

The Suffragist Peace

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Abstract: Preferences for conflict and cooperation are systematically different for men and women. At each stage of the escalatory ladder, women prefer more peaceful options. They are less apt to approve of the use of force and the striking of hard bargains internationally, and more apt to approve of substantial concessions to preserve peace. They impose higher audience costs because they are more approving of leaders who simply remain out of conflicts, but they are also more willing to see their leaders back down than engage in wars. Unlike men, most women impose audience costs primarily because a leader behaved aggressively in making a threat, not because the leader endangered the state's bargaining reputation through behaving inconsistently. Many of these differences, and possibly all, span time periods and national boundaries. Women have been increasingly incorporated into political decision-making over the last century through suffragist movements, raising the question of whether these changes have had effects on the conflict behavior of nations consistent with their large effects in other areas, such as the size and competencies of governments. We find that the evidence is consistent with the view that the increasing enfranchisement of women, not merely the rise of democracy itself, is the cause of the democratic peace.

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Preferences for conflict and cooperation are systematically different for men and women. At each stage of the escalatory ladder, women prefer more peaceful options. They are less apt to approve of the use of force and the striking of hard bargains internationally, and more apt to approve of substantial concessions to preserve peace. They impose higher audience costs because they are more approving of leaders who simply remain out of conflicts, but they are also more willing to see their leaders back down than engage in wars. Unlike men, most women impose audience costs primarily because a leader behaved aggressively in making a threat, not because the leader endangered the state's bargaining reputation through behaving inconsistently. Many of these differences, and possibly all, span time periods and national boundaries. Women have been increasingly incorporated into political decision-making over the last century through suffragist movements, raising the question of whether these changes have had effects on the conflict behavior of nations consistent with their large effects in other areas, such as the size and competencies of governments. We find that the evidence is consistent with the view that the increasing enfranchisement of women, not merely the rise of democracy itself, is the cause of the democratic peace.

In Aristophanes' play *Lysistrata*, the women of Greece famously decide to withhold sexual privileges from their husbands and lovers to force the men to negotiate peace in the Peloponnesian War. Perhaps less well-remembered is that much of the rest of the play involves a confrontation between the sexes that ultimately results in peace talks, but not before the women make their own preferences for peace heard (Aristophanes 1925). Public opinion research in the contemporary United States is consistent with this ancient gender divide on the use of force. It is well-established that women, while not completely dovish, are generally less supportive of war than men. Indeed, Brooks and Valentino assert that “the divergence between men and women in support for the use of force represents the largest and most consistent gender gap measured since the advent of systematic public opinion polling” (Brooks and Valentino, 2011, pp. 270-286).

Yet, as with other studies of public opinion, a significant question is whether and how public opinion cleavages actually influence foreign policy decisions and international outcomes. Public opinion research in international relations generally struggles with the so-called “aggregation” problem, moving from individual preferences to policy outcomes, via politics that filters through institutions, strategic context and regime type (Hafner-Burton et al., 2017). How, exactly, do differences in male and female preferences matter for international relations?

In this article, we use data from both the individual and international levels to show how the increasing enfranchisement of women influenced behavior in the international system. We analyze the average difference between men and women in their political preferences at each decision point in standard formulations of international crises; we show how extending suffrage to women changes the composition of the electorate and how these changes interact with domestic political institutions and strategic contexts to influence state decisions to make threats and engage in war. We find that

the evidence is consistent with the view that the increasing enfranchisement of women, not merely the rise of democracy itself, is the cause of the democratic peace. Our analysis bridges the individual and international levels to show how the gender gap on the use of force matters, contributing to the growing positivist study of gender and international relations (see Reiter 2015 for a review).¹

At the individual level, we perform a meta-analysis of survey experiments that test public opinion on issues of war and peace. Although the gender gap on the use of force has been explored extensively in polling data (see, e.g. Eichenberg 2003, 2016, Hudson et al. 2012, Goldstein 2003, 303-5, 329-30), the analysis of survey experiments allows for a fine grained analysis of sex differences in popular preferences over the range of international crisis bargaining outcomes. We examine how the sexes view the standard crisis bargaining outcomes: staying fully out of a conflict, coercing a negotiated outcome, backing down and engaging in a successful or unsuccessful war. The experiments cover a wide geographic area, including four continents and both developed and developing countries, allowing us to verify that gender effects are not specific to North America and Western Europe. The results at the individual level are unequivocal: women are more hesitant to approve of the use of force, less desirous of negotiated outcomes that appear as substantial impositions on adversaries, and more willing to see their government back down rather than use force once a threat has been made, although they do impose audience costs though for quite a different reason: because a leader behaved aggressively in the first place. These results comport with Goldstein’s wide-ranging study of gender

¹Recent scholarship has brought nuance to the conventional distinction between “gender”—as related to the social construction of sexual differences—and “sex”—as related to biological differences (see, for example, McDermott and Hatemi 2011, Hatemi et al. 2012; see also Goldstein 2003, 2 for a discussion). While we recognize the complexity of these concepts and the underlying phenomena, the data available to us does not distinguish between them. Our data is based on individuals self-identifying as male or female, which is highly correlated with more nuanced conceptions of sex and gender but does not allow for further differentiation. As a pragmatic choice, we use the term “sex” in reference to this variable, while recognizing that the active causal factor may very well be related to identity, cultural expectations, life experiences, or other correlates of reported sex. We agree with McDermott and Hatemi (2011) and Hatemi et al. (2012) that future work should explore conceptual refinements of sex and gender, and develop research strategies to examine how these relate to political behavior.

and war, which concludes that war is associated with men across cultures and time (Goldstein, 2001).

Moving from the individual to the national level, we develop a theory for how changes in the composition of the electorate, induced by suffrage, influence international policy. We show that such shifts in state preferences are likely to produce both monadic and dyadic effects internationally as a result of strategic interaction (Rousseau et al. 1996).

Finally, we estimate the effect of the preference shifts that resulted from the extensions of women's suffrage on state aggression. Using cross-national data on suffrage, we find evidence that the extension of suffrage is associated with both monadic and dyadic reductions in the use of force. As theorized, these effects are particularly strong in the presence of strong democratic institutions. Democratic institutions by themselves are not associated with a dyadic peace. Thus, the evidence is consistent with the theory that the enfranchisement of women, alongside other advances in democratic representation, are jointly responsible for the reduced levels of conflict among democratic countries. These effects hold across time periods and do not appear to result from other confounding factors, such as extensions of suffrage generally (Buono de Mesquita et al. 1999) as opposed to the extension of suffrage to women. In fact, other extensions of suffrage have no discernible effects on conflict behavior.

Although the scope of this paper does not allow for a full exploration of the sources of gender differences in preferences over the use of force or of the many possible ways that women's preferences influence national policy, we show clearly that these gender differences at the individual level generate important national-level constraints that affect international outcomes. The findings are strongly suggestive that as women entered the political sphere, they changed the composition of national electorates in ways that influenced national leaders.

Gender and Public Opinion: Aggregate- and Individual-Level Evidence

Beginning at early ages and spanning cultural contexts, males are more aggressive across a range of measures (Tapper and Boulton 2004, Hyde 1984, Whiting and Whiting 1975). Consistent with these differences in individual behavior, there is a well established gender gap in public opinion on the use of force, particularly in the United States, where much research has focused. As Conover and Sapiro (1993, 1079) note, “although American women as a group can hardly be classified as pacifist, they certainly appear less militaristic than American men” (Conover and Sapiro, 1993, 1079).

In perhaps the most comprehensive assessment of U.S. polling data to date, Eichenberg (2016) analyzes gender differences in public attitudes toward the use of military force in twenty-four cases from 1982 to 2013, including the wars in Afghanistan and Iraq and the crisis in Syria. He consistently finds that women are less supportive of using force; this result holds across time, the size of interventions (including smaller operations such as the deployment of Marines in Lebanon in 1983 or the airstrikes in Libya in 1986), and the partisanship of the president, although the magnitude of the gender gap varies. In another study, Eichenberg also finds that the gender gap appears to hold cross-nationally, though its size and nature varies by country and context (Eichenberg 2017). Those findings comport with the few studies that explore the gender gap in attitudes toward war outside the United States (see, for example, Tessler and Warriner 1997, Cohen and Jung 2018).

Scholars have explored the sources and limits of the gap. Focusing on public opinion in the context of the first Gulf War, Conover and Sapiro (1993, p.1080) usefully categorize explanations for the gender gap into those that focus on biological difference or early childhood socialization (“gender”), those that focus on the experience of motherhood (“maternalism”), and those that emphasize political activation of gendered views of war (“feminism”). As they note, many studies

moved away from biological determinism and emphasized instead “early differential socialization and experience.” Whether biological or social, however, the gender-based explanations “share an important implication,” namely that “differences between women’s and men’s orientations to war are founded in childhood or earlier and cannot be explained away by any other aspects of their lives.” They find the most support for gender explanations and some for feminist arguments, but little support for maternalism.

Women and men differ in many ways, and in principle many of these differences could account for the gender gap in polling data. For example, in the context of political economy, Iversen and Rosenbluth (2006) find that women’s labor market opportunities have affected their support for left-leaning parties and thus the gender gap in political preferences. However, echoing Eichenberg (2016, pp. 139-140), we note that a substantial gender gap in polling data has been persistent across decades, suggesting that it cannot be entirely explained by characteristics that have varied substantially over time, such as partisanship, ideology, or women’s skill, labor, or education profiles. Rather, the gap is likely caused by some persistent characteristic, such as sex.

The gender gap is not a simple pacifism, however, and can be moderated by politics or context. Using experimental data, Brooks and Valentino (2011) find that the gender gap can be moderated under conditions related to political feminism, such as whether the war stakes are humanitarian rather than strategic. Indeed, Eichenberg (2016) also found evidence that women are more supportive of the use of force under humanitarian circumstances, and that during the wars in Iraq and Afghanistan, the gender gap decreased as men became more sensitive to casualties.² Women are not wedded to

²Chaney, Alvarez and Nagler (1998) find that different views on the use of force contribute to the gender gap in presidential elections. Eichenberg and Stoll (2012) found that women were less supportive of defense spending on average, but that men and women’s support for defense spending co-moved over time and were responsive to similar factors.

an extreme pacifist position. Rather, they seem to have a more baseline dovish preference in many situations (such as those with more strategic stakes), but this preference responds to and interacts with information and context.³ As McDermott (2015, p. 755) suggests, “arguments that men and women are more or less likely to fight appear too simplistic; rather, it is worth considering that men and women may possess different motivations for fighting, and fight under different circumstances and for different reasons.”

Still, most of the findings to date—with the notable exception of Brooks and Valentino (2011)—are based on observational surveys with relatively simple “for-or-against” questions. This data admits to multiple interpretations because the counterfactual policies, then and earlier in the crisis, are not always clear. At a particular stage of a crisis a respondent may support escalating to war, against backing down or staying out, even while they might have more strongly preferred other pacific policies. For example, it is entirely consistent for a respondent to support the use of force, given that their President has publicly threatened it (Fearon 1994, Tomz 2007, Trager and Vavreck 2011), while disapproving of their President’s making of the threat in the first place (Kertzer and Brutger 2015). To more cleanly disentangle policy preferences under different crisis conditions, we now turn to a meta-analysis of survey experiments; here we also find that men’s and women’s preferences for conflict persist across a range of contexts.

A Meta-Analysis of Gender in Recent Survey Experiments

To understand the differences between men and women more precisely, we conduct a meta-analysis of international conflict survey experiments. These studies have been influential in the revival of individual-level and behavioral approaches to international relations (see Hafner-Burton

³In the extreme, women can also be perpetrators of violence, as the work of Cohen (2013) shows.

et al. 2017 for a review). Yet most of these studies gloss over or ignore entirely the gender gap. As this section demonstrates, hidden within these studies are important insights into how and why women and men differ in their attitudes toward war and conflict.

These experiments provide a unique source for drawing inferences about the effects of sex because they are designed to isolate factors considered by the field to be important determinants of conflict. This allows us to examine sex differences at each stage of a crisis, and with respect to all the options in the canonical international relations escalatory decision tree. We are able to analyze sex differences not just over war and peace, but over negotiated solutions, backing down, and successful and unsuccessful uses of force.

For the meta-analysis, we use the what we believe to be the universe of experiments through 2016 conducted by international relations scholars on representative samples of national populations that describe a potential or actual international conflict, and ask respondents about their preferences over crisis bargaining outcomes. All experiments in this universe recorded the sex of respondents and thus the analysis includes all such experiments for which data was available (for more details see the Part F.4 of the Online Appendix). We also conducted four original experiments in four different countries. In total, we analyze nineteen studies comprising more than 20,000 respondents from 6 countries and 4 continents.

The survey vignettes of these studies offer diverse reasons for the use of force across a range of contexts. Tomz and Weeks (2013) study the response of British and U.S. populations to using force to prevent nuclear weapons acquisition, while Flores-Macías and Kreps (2015) study the support in those same populations for protecting an ally, humanitarian intervention, and regime change. Tago and Ikeda (2015) examine Japanese support for the use of force alongside the U.S. in the service

of democratic regime change in the Middle East, while Grieco et al. (2011) examine action in East Timor. Gottfried and Trager (2016) analyze a conflict with Russia in the Arctic, while Press, Sagan and Valentino (2013) study an attack on an Al Qaeda nuclear weapons lab in Syria. The original data we collect come from experiments in Egypt, Israel, Turkey and the United States. Each of these experiments ask similar questions about a resource conflict in the Mediterranean or, in the case of the U.S., in the Arctic (details on these studies in Part F.5 of the Appendix).

We turn first to an examination of sex differences in preferences for the use of force. To perform the meta-analysis, we restrict attention to vignettes that describe either a use of force in the future or a successful use of force in the past. Some of these experiments included a description of a conflict as a treatment alongside other treatments describing peaceful outcomes, and other experiments included only a question about a choice to engage in conflict following a description of an international context. We exclude vignettes describing unsuccessful uses of force because reactions to these may conflate reactions about the use of force itself or about the defeat. When participants were asked if force should be used or should only be used under a more restrictive set of conditions, we only coded the unrestricted use of force option as advocating the use of force.

In every study, support for the use of force is higher among men than among women. The average level of support among men is just over 50% while the average support among women is only 38%, a 14 percentage point difference which is highly significant ($p < 10^{-56}$). These effects span the globe to a remarkable degree.⁴ The difference between the sexes in approval of the use of force over Mediterranean resources is 14% ($p < .01$) in Egypt and 12% in Turkey ($p = .0001$). Each of the U.S. and U.K. studies are individually significant at conventional levels, and the pooled difference of 12%

⁴See Appendix F.1 on cross-cultural and cross-regional similarities.

Study	Country	Approval of Force		Sex	Study N [†]	Reason for Use of Force
		Male	Female	Difference		
Brutger and Kertzer (2016)	United States	46%	38%	7%	489	Protecting foreign state.
Flores-Macias and Kreps (2015)	United States	47%	36%	12% ***	2,500	Protecting ally, humanitarian, or regime change.
Flores-Macias and Kreps (2015)	United Kingdom	46%	33%	13% ***	2,122	Protecting ally, humanitarian, or regime change.
Gottfried and Trager (2016)	United States	44%	33%	11%	177	Resource conflict with Russia.
Grieco et al (2011)	United States	53%	38%	14% ***	1,036	Protecting East Timor.
Ikeda and Tago (2014)	Japan	49%	28%	21% ***	1,001	Stopping autocratic repression.
Press, Sagan and Valentino (2013)	United States	72%	67%	5%	766	Al Qaeda nuclear weapons lab in Syria.
Tago and Ikeda (2013)	Japan	53%	26%	26% ***	1,001	Democratic regime change in Middle East.
Tomz and Weeks (2013)	United States	54%	42%	12% ***	1,273	Nuclear weapons acquisition.
Tomz and Weeks (2013)	United Kingdom	34%	20%	13% ***	762	Nuclear weapons acquisition.
Trager and Vavreck (2011)	United States	70%	40%	30% ***	173	Protecting strategic country.
Original Data						
Egypt (2016)		54%	41%	14% **	513	Mediterranean resource conflict.
Israel (2016)		41%	37%	4%	687	Mediterranean resource conflict.
Turkey (2016)		68%	55%	12% **	554	Mediterranean resource conflict.
United States (2016)		51%	33%	18% ***	1,017	Artic resource conflict.
Overall Average (Weighted by Study Size)		51%	38%	14% ***	14,071	

* $p < .05$, ** $p < .01$, *** $p < .001$. Egypt, Israel and Turkey original data indicates percent of respondents marking above 5 on a 10-point scale.

† Indicates number of respondents asked about the use of force or administered a use of force treatment, which is often less than the total respondents in the study.

TABLE 1: CONFLICT PREFERENCES BY SEX IN FIFTEEN EXPERIMENTS.

has $p < 10^{-24}$. In the two studies from Japan, the difference in approval levels by sex is a remarkable 23 percentage points ($p < 10^{-27}$). In fact, the difference between male and female support is highly significant in each study of at least 500 respondents with the sole exceptions of our original study conducted in Israel ($p = .1$), which is consistent with Tessler and Warriner (1997)'s findings, and the Press, Sagan and Valentino (2013) study in which approval of an attack on an al Qaeda nuclear weapons lab is high for both sexes ($p = .15$). These results are presented in Table 1.

It is worth emphasizing that these findings do not mean that women are either uniformly or unalterably opposed to the use of force. Indeed, the weighted average of approval for force in all 15 studies is 38% among women, with many studies showing support in the 30-40% range. Furthermore, prior experiments that explicitly explore the gender gap on war (e.g., Brooks and Valentino 2011) as well as observational data (e.g., Eichenberg 2016) suggest that women support the use of force in particular contexts.⁵ Indeed, although an exploration of individual treatment effects (and possibly variation by gender) is beyond the scope of this paper, it is likely that some existing survey experiments, as reported, are averaging over interesting sex differences in treatment responses, which in turn are affected by baseline differences in attitudes.

In this vein, it is particularly useful to consider the Tomz and Weeks (2013) experiment on public opinion and the democratic peace, which examined public support for military strikes against a democracy or an otherwise identical autocracy and is thus the individual-level study of most direct interest to this paper.

In their US sample, they report 53% of respondents support a strike if the target was not a

⁵The data does not include Sagan and Valentino (2017), which examines support for escalation to nuclear or conventional bombing in the course of a war that has already begun. Intriguingly, this study finds little difference between men and women on this question and even some evidence that women may be more willing than men to escalate to nuclear weapons use to protect U.S. soldiers' lives.

Tomz and Weeks (2013) US	Full Sample	Men	Women	Sex Diff
Not a democracy	53%	61%	46%	-15%***
Democracy	42%	46%	39%	-7%†
Effect of democracy	-11%***	-15%***	-7%†	8%
95% C.I.	(-17 to -5.9)	(-22.8 to -7.2)	(-14.7 to 0)	(-18.6 to 3)

Tomz and Weeks (2013) UK				
Not a democracy	34%	41%	24%	-17%***
Democracy	21%	25%	17%	-8%†
Effect of democracy	-13%***	-16%***	-8%†	9%
95% C.I.	(-19.5 to -.7)	(-25.1 to -7.5)	(-16.3 to 0)	(-20.8 to 3.7)

* $p < .05$, ** $p < .01$, *** $p < .001$. † $p < .1$

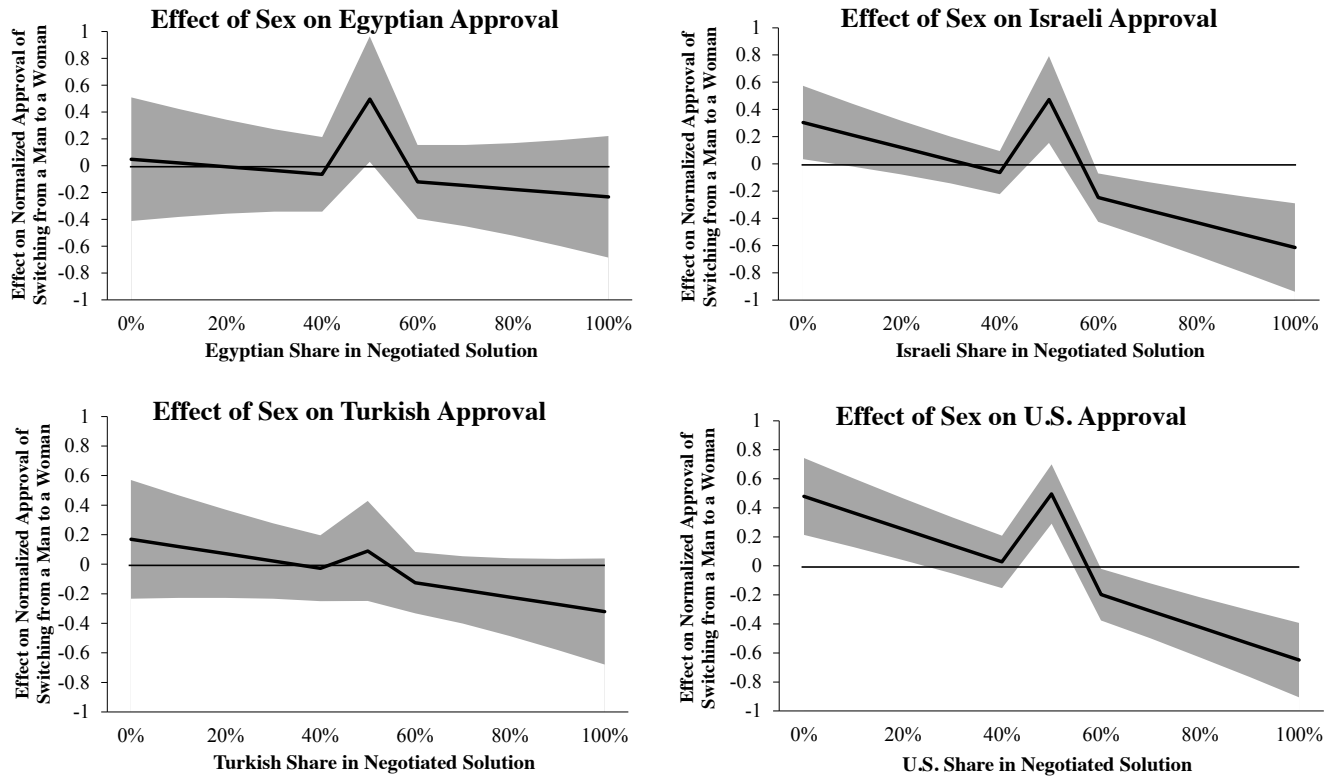
TABLE 2: ANALYSIS OF TOMZ AND WEEKS (2013) BY GENDER

democracy, versus 42% if the target was democratic. Breaking this result down by sex, however, reveals a striking pattern. Among men, 61% support a strike against an autocracy, versus 46% against a democracy. But among women, 46% support using force against an autocracy, versus 39% against a democracy. Women’s views of striking an autocracy (54% oppose vs. 46% favor) almost exactly mirror men’s views of striking a democracy (54% oppose vs. 46% favor). The difference-in-differences in the effect of regime type across sex is not statistically significant, but this lack of significance itself stems from an interesting difference in male and female attitudes. Women’s already-low baseline (below 50%) for striking an autocracy may leave less room for their views to be moved by subsequent treatments. If the target is a democracy, support for a strike falls under 50% for both men and women, with men only 7 percentage points more likely to support striking a democracy, significant only at $p = .06$. For an autocratic target, however, the difference between male and female support is a highly statistically significant 15 percentage points. Although results for the United Kingdom show treatment effects of very similar magnitude in terms of regime type

across sex, in the UK both sexes have lower baseline support for war across regime types, with 41% of UK men approval for striking an autocracy. Expanding suffrage to women would thus pull down overall support for using force against both democracies and autocracies. These findings, presented in Table 2, connect to our theoretical argument and aggregate-level finding: that female suffrage points to not only a dyadic democratic peace, but also a monadic democratic peace.

Of course, not all crises escalate to war. We now turn to an evaluation of sex differences in the evaluation of compromise outcomes. To do so, we use the four original experiments conducted in Egypt, Israel, Turkey and the United States, alongside data from Gottfried and Trager (2016), which all collected data on respondent approval at shares of negotiated outcomes. We hypothesized that women would be more accepting of lower shares of a negotiated outcome, as well as less approving of higher shares because “greedy” foreign policy incurs a greater risk of war. In spite of interesting cross cultural differences in approval, the effects of sex differences in each country are consistent with this hypothesis.

This can be seen graphically in Figure 1, which shows predicted effects from linear regressions of approval of negotiated outcomes in terms of differences from country-gender-means. Each country regression included the first three terms of the Taylor series of the country share in the negotiated outcome, a dummy variable for a 50% share, respondent sex and respondent sex interacted with the 50% dummy and the country share variables. The figure shows the predicted effects on approval of switching from a man to a woman at levels of the negotiated share variable. In all four countries, women are estimated to have higher approval at lower shares of the negotiated outcome (relative to the country-gender-mean) and lower approval at high shares of the negotiated outcome. The effects of gender are strongest in the United States and Israel, where more data was also available, but the



Note: Approval of Egyptian, Israeli, Turkish and U.S. preferences measured on a 10-point scale to avoid direct disapproval of government policy. Graphs represent predicted values from linear regressions on approval levels in terms of distance from gender means. The regression equation included the first three terms of the Taylor series of the country share, a dummy variable for a 50% share, respondent sex and respondent sex interacted with the 50% dummy and the country share variables.

FIGURE 1: SEX DIFFERENCES IN PREFERENCES FOR NEGOTIATED OUTCOMES.

effect of sex in the other two countries was consistent with the same overall pattern. Women also show consistently higher approval levels at a 50% share.⁶

We next turn to how men and women evaluate leaders who back down from a threat versus those who remain out of a conflict entirely, which is known as the audience cost (Fearon 1994). We examine four studies conducted on representative samples of the U.S. population and comprising over 7,000 respondents in total. The results are shown in Table 3. It is apparent that both men and women

⁶See Part F.2 of the Appendix for description of two formal tests of this hypothesis.

Study	Male Approval		Female Approval		Audience Cost (SO-BD)		Audience Cost Dif.	Study N [†]
	Stay Out	Back Down	Stay Out	Back Down	Men	Women		
Brutger and Kertzer (2016)	51%	30%	61%	26%	21%	35%	13%	453
Horowitz and Levendusky (2012) [‡]	30%	13%	36%	15%	17%	21%	4%	1,108
Tomz (2007) [§]	29%	21%	30%	17%	8%	13%	5%	3,123
Trager and Vavreck (2011) ^{§§}	37%	19%	45%	22%	18%	24%	6%	2,336
Weighted Average	33%	20%	38%	19%	14%	19%	6% ***	7,020

* $p < .05$, ** $p < .01$, *** $p < .001$.

† Indicates the number of respondents given the Stay Out or Back Down treatments. ‡ Includes all audience cost conditions that do not involve new information arising during the crisis. § Includes Back Down conditions that do not involve the use of force since those that do could be categorized as Unsuccessful War. §§ Pools data for studies 1 and 2 from this article.

TABLE 3: SEX DIFFERENCES IN STAYING OUT VERSUS BACKING DOWN.

impose audience costs: approval for both is much higher for leaders who remain out of a conflict and do not threaten force than for leaders who make a threat on which they do not follow through. In each of the studies, the audience cost imposed by the women is higher than that imposed by the male population, but in no study considered in isolation is the difference between the sexes statistically significant. When we pool the data from all four studies, however, we see that the sex difference in audience costs is highly significant at the $p < .001$ level. As we shall see in a moment, however, women tend to impose these audience costs for a different reason than men.

Lastly, we examine sex differences in evaluations of the decisions at the final stage of the game tree: using force versus backing down. Only two studies examine popular reactions to this crucial leadership decision. We pooled experimental conditions that describe a use of force without describing the result with those that describe a successful use of force; only one study included an unsuccessful use of force condition. The results are shown in Table 4. In spite of the relatively small numbers of respondents, the differences between the sexes are striking and highly statistically significant. Well over half of men approve of a successful or an unsuccessful war whereas only 39% of women approve

Study	Approval			War - Backdown	Unsucc. War - Backdown	N [†]
	Back Down	Engage Mil./ Successf. War	Unsuccessf. War			
Men						
Brutger and Kertzer (2016)	30%	46%	-	16%	-	384
Trager and Vavreck (2011) [§]	18%	70%	54%	52%	36%	231
Overall Average (Weighted)	25%	55%	54%	30%	36%	
Women						
Brutger and Kertzer (2016)	26%	38%	-	12%	-	334
Trager and Vavreck (2011) [§]	27%	40%	29%	13%	2%	279
Overall Average (Weighted)	27%	39%	29%	13%	2%	
Difference in Male Versus Female Averages	-1%	16% ***	25% ***	17% ***	34% ***	

* $p < .05$, ** $p < .01$, *** $p < .001$.

† Indicates the number of respondents given the Back Down or War treatments. § Data from Study 2 because only that study contains both Back Down and War treatments.

TABLE 4: SEX DIFFERENCES IN FIGHTING VERSUS BACKING DOWN.

of a use of force that is successful or whose outcome is not described ($p < .001$). Only 29% of women approve of the unsuccessful use of force treatment condition ($p < .001$).

Most telling is to compare how men and women weigh the choice between backing down and conflict. Women are nearly indifferent between an unsuccessful use of force in which nothing is gained and their country's leader backs down after threatening force. Men, by contrast, would much rather see force used unsuccessfully than see the country's reputation endangered through backing down. Approval among men is fully 36% higher for a use of force that achieves nothing and in which over 4,000 U.S. soldiers die than when the U.S. president backs down and the same objective outcome is achieved without loss of life. For women, this difference is only 2%; the difference between backing down and engaging in an unsuccessful war for men versus women is significant at the $p < .001$ level. We find similar results when we compare backing down to successful uses of force. Thus, on average,

while women do not approve of backing down relative to simply staying out of conflicts in the first place, they are much more willing than men to see their states back down rather than engage in violent conflict.

Following the procedure used in Kertzer and Brutger (2015), we can use the data from this study to decompose audience costs into a cost for saying one thing and doing another (inconsistency) and a cost for making a threat in the first place (belligerency). The results are striking: while most men impose audience costs because of inconsistency and the threat to reputation that this implies, most women impose audience costs for belligerency. This analysis is presented in Part F.3 of the Online Appendix.

Overall, the analysis of international conflict experiments demonstrates that biological sex predicts substantial differences in preferences for conflict and cooperation, and that these differences are not limited to a few cultural contexts or geographic regions. While we do observe cross-national variation in the degree of preference difference between the sexes, most of these are not large enough to support the conclusion of systemic cross-national variation, though future research should certainly explore differential gender-construction and gendered conflict preferences. In the United States, where the most studies were conducted, women's preferences imply less support for more conflictual options at each stage of the escalatory ladder. While women impose larger audience costs for backing down versus staying out, relative to men, they nevertheless show higher approval for backing down versus engaging in any form of conflict. Thus, the balance of the evidence suggests that across geographic and cultural domains, and across the range of international conflict decisions, including women in the voting public increases electorate support for less aggressive policies.

Gender, Politics, and War

While public attitudes are important in their own right, do they actually impact decisions to wage war? As Eichenberg suggests, what we really want to know is not simply whether there are on average preference differences over international outcomes, but the conditions under which these differences matter for political outcomes and policy (Eichenberg, 2016, 147).

We argue that the extension of suffrage changes the composition of democratic electorates and thus the distribution of war preferences that democratic leaders confront. Of course, scholarship on public opinion and foreign policy in democracies suggests that elite cues are important for activating issue preferences (see Aldrich et al. 2006 for a review). But public opinion serves as an important constraint or outer bound on democratic leaders (Russett, 1990). Adding a large pool of voters with structurally different preferences is likely to change the calculus of political leaders as they contemplate the use of force. As Caprioli and Boyer (2001, 511) put it, “by gaining political influence through voting, women’s values should influence leaders’ decisions.”

The context-sensitive nature of women’s individual-level preferences on the use of force suggest that politicians can make arguments that will convince women that the use of force is necessary. But the presence of women voters makes the decision to present such an argument a politically different calculation for leaders. Indeed, Oneal and Russett (1999*a*, 12) note that differences in the franchise, especially for women, are a complicating factor in measuring democracy and that

the consequences of these restrictions on political participation may not be trivial. In the contemporary United States, for example, women are significantly more averse to the use of military force than are men and vote in part on this basis. Thus the exclusion of women from the franchise in earlier periods could have profoundly reduced the tendency

of even the most ‘democratic’ states to avoid conflict.

The extension of suffrage is thus a plausible factor restraining states from using force. Thus far, however, few studies have investigated the link between suffrage and peace. Women’s representation in legislatures has received more attention (Caprioli and Boyer 2001, Regan and Paskeviciute 2003, Clayton and Zetterberg 2018). In a study of female leaders and conflict intensity, Caprioli and Boyer (2001) include suffrage in their study of crisis severity, but explicitly treat it as a control, focusing instead on female representation in the legislature as a measure of gender equality. In a study of militarism, Caprioli (2000) examines suffrage more directly as a measure of political equality, but again in tandem with parliamentary representation, and for a more limited time period (1960-1992) than we examine here. In Hudson et al. (2013), suffrage is one of many factors connecting gender and peace.

A group’s preferences do not directly shape state behavior, but do so more or less depending on the group’s electoral power and political voice. To theorize the causal impact of a group’s preferences, we need to understand both the group’s preferences as well as the group’s ability to express those preferences in ways that matter. To a first approximation, the level of democracy determines the extent of public influence, and the existence of suffrage determines whether the voting public includes women; thus it is the two together that jointly determine whether and how much female preferences influence state behavior. This argument—that it is the interaction of democracy and suffrage that matters—echoes recent arguments in the literature on democracy and war. For example, Baum and Potter (2015) argue that the process of generating democratic constraint on the use of force depends on features such as the number of political parties or access to free media that provide citizens with sufficient information to exercise their ability to hold democratic leaders accountable.

Another complication arises when trying to theorize from preferences to behavior: state behavior is strategic in multiple senses, taking into account shifts in others' preferences and adapting strategies to circumstances. Specifically, while arguments for the suffragist peace focus on the (monadic) shift in preferences within a country, avoiding conflict may require a (dyadic) shift in both potential belligerents. This theoretical and empirical complication has been examined in the context of the democratic peace, with statistical analysis finding most support for a dyadic democratic peace.

The strategic channeling of pacifying preferences so that they only operate under dyadic shifts can be seen in a simple two-by-two conflict game. Suppose players simultaneously choose a conflictual or a moderate strategy, that peace obtains if and only if both sides choose the moderate strategy, and that there is a marginal benefit to one side in a conflict if the other chooses the moderate strategy. Finally, suppose the players are uncertain about their opponents' values for the peaceful outcome (the adversary may have Prisoner's Dilemma or Assurance Game preferences). In models of this sort, the peace loving preferences of one state may only influence the outcome when they are matched on the other side. This result, from a formal model described and analyzed in the Appendix (Part E), can be seen in Figure 2. If Player 2 is believed to be very aggressive, factors that influence the preferences of Player 1 will have no effect on the outcome at all. If Player 2 is not thought to be so aggressive, however, a shift in Player 1's preferences toward the peaceful outcome will decrease the likelihood of conflict. Thus, the effects of preference shifts are moderated by the other player's (observable) preferences: making one player more peace loving will have the greatest effect on conflict outcomes when the other player is sufficiently peace loving. We call this the dyadic suffragist peace because the peace only solidly obtains between countries that both have women's suffrage. In fact, however, the model predicts both monadic and dyadic effects of preferences in all areas of the parameter space

except in those in which either player is perceived to be extremely aggressive. In the analysis below, we examine the evidence for both a monadic and dyadic effect of suffrage. This theory does not require that actors understand that suffrage is a driver of state behavior, so long as they notice correlates of it such as signaling behavior.

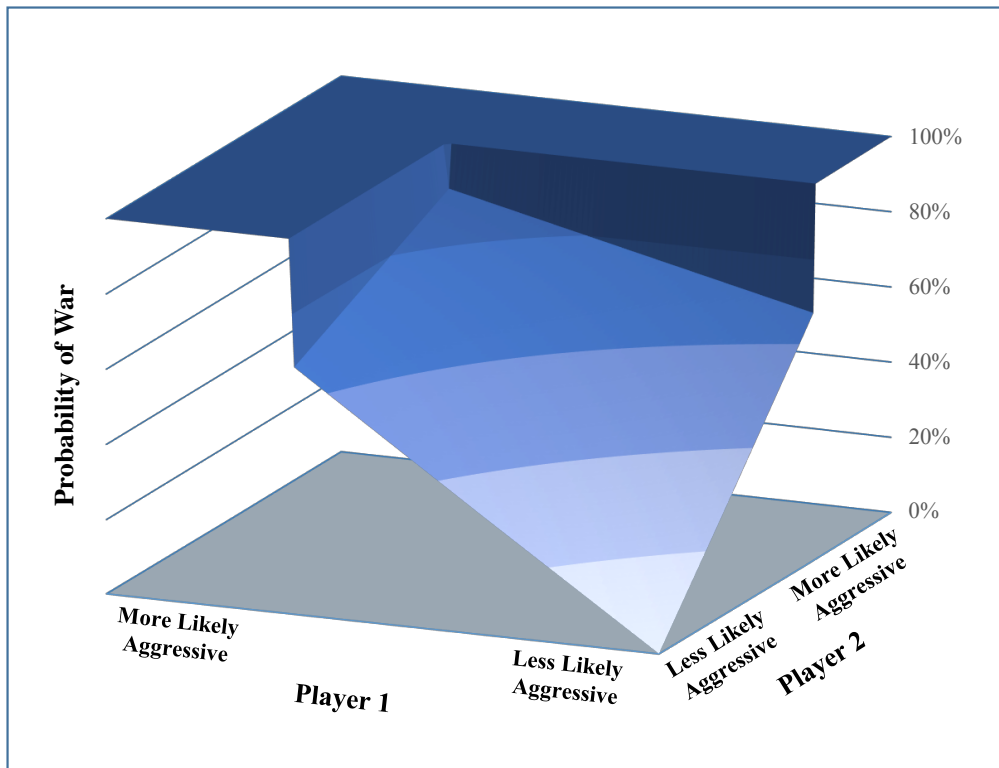


FIGURE 2: IMPLICATIONS OF MONADIC PREFERENCE SHIFTS.

Observational Research Design and Variables

We examine the cross-national evidence for a suffragist peace through the framework of standard statistical tests of the democratic peace over the period 1816 to 2010. In keeping with prior approaches to the study of the democratic peace, we analyze the relationship between women's suffrage

and conflict using non-directed dyadic data omitting all but the first years of World War I and World War II.⁷ Unless noted, variables are coded as described in Russett and Oneal (1999).

Dependent Variable: Involvement in Militarized Disputes

Our primary dependent variable is *Dispute*, which is coded 1 in the first year of a dyadic dispute in which one or both states threatened to use force, demonstrate the use of force, or used military force against the other and 0 in all other years. The data on dispute involvement within the models below is taken from Militarized Interstate Disputes dataset version 4.2.⁸ Models using alternative measures of interstate disputes coded by Gibler, Miller and Little (2016) and Maoz (2018) are also reported in the Appendix, Part B.7. Those models do not differ significantly from the results reported below.

Independent Variable: Female Suffrage

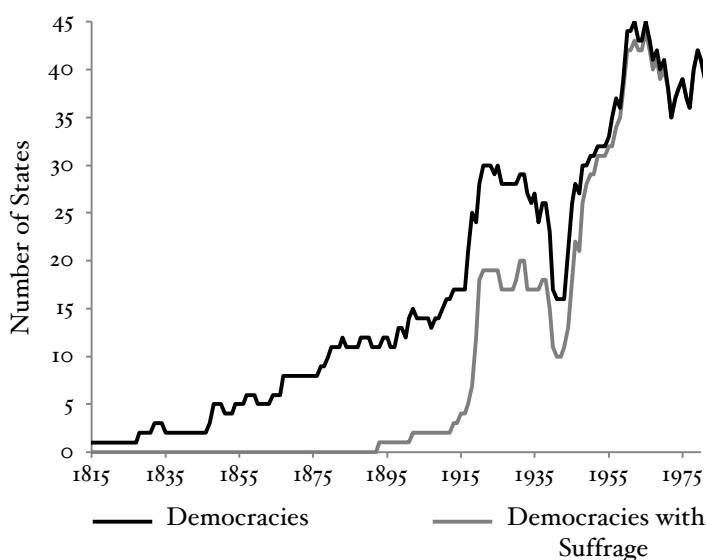
We first created a binary variable *Suffrage* coded 1 if any women within a state have been granted the right to vote in national elections and 0 otherwise.⁹ Within 160 countries, women's suffrage was granted to all women at the same time. Within 13 other countries, the right to vote was granted to women in stages according to different sets of conditions. Some constraints were unique. Within Belgium, for instance, war widows, mothers of those killed in war, and female political prisoners were granted the right to vote in 1919 while all other Belgian women of an equivalent voting age of men were not given the vote until 1948. Other states, such as Australia, Canada, and the US, first granted female suffrage on the basis of race while other states, such as Bolivia, Ireland, Romania and the United Kingdom, first granted female suffrage on the basis of literacy, property rights, or education

⁷Omission of other ongoing disputes does not affect the reported results.

⁸Palmer et al. (2015).

⁹Data on female suffrage was collected primarily using the United Nation's report on the *Progress of the World's Women* which lists the voting status of women by year in all 196 countries.

FIGURE 3: DEMOCRACIES WITH AND WITHOUT SUFFRAGE.



level, and only later adopted legislation allowing full female suffrage at an equivalent age as men. We estimate that within all but six of these 13 countries which adopted suffrage in a piecemeal fashion, the first wave of women’s suffrage created voting populations in which women constituted at least 40% of all eligible voters.¹⁰ The first wave of suffrage, therefore, represents on average the largest overall shift in the gender balance of the electorate within all but six of the 198 states included within the analysis. Though the effect of this substantial shift is our primary interest for this study, we also assess the effect of other measures of suffrage, including universal women’s suffrage and whether a national election has been held in which women were eligible to vote, within Part B.4 of the appendix.

Figure 3 illustrates the number of democracies that do and do not allow women’s suffrage within

¹⁰These six countries are Belgium, Iceland, Ireland, Nigeria, Romania and the United Kingdom. Additional information about the waves of female suffrage, including the logic behind these estimates and the timeline of women’s suffrage, can be found in Part A, pp. 1 - 5 of the appendix.

each year over the period 1815 to 2015.¹¹ The figure shows that while the number of democracies grew slowly but gradually over the 19th century, no women held the right to vote until 1893 when New Zealand became the first state to grant universal female suffrage, followed by Australia in 1902, Finland in 1906 and Norway in 1913. The graph shows a sharp increase in the number of democracies both with and without female suffrage in the period 1915 to 1922. Denmark, Canada, Austria, Germany, Ireland, the United Kingdom, and the United States, amongst others, adopted women's suffrage during this period. By 1955, all but two democracies, Sudan and Switzerland, had granted women the vote.¹²

As discussed above, we hypothesize that the interaction between women's suffrage and a state's level of democracy will determine the degree to which female preferences on the use of force constrain state behavior.¹³ We predict that the adoption of women's suffrage will have a dyadic effect, in which the probability of disputes will be lower within democratic dyads with joint suffrage than within autocratic dyads or democratic dyads without joint suffrage, and a monadic effect, in which suffrage will lower the overall dispute propensity of states as they become increasingly democratic, regardless of the type of state they are interacting with.

To assess the potential differential effects of women's suffrage as a function of the dyadic levels of democracy, we analyze both a set of models using continuous measures of democracy, matching the primary approach previously used in the literature, as well as, for purposes of robustness, a model using binary measures of democracy and suffrage. For the continuous measure of suffrage, we utilize

¹¹Democracies within this graph are those states that receive a score from the Polity IV dataset of 7 or higher within a given year.

¹²Sudan eventually granted female suffrage in 1958 and Switzerland in 1971.

¹³Women have been granted the right to vote in the vast majority of countries, including those that do not actively hold national elections. Only five states – Brunei, Saudi Arabia, Oman, Qatar, and The UAE – had not legalized women's suffrage by 1999.

the standard DEM_L variable which is obtained by first calculating the Polity score of each state, a value which ranges from -10 for extreme autocracies to 10 for the most democratic states, and then taking the lower of these two calculations within each dyad.¹⁴ The values of our primary variable of interest, $Suffrage-Democracy_L$ range from 0 to 10. The variable is coded 0 if neither or only one state within a dyad has granted suffrage in national elections to any women, or if the lowest democracy score in the dyad is zero or less. Within those dyads in which both states are thought to possess more democratic than autocratic features ($DEM_L > 0$) and in which both states have granted suffrage, the variable is coded as the lower dyadic democracy score. This coding enables us to assess the effect of female suffrage within countries with varying degrees of democracy. We also include a binary variable $Suffrage_L$, which is coded as 1 if both states have adopted suffrage and otherwise as 0. We then lag these variables by one year.

To assess the monadic effects of suffrage, we create the variable $Suffrage-Democracy_H$ which ranges from 0 to 10. The variable is coded 0 if neither state within the dyad has adopted suffrage or if the state with the highest democracy score has granted suffrage but its democracy score indicates that the state is more autocratic than democratic in nature ($DEM_H < 1$). If the most democratic state within the dyad possesses a democracy score of greater than 0 and has adopted female suffrage, the variable is coded as the higher dyadic democracy score. If the effects of suffrage are not solely dyadic but also monadic, we would expect the adoption of suffrage by more democratic states to correlate with lower rates of dispute propensity regardless of the characteristics of states they interact with. We also include in the models the binary variable $Suffrage_H$ which is coded 1 if one or both

¹⁴This data is taken from the Polity IV dataset. An analysis of the relationship between Polity scores and extent of suffrage is presented in Part A.2 of the appendix. As Oneal and Russett (1999b) notes, increases in the size of the voting population often do not correspond with increases in Polity scores. There are in fact numerous examples of states with Polity scores of 10 which have not granted women the vote. See also Paxton (2000) on issues of democracy measures and female suffrage.

states within the dyad allow women's suffrage and 0 otherwise, and DEM_H , which lists the highest Polity score within the dyad. Prior analysis of the democratic peace has shown that increasing the highest democracy score while holding the lowest democracy score constant correlates with an increase in conflict propensity. This finding is credited to the idea that states with more similar regime types are less likely to fight each other.¹⁵

We also created four dichotomous variables of suffrage and democracy. *Joint Democracy* is coded 1 if both states within the dyad are democracies (they possess a democracy score of 7 or higher) and otherwise as 0. *Joint Suffrage Democracy* is coded 1 if both states are democracies that have adopted women's suffrage and is otherwise coded 0. The variable *At Least One Democracy* is coded 1 if at least one state in the dyad is a democracy and otherwise is coded 0. Finally, the variable *At Least One Suffrage Democracy* is coded 1 if at least one state in the dyad is a democracy that has adopted women's suffrage. All of these variables are lagged by one year.

Measures of Gender Equality

Within some models, we also include two additional measures of gender equality in the analysis. In keeping with prior models of gender equality and conflict, we include a measure of the degree to which women are represented within formal political positions from 1900 to 2000, as collected by the Varieties of Democracy project.¹⁶ $Political-Participation_L$ lists the lowest measure of political participation within the dyad lagged by one year. In addition to proxying as a measure of gender equality, this variable enables us to test whether or not the gender gap in support for the use of force extends to the level of elite decision makers. We also include the variable $Civil-Liberties_L$, also taken

¹⁵See Oneal and Russett (1999b, p. 12).

¹⁶Prior measures of gender equality have focused on the percentage of women within lower chambers of government. We utilize the measure political participation more broadly largely because of the broader time frame and greater data availability within the VDem dataset.

from the VDem dataset, which provides a measure of the extent that women within the state have the ability to make meaningful decisions in their lives, lagged by one year.¹⁷

Additional Variables

In keeping with the standard empirical approach to the study of the democratic peace theory, we include the following control variables: *Noncontiguity*, *Capability Ratio*, *Alliance*, *Interest Similarity*, *Distance*, *Depend_L* and *Peace Years* (see Carter and Signorino 2010), among others, which are all described, for the sake of space, within Part D of the appendix.

Results

The results of five models of the relationship between suffrage and dispute involvement, estimated using logistic regression on non-directed, dyad data from 1816 to 2010 are presented within Table 5.¹⁸ Model 1 in the table assesses the relationship between dispute propensity and the four dichotomous measures of suffrage and democracy. Substantive analysis of this model is illustrated in Table 6. The table presents the difference in the predicted probability of conflict as a function of dyadic regime type. The first row indicates that dyads in which there is one autocracy and one non-suffrage democracy are 46% more likely to experience conflict than joint autocratic dyads. In contrast, the probability of conflict within dyads in which both states are democracies with female suffrage is 72% lower than the probability of conflict within joint autocracy dyads and 57% lower than conflict propensity within dyads with joint non-suffrage democracy.

Models 2 through 6 in Table 5 analyze the relationship between the continuous measures of suf-

¹⁷See Coppedge et al. (2016) for more information on the coding of this variable.

¹⁸For the sake of space, coefficients for the temporal controls and for the squared and cubed measures of distance are not presented within the table.

TABLE 5: DISPUTE MODELS.

<i>Variables</i>	<i>Model 1 Binary Model</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4 Fixed Effects</i>	<i>Model 5</i>	<i>Model 6 Male Suffrage</i>
<i>Dem_L</i>		-.081*** (.00)	-.039*** (.01)	.003 (.01)	-.002 (.01)	-.017 (.01)
<i>Suffrage_L</i>			.337** (.09)	.511** (.13)	.429** (.03)	
<i>Suffrage-Democracy_L</i>			-.127*** (.02)	-.148*** (.03)	-.106*** (.03)	
<i>Dem_H</i>		.043*** (.00)	.065*** (.00)	.016 (.01)	.019 (.01)	.043*** (.01)
<i>Suffrage_H</i>			-.347** (.12)	.238 (.18)	-.426 (.25)	
<i>Suffrage-Democracy_H</i>			-.057*** (.01)	-.041** (.02)	-.106*** (.03)	
<i>Joint Democracy (0/1)</i>	-.849** (.31)					
<i>Joint Suffrage Democracy (0/1)</i>	-.524 (.34)					
<i>At Least One Democracy (0/1)</i>	.379* (.16)					
<i>At Least One Suffrage Democracy (0/1)</i>	-.373* (.16)					
<i>Civil-Liberties_L</i>					-1.23*** (.24)	
<i>Political- Participation_L</i>					-1.07*** (.28)	
<i>Noncontiguity</i>	-2.04*** (.18)	-1.84*** (.12)	-1.78*** (.12)	-.541 (.36)	-2.19*** (.25)	-1.76*** (.14)
<i>Capability Ratio</i>	-.008 (.01)	-.005 (.01)	-.000 (.01)	.008 (.05)	-.016 (.01)	-.000*** (.01)
<i>Alliance</i>	.243** (.09)	.138* (.07)	.212** (.07)	-.298** (.11)	.263* (.11)	.097 (.08)
<i>Minor Powers</i>	-1.31*** (.11)	-1.37*** (.07)	-1.37*** (.07)	-1.09*** (.23)	-1.30*** (.14)	-1.42*** (.10)
<i>At Least One Nuclear Power</i>	.758*** (.12)	.543*** (.08)	.619*** (.09)	-.500** (.14)	.621*** (.14)	-.449* (.18)
<i>Joint Nuclear</i>	-.258 (.52)	.033 (.35)	.026 (.37)	-1.62*** (.45)	-.169 (.53)	.193 (.90)
<i>Trade</i>	-23.26* (11.75)				-3.88 (13.32)	
<i>Interest Similarity</i>	-1.03*** (.22)				-1.32*** (.26)	
<i>Year</i>	-.000 (.00)	.000 (.00)	.002 (.00)	-.001 (.00)	.008* (.00)	.002* (.009)
<i>Distance</i>	-.000*** (.00)	-.001*** (.01)	-.000*** (.00)	-.000 (.00)	-.001** (.00)	-.000*** (.00)
	N = 302,889	470,016	470,016	28,562	210,994	239,556

*** = Coefficients significant at the .001 level.

Robust standard errors clustered by dyad in parentheses below.

TABLE 6: PERCENTAGE DIFFERENCE IN PROBABILITY OF DISPUTE BY DYAD TYPE.

<i>Dyad Comparisons</i>	<i>Percentage Change</i>
Joint Autocracy → One Non-Suffrage Democracy/ One Autocracy	+46%*
Joint Autocracy → Joint Non-Suffrage Democracy	-34.7%
Joint Autocracy → Joint Suffrage Democracy	-72%***
Joint Non-Suffrage Democracy → Joint Suffrage Democracy	-57%***
One Non-Suffrage Democracy / One Autocracy → One Suffrage Democracy / One Autocracy	-28%**

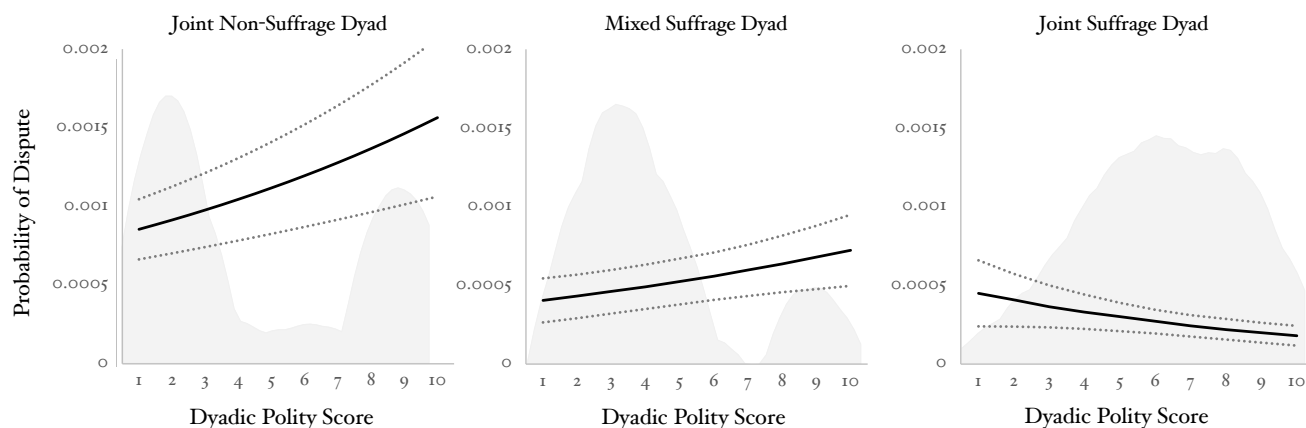
*** = Coefficients at the .000 level
 Results generated by holding all other dichotomous variables at 0 and all continuous variables at their means.
 The baseline probability of dispute for these comparisons are: .00311, .00311, .00311, .00327 and .0054.

frage and dispute propensity. Model 2 largely replicates the standard model of the democratic peace from Oneal and Russett (1999b), with the inclusion of variables accounting for nuclear capabilities. In keeping with prior results, the model shows that dispute involvement and the lowest democracy score are negatively and significantly correlated while high democracy score is positively and significantly correlated with dispute activity. Model 3 includes within this standard model our continuous variables *Suffrage-Democracy_L* and *Suffrage-Democracy_H*, as well as the component variables *Suffrage_L* and *Suffrage_H*. The coefficient for our primary dyadic variable of interest, *Suffrage-Democracy_L*, is negative and highly significant.

Figures 4 and 5 present the substantive interpretation of the relationship between dyadic suffrage and conflict propensity as estimated in Model 3.¹⁹ The three graphs within Figure 4 each depict

¹⁹The inclusion of additional variables within Models 3 and 4 above results in a significantly truncated dataset which excludes all data prior to 1900 and many data points between 1900 and 1950 where trade data is missing. We focus on

FIGURE 4: THE PROBABILITY OF DISPUTE AS A FUNCTION OF DYADIC SUFFRAGE.



The left graph shows the effect of increasing the shared dyadic polity score when neither state has adopted women's suffrage. The center graph in the center shows the effect of increasing democracy within dyads in which one state has adopted suffrage. The right graph shows the effects of increasing democracy within dyads with joint female suffrage.

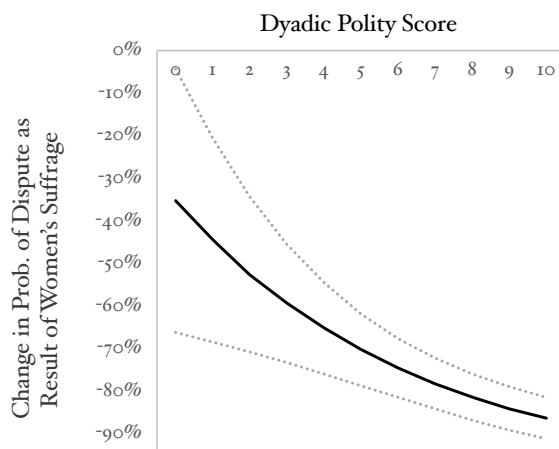
The grey areas are density plots of Dem_L for each type of dyad. The predicted probabilities in these graphs have been estimated for non-allied and non-nuclear minor power dyads, holding all continuous variables at their means.

the probability of disputes in dyads in which both states share the same polity score. As the graphs show, the effect of increasing dyadic levels of democracy on dispute propensity appears to depend significantly on the gender of eligible voters within the two states. An increase of dyadic democracy within male-only voting populations is associated with a significant increase in the likelihood of conflict while an increase of dyadic democracy within joint-suffrage dyads is associated with a significant decline in conflict propensity.

Figure 5 presents the percentage difference in the predicted probability of conflict between joint suffrage dyads and dyads in which neither state allows women's suffrage. The figure illustrates the significant decline in dispute involvement that correlates with the joint adoption of female suffrage within increasingly democratic societies. The probability of disputes within dyads in which both

the substantive interpretation of Model 3 in the manuscript because of the broader time frame it allows us to consider.

FIGURE 5: CHANGE IN DISPUTE PROPENSITY AS A RESULT OF JOINT SUFFRAGE.



states possess Polity scores of 7 and in which neither state has granted women the right to vote is, for instance, 79% higher than in otherwise-identical dyads with joint female suffrage. The pacifying effects corresponding within dyadic women's suffrage become even more prominent as dyads become more democratic.

Model 4 in Table 5 shows that the relationship between dyadic suffrage and dispute propensity exists when dyad-decade fixed effects are included: that is, a fixed effect not only for every dyad and for every decade, but for every combination of these. Such a specification means that the coefficients are identifying off of within dyad-decade variation only, and are not arising from cross-country or multi-decadal confounding.

Model 5 shows that this result holds up when controlling for trade, interest similarity, and measures of women's political participation and civil liberties. Model 5 also confirms prior findings, showing that both women's political participation and civil liberties are negatively correlated with

dispute involvement.²⁰ Substantively, an increase in the measure of women’s political participation in government by one standard deviation correlates with a 38.4% decrease in the probability of conflict ($p < .001$). This finding suggests that the gender gap regarding the use of force may extend to the voting behavior of some political elites. A one standard deviation increase in women’s civil liberties similarly correlates with a 28.7% decline in dispute propensity ($p < .001$).

Model 6 provides further evidence that female suffrage convincingly explains the democratic peace. The model assesses the effects of the standard DEM_L variable on a subset of the dataset from which all dyads with at least one democracy (those with democracy scores of 7 or higher) with female suffrage have been omitted. The results of this model suggest that, in contrast to prior findings, increasing levels of democratization do not significantly correlate with a decline in dispute propensity. The coefficient for Dem_L is negative, though not close to significant at traditional levels.

In order to further probe the dyadic effects of gender on democratization, we analyzed the standard model of the democratic peace (Model 1 above) over the period 1816 to 1892 when all democratic states prohibited women from voting. We find that an increase in the low dyadic democracy score from 0 to 10 during that period was associated with a 38.8% *increase* in dispute propensity ($p < .05$).²¹ The aggressive behavior of the United States, France and Great Britain, each of which had a democracy score of 7 or higher during this period, likely explains a significant proportion of this increase. And yet, as results in the appendix show, omission of those three powerful states from this analysis does not significantly alter the results.

We also analyzed the effects of democracy and suffrage during the specific period of 1890 to 1930,

²⁰See Caprioli (2003); Hudson et al. (2012).

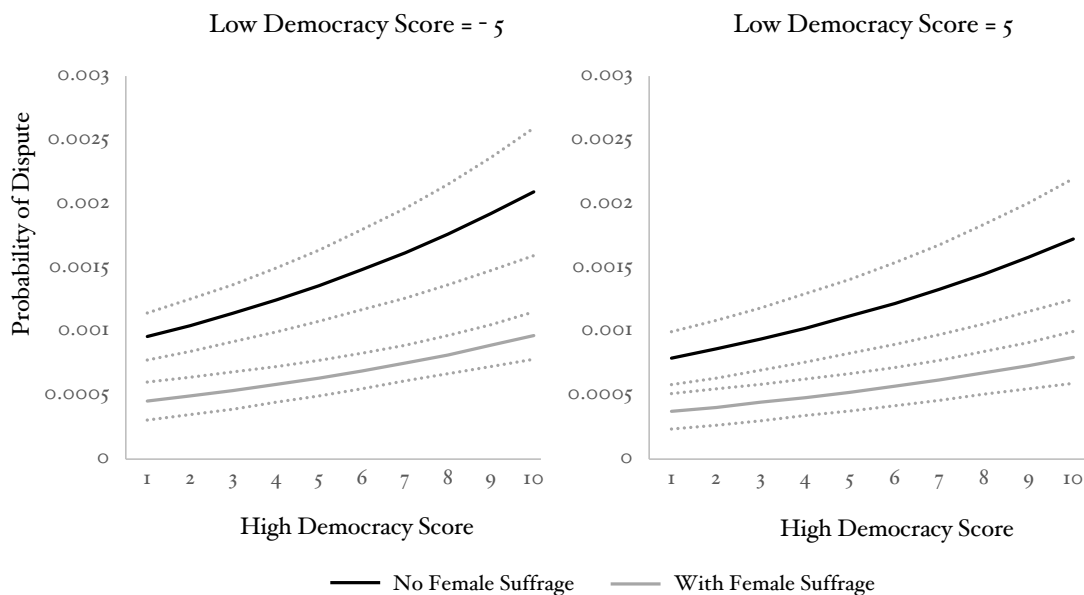
²¹The results of this analysis, as well as further analysis of democratic behavior within the 19th century, are presented in Part B.5 within the appendix.

a period in which half of the number of democratic dyads had joint suffrage and in which half of democratic dyads did not. While the relative paucity of data during this period renders it difficult to draw confident inferences, the estimated conflict trends during this period roughly mimic those presented in Figure 4 above, as shown in Part B.5 of the appendix. A one-tailed t-test of dispute propensity during this period also indicates the following. While jointly democratic dyads during this time were 38.9% less likely to experience a dispute than jointly non-democratic dyads ($p = .0448$), democratic dyads in which neither state allowed female suffrage were 189% more likely to experience a dispute than a joint-autocratic dyad ($p = .0005$). Democratic dyads with joint suffrage were, in contrast, 93.2% less likely to experience a dispute than democratic dyads in which neither or only one state allowed female suffrage ($p = .0003$).

We turn next to the substantive interpretation of the monadic effects of suffrage, shown in Figure 6. The graph on the left illustrates the effects of holding the low democracy score at -5 and increasing the higher democracy score within states with women's suffrage (the grey line) and without women's suffrage (the black line). The graph on the right illustrates the same effects when holding the low democracy score at 5. Within both graphs, the state with the lower democracy score does not allow for women's suffrage. In keeping with prior research, we find that increasing the higher democracy score while holding the lower democracy score constant is associated with an increase in dispute propensity. The adoption of suffrage in increasingly democratic states, however, dramatically reduces this increase in conflict propensity, regardless of the democracy score of the state one is interacting with.

The additional analyses presented in Part B of the appendix indicate that the results presented here are highly robust to alternative model specifications. Inclusion of decade-dyad fixed effects

FIGURE 6: THE MONADIC EFFECT OF SUFFRAGE.



within the binary democracy and suffrage models, for instance does not significantly alter results (Appendix, Part B.2). Neither does truncating the data to various time periods prior to 1950 (Appendix, Part B.5 and Part C.1). The additional analysis also shows that dyadic women’s suffrage predicts not only the initiation of conflict but also the likelihood of the use of force within a dyad (Appendix, Part B.3).

Alternative Hypotheses

We also examined the validity of a number of alternative hypotheses that might better explain the negative correlation we find between dyadic women’s suffrage and dispute involvement. It is possible, for instance, that the timeline of women’s suffrage simply serves as a proxy for the advent and institutionalization of more cooperative international norms during the interwar period and after World War II. Analysis of the relationship between time and women’s suffrage indicates, however,

that women’s suffrage is not an artifact of historical time period.²² First, all of the above models include a control for *Year* – a simple calendar year variable – which would pick-up some temporal trends (particularly those that most closely correspond to a linear change in log-odds over time). Second, the inclusion of decade-dyad fixed effects does not alter the relationship between suffrage and lower dispute propensity. Third, using Model 3 from Table 5, the main result is robust to analysis just within the time periods 1890 to 1930, and 1920 to 1938.²³ Figure 7 illustrates the percentage change in the marginal effect of suffrage as a function of increasing the low democracy score while holding the high democracy score at 10 for the interwar period from 1920 to 1938.²⁴ The difference in dispute propensity between states that have and have not adopted suffrage is significant and negative amongst those states categorized as democracies (those with democracy scores of 7 and higher). Fourth, interwar behavior alone is not driving the results. Omitting the interwar period from the analysis does not significantly change the findings reported above. The details of these analyses on the role of time are presented in Part B.5 of the appendix.

We also considered the possibility that women’s suffrage is conflated in one of two ways with the strategic context of a state. On the one hand, states may be, for various reasons, more likely to adopt suffrage following periods of conflict.²⁵ The results described above, in such a case, might simply be

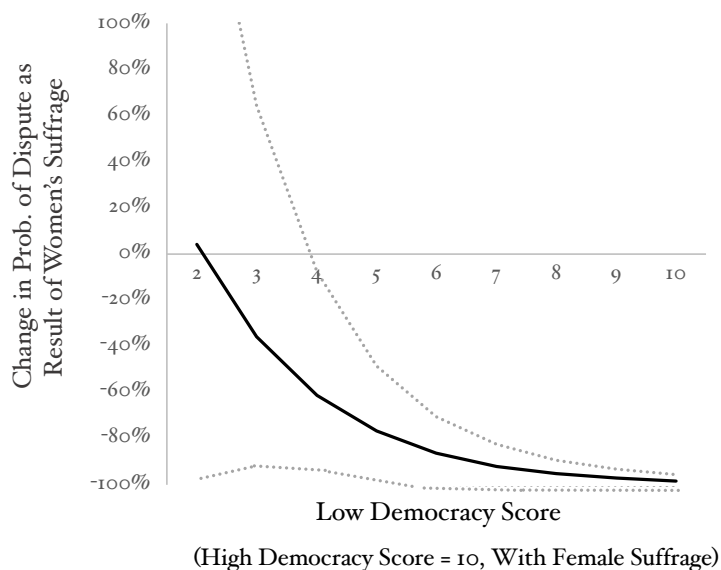
²²Indeed, in their overview of feminism in international relations, Tickner and True 2018 note how long it took for feminist activism to take hold and that in World War I, many suffragists supported the war, suggesting that activism surrounding suffrage and feminism in a particular period is separate from the political processes we describe here.

²³Prior to 1914, only five states had adopted women’s suffrage. We were therefore unable to independently assess the period 1816 to 1914. Similarly, all but 2 democracies had allowed suffrage by 1950, preventing analysis of the post-war period.

²⁴This analysis comports with literature on suffrage itself, where scholars have argued that elite-level political machinations were crucial to getting suffrage over the finish line in both the United States (McConaughy 2013) and Britain (Teale 2014).

²⁵Ticchi and Vindigni (2006) argue that suffrage has often been extended as elites prepare for war. Their argument, however, focusing on the principal of “one *man*, one vote, one gun.”

FIGURE 7: CHANGE IN DISPUTE PROPENSITY AS A RESULT OF SUFFRAGE, 1920 - 1938.



capturing war weariness on the part of recent adopters. Numerous pieces of evidence speak against this hypothesis. First, the analysis of the interwar period indicates that significant differences in the dispute propensity of suffragist democracies and non-suffragist democracies existed during this period, suggesting that the results we are observing are not explained by differences between pre and post-World War behavior. McConnaughey (2013, p. 22) notes that many U.S. states had already extended suffrage (some as early as the 1890s) by the time federal ratification occurred in 1920. Similarly, Teele (2014, p. 552-3) carefully argues that World War I did not cause British suffrage. Also, as discussed within Part C.3 of the appendix, we find that the results presented in Figure 5 hold when omitting those states that adopted suffrage within three years following major war. The results of the decade-dyad fixed effects model above also speak against this theory. Moreover, in the within-country analysis, only 3 of the 40 states examined extended suffrage to women within 5 years after the end of a war. After omitting those cases from the analysis, the average rate of dispute

TABLE 7: COMPARISON OF DISPUTES BEFORE AND AFTER GRANTING OF SUFFRAGE.

<i>Time Span</i>	<i>Female</i>		<i>Male</i>
	First Wave	Universal	Second Wave
+ / - 10 Years	-8.41% (<i>p</i> =.19)	-19.7% (<i>p</i> =.01)	+10.1% (<i>p</i> =.28)
+ / - 10 – 20 Years	-17.8% (<i>p</i> =.03)	-14% (<i>p</i> =.07)	+22.6% (<i>p</i> =.16)
+ / - 20 Years	-14% (<i>p</i> =.02)	-20% (<i>p</i> =.002)	+27.1% (<i>p</i> =.008)
	N= 49, 40	N = 50, 41	N = 16, 12

involvement in the twenty years after suffrage remains 20.4% lower than in the two decades prior to suffrage. Additionally, the average rate of dispute involvement in years $t-20$ to $t-10$ before the adoption of women’s suffrage is 17.8% higher than in years $t+10$ to $t+20$ after female suffrage ($p = .03$).²⁶

The within-country evidence also calls into question the converse hypothesis – that states with fewer strategic threats may be more likely to adopt women’s suffrage than states facing heightened security threats. In such a case, peace, rather than arising as a product of women’s suffrage, would instead facilitate the extension of suffrage. However, as pointed out above, states typically experience significantly higher rates of conflict in the decades immediately before the adoption of suffrage than they do after suffrage. Suffrage does not typically follow a period of relative national calm but rather precedes it.

Finally, it is possible that what affects conflict propensity is not the extension of suffrage *by gender* but rather the extension of suffrage more generally by class. Such extensions by class have

²⁶Analysis of strategic context and women’s suffrage is presented in Parts C.2 and C.3 of the appendix.

typically involved the elimination of literacy, property, or wealth requirements, or the removal of racial barriers to voting. To assess the validity of this hypothesis, we performed a within-country analysis on the effects of extending suffrage by class amongst male voters using data on suffrage extensions presented in Przeworski (2009). The results are presented in Table 7. As the table shows, these other extensions of suffrage are not associated with greater peace. In fact, they are associated with more conflict, with effect estimates of +10%/+23%/+27% (p-values of 0.28/0.16/0.008) for various temporal windows. While these within-country results are based on a relatively small sample size, they provide little reason to think that the mere process of expanding the voting population lowers a state's overall rate of conflict propensity.

Conclusion

The results above provide evidence that the divergent preferences of the sexes translate into a pacifying effect when women's influence on national politics grows. The magnitude of these associations are substantial, on par with the largest effects uncovered in the empirical literature on international relations. Further, this suffragist peace plausibly accounts for much or all of the apparent phenomenon of the democratic peace.

There remains much to understand about these political processes. The results presented above are consistent with greater female influence directly through voting, but perhaps also consistent with influence exercised through other societal channels whose existence correlates with the female franchise. Another alternative explanation for our findings may be that suffrage is confounded with liberal institutions and attitudes. While this possibility cannot be fully ruled out, we have illustrated the shortcomings of this argument in several ways. The concerns of some scholars about the democratic peace, as well as concerns about critiques of the democratic peace (Dafoe, 2011;

Dafoe, O Neal and Russett, 2013), may apply to the argument we make here. To address these, we have shown that our findings are robust to a variety of specifications, each of which was selected with attention for separating out potential alternative explanations. Further investigation of this result is required.

At the individual level, the evidence of a gender gap in so many existing survey experiments suggests that scholars should systematically explore how men and women respond to different frames or primes. Such evidence would help illuminate how politicians might frame arguments for war or even choose to use force in different contexts depending on the constraint of women's more pacific preferences, or the necessity of expending political capital to overcome those constraints. The exploration of heterogeneous treatment effects is beyond the scope of this paper but a logical avenue for future research.

The links from the individual level to national policy and international interactions are also ripe for further exploration. There are potentially many paths from female suffrage to women's preferences influencing national policy and international outcomes. Some might be direct, for example if interest groups are able to exert direct pressure on politicians; some might be more indirect, for instance if institutional and electoral incentives in some countries make women a particularly important voting bloc. In the latter case, politicians may anticipate the reactions of female voters, either by consciously considering women's lower baseline preference for war or by treating it as one part of a package of preferences. At the level of strategic interaction between states, process tracing might illuminate whether leaders in one state actively consider the extension of suffrage in adversary states when engaged in a crisis. More fine-grained analysis of how leaders seek to accommodate women's preferences in the wars they do fight could also follow, including an examination of other dependent

variables such as war duration, casualties, or military strategy.

Yet another avenue for future research concerns the potentially differing effects of female enfranchisement and female political leadership. While this study focuses on the former, others have examined the latter, and some evidence exists that female leaders are *more* willing to participate in international conflicts (Dube and Harish 2017). Given the on average individual level differences between the sexes, this may be considered surprising. Future research should probe the extent to which this tension is explained by one of two factors. The first is whether female political leaders are systematically different from female population averages in ways that relate to political decisions to engage in conflict (Fukuyama 1998, 32). The second is the extent to which female leaders, who have often been a gender minority among their peers, have been influenced by incentives to mimic or even exceed the aggressive norms of male peers (Goldstein 2003, 124-5, but see Croco and Gartner (2014)). Doing otherwise might have been interpreted as a form of “weakness” in the conduct of foreign affairs.²⁷ In effect, as Ehrenreich (1999) point out, the “tough” international actions of Indira Gandhi and Margaret Thatcher may have been a form of “male posturing.”²⁸

As the field of international relations has returned to studying individuals and their preferences, the long-understood gender gap has been glossed over. Yet this persistent feature of individual preferences over war and peace changes the aggregate preferences of the electorate in states that give women the vote. This article represents an important step in establishing the link, across space and time, between the gender gap at the individual level and peace at the international level. Democracy gives the public a voice, but the public is not homogeneous. This article suggests that women’s

²⁷For discussions of incentives to “hide type” in foreign affairs, see Schultz (2005), Trager and Vavreck (2011).

²⁸A third possibility is that female political leaders are more likely to be attacked rather than more likely to initiate conflict, but Dube and Harish (2017) provide evidence against this view.

preferences exert a significant and independent effect on state behavior in war, conditional on the existence of political institutions that allow women's voices to be heard.

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