interruptions (see Karpowitz & Mendelberg, 2014, 208 for additional details).

decision was more generous than it was when the same number of women operated under majority rule. Again, under unanimous decision rule there was no positive effect from increasing numbers.

Although we cannot definitively say which aspect of group interaction ultimately moved the group's decision, we find suggestive evidence that women's speech mattered. When women and men disagreed about the safety net level, women were able move the group's outcome in their preferred direction (which was nearly always for more generous floor amounts), but only when women held the floor to a significant extent (Karpowitz & Mendelberg, 2014, 260–267). In other words, when women had distinct preferences from men, they led only when they were active deliberators. Silence was not an effective leadership strategy, and when women failed to speak up, the group's safety net nearly always defaulted to the preferences of men.

However, as we indicated earlier, the extent to which women spoke up or not was itself a function of the group-level conditions in which women found themselves. These facts further highlight the problem in the most common situation in politics today – majority-rule groups with few women. There, women were simply far less likely to play a leadership role because they were far less likely to speak up in the first place, and when they did, they were more likely to echo men's less generous preferences and sometimes even promote principles of redistribution that they did not privately prefer. Despite the fact that women were more timid about advocating for generosity toward the poor in these settings, they also received more negative feedback in the form of hostile interruptions from men on the comparatively rare occasions when they did venture into the conversation. Together, these tendencies cumulate to the very opposite of leadership.

8.6. Summary of empirical results

In sum, our study found that in the conditions typical of official decision making settings – majority-rule groups with fewer women than men, women tended to participate less and exercise less influence. We measured those behaviors in a number of concrete ways: by counting floor time and speaking turns, assessing how much women and men speak about women's distinctive priorities, counting the number of negative versus positive interruptions, and the group's decision to be generous to those who have the least. But when women formed a large percent of the group and the group used the adversarial procedures of majority rule, these procedures legitimated women's empowerment, and the gender gap closed (though it took a supermajority of women to eliminate the gap completely). However, changing the group's gender composition was not the only remedy for women's disempowerment. When women were few, they benefitted from the consensus conversational norms prompted by the imposition of unanimous rule.

These findings suggest a partial solution to the puzzle of women's numbers. As we noted, women's numbers have mixed and contradictory effects in several literatures. One possible reason is that the institutional arrangements are not sufficiently accounted for. The numbers work conditional on procedural rules and conversational norms. Large numbers help when norms and rules legitimate women's numerical power, but the pernicious effects of low numbers can be substantially ameliorated when norms and rules legitimate women's individual veto power.

9. Beyond decision rules

Our research has primarily focused on how two common decision rules affect women's participation and authority, but are other structural possibilities beyond unanimity and majority rule possible? In our view, the key is establishing norms of equal authority, and rules are only one avenue to the creation of such norms. For example, research by Smith (2014) points to other aspects of institutional arrangements that determine whether women's presence translates into women's authority. Smith used a city-level dataset of hundreds of American cities. Her goal is to study the policy effects of women mayors, but she measures the presence of a woman mayor using the percentage of county commissioners that are female. The percentage is used as an indicator of the likelihood of the mayor also being female. She finds that this percentage matters when the mayor's office is institutionally empowered vis a vis other local offices (e.g., a strong mayor in a weak council system). When institutions empower female leaders, their larger presence translates into influence over spending decisions on the issues women tend to care more about, such as the proportion of funds spent on children/youth or abused spouses.

Another tack to take following the logic of institutional arrangements is to use discussion procedures that include women. Unanimous rule is not the only way to accomplish a dispersion of power to promote gender equality. Formal rules could include the requirement of a super-majority, which is more feasible than unanimity. Other rules might include formal turn-taking, a set allocation of equal floor time to each person, and the requirement that each member speak at least once about their pre-discussion views. One application already exists within the US Congress – allocating formal turns with predetermined speaking time to each member, along with easy access to the queue for speaking opportunities.[14] Pearson and Dancey (2011a) show that even after controlling for political party, women were also significantly more likely than men to give one-minute floor speeches and to give speeches in advance of important floor votes taken in the 103rd and 109th Congresses. The researchers hypothesize that such floor speeches are a response to the challenges faced by women working in an institution heavily dominated by men and where other paths to influence might be obstructed, but regardless of the specific motivation, the results

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[14] Party leaders exercise little gatekeeping over one-minute speeches (Pearson & Dancey, 2011a, 2011b). Speakers are granted time in the order in which they arrive on the floor, with parties alternating turns. Other than the one-minute time limit, the only constraint is the overall number of speeches allowed on a given day, which is determined by the speaker. Perhaps because of this relative ease of access, speeches are tools primarily used by "backbenchers" and other legislators who are less central to the policy-making process or otherwise less able to shape policy via alternate avenues (Maltzman & Sigelman, 1996).

show that with respect to some forms of talk and under certain procedures, women are not always quiescent and can find ways to be visible, even when heavily outnumbered. These results also indicate that even when women are few and the institutional rule promotes more adversarial norms, procedures that invite each person to speak her mind and guarantee the absence of interruptions can pave the way for more active verbal participation.

Finally, another approach now under investigation consists of sending cues from accepted leaders. Karpowitz, Monson, and Preece (2015) conducted a field experiment of the effect of instructions from authorities on electing women in a state with very low levels of women's representation. In this state, party candidates are chosen at a statewide convention, with convention delegates selected by vote at local neighborhood precinct caucus meetings. As we noted above, the precinct caucus meetings are evenly split between men and women, but in the Republican Party, the delegates elected to the statewide nominating convention have tended to be overwhelmingly (75–80%) male. In the field experiment, researchers worked with statewide party leaders and randomly assigned different neighborhood precinct chairs to receive different messages. Some chairs received a message encouraging them to recruit two or three women to stand for election as delegates to the nominating convention; other chairs were asked to read a special message from the party chair to everyone attending the meeting, emphasizing the importance of electing more women as delegates. This message was designed to send cues about the importance of a norm of gender equality. A third group was asked to both recruit and read the special message, and a control group received a letter that reminded them about their caucus responsibilities but said nothing about gender.

The researchers find that both the recruitment and special message conditions increased the proportion of women elected as delegates slightly, but doing both together increased the number of precincts electing at least one woman by about 8 percentage points and the overall proportion of delegates who were women by nearly 5 percentage points. In practical terms, this would have meant hundreds of additional women at the convention. In other words, cues from respected party leaders can have a dramatic effect on women's representation, even in parties where gender disparities are largest and where party members are ideologically more skeptical of more aggressive interventions like quotas.

10. Conclusion

Society trains people to view women as less authoritative. It is no surprise, then, that women are still scarce in official political positions and that much of that scarcity comes from women's reluctance to assert formal authority. This gendered expectation has subtle but important consequences for women's influence within formal decision-making groups, where democracy is anchored, and for women's general authority in a society that still relies on face-to-face meetings. Such meetings continue to be a central means of conducting collective life, whether in politics, education, civic associations such as churches or clubs, and the workplace. The authority deficit not only produces formal groups where women are scarce, but then further plays out in group discussion in those same groups: women are less assertive, and their audience is less likely to listen to them with respect when they talk, culminating in women's relative influence gap with men over group decisions and in perceptions of which individual is influential. Coming into a group discussion with an authority deficit means that unless something proactive is done to equalize authority for women, women will speak less, speak what's on their minds less, and be listened to less than men.

Groups can remedy this deficit in one of two ways. They can balance numbers such that women are a clear majority in the group. That works as long as the discussion procedures signal the legitimacy of the majority of those present, because it implicitly allows the average woman to talk as much as the average man and to express her genuine views, and it prompts the average man to treat a woman with respect while she talks. Alternatively, a group can go some ways to ameliorating gender inequality when women are few by using rules or practices that signal the importance of each group member or establish other consensus-seeking discussion procedures.

The challenge of the findings we have reviewed here is that political life often occurs in a setting that may inhibit the cause of women's leadership – majority rule with few women. But neither the gender composition of meetings nor the rules by which groups discuss and decide are immutable. Changing those features has the potential to alter norms of group interaction and ultimately help remedy the deficits of voice, influence, and authority that women often face. Whether or not such changes are made is itself a question of political will and, yes, leadership.

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