The Clash of Traditional Values: Opposition to Female Monarchs*

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Abstract

The revision of sexist laws is complicated not only by disagreements between progressives and traditionalists, but also by opposing views held by different types of traditionalists. We design a two-wave list experiment with information treatments to examine public opinion towards reforming the Japanese monarchy's male-only patrilineal succession rule, focusing on two strands of traditionalism: conservatism and sexism. We show that conservatism, not sexism, is associated with stronger opposition to the ascension of female monarchs. Moreover, opinions towards gendered succession rules are hard to dislodge, because they are rooted in deep-held values. Treatments that highlight the capability of female heirs, the rarity of current practices in peer nations, and the perils posed by succession crises, fail to change respondent preferences. Our study reveals the discordance within traditional values, and how this can impede efforts to reform statutory gender discrimination.

Keywords: gendered institution, constitutional monarchy, conservatism, sexism, sur-

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1 Introduction: Pandas and Royal Persons

Despite significant progresses in gender equality, women continue to lag behind men in politics, higher education, and business. As of 2019, 24.5% of seats in national parliaments are held by women globally, and only 11.2% of countries have women as heads of state or government (UN Women, 2020). While women account for more than half of all college students in the US, they make up just slightly more than a quarter of full professors at doctoral degree-granting institutions (Johnson, 2017). There are more CEOs of large U.S. companies who are named John (5.3%) or David (4.5%) than CEOs who are women (4.1%) (Johnson et al., 2016).

Many inegalitarian outcomes persist because of traditional socio-cultural values about women's roles in the public and private spheres (Inglehart and Norris, 2003). While such values may be deeply rooted orientations (Rokeach, 1972), they are also not static (Inglehart, 2007). For example, improvements in women's economic opportunities and income potential can reduce gender gaps in other spheres, such as expectations of household work (Iversen and Rosenbluth, 2010). These normative shifts have made legalized gender discrimination rarer, especially in developed democracies. According to data from the Comparative Constitutions Project, the percentage of constitutions mandating equal treatment under the law based on gender has increased rapidly from 49% in 1950 to 87% in 2010 (Elkins et al., 2014).

An important exception to this trend is laws or customs governing succession in constitutional monarchies. As of 2020, 30 states allow for female monarchs while 12 reserve the throne for male royals. Historically, male primogeniture, or succession by eldest sons, sustained absolute monarchies by reducing the pool of legitimate claimants to the throne and lessening the frequency of violent succession conflicts (Menaldo, 2012; Kokkonen and Sundell, 2014; Acharya and Lee, 2019; Gerring et al., 2021). However, the gendered norms that underlie these rules are more controversial today. Many monarchical families survived democratic transitions by accepting a non-partisan, symbolic role and adapting its practices to evolving social values (McDonagh, 2015; Dixon, 2020). Two key changes have been the proscription of polygyny, or plural wives / concubines, and the removal of cadet branches from the official "royal" family. However, these reforms have also shrunk the pool of legitimate male heirs to the throne, threatening the viability of male-only patrilineal primogeniture, whereby the preceding ruler is succeeded by his sons in order of birth, followed by his male siblings (through the same father) and their descendants.

Reforms cannot be put off forever, lest the absence of legitimate heirs provoke a costly succession crisis or even lead to the dissolution of monarchy itself. Indeed, Mantel (2013), remarking on the difficulties of preserving sufficient heirs to the British monarchy, writes,

"Pandas and royal persons alike are expensive to conserve and ill-adapted to any modern environment." The persistence of male-only succession rules poses a puzzle to existing research on political culture and gender equality. First, resistance to gender-neutrality is often based on their redistributive consequences. Women may fight for employment equality in order to improve their economic prospects, while men may oppose it to preserve their privileged position (Franceschet, 2011). The same dynamics can be seen in debates over the adoption of corporate or legislative gender quotas (Hughes et al., 2017). In the case of monarchical succession, however, changes to inheritance order only affect the fates of a few children in the royal family. It is also unlikely to affect political affairs materially, given the monarch's purely symbolic role, or increase the institution's fiscal costs.

Second, opposition to female monarchs cannot be reduced to the political dominance of traditionalists. On the one hand, traditionalists are more likely to desire the preservation of the monarchy than are progressives. On the other hand, any plausible solution, such as the ascension of female monarchs or descendants through the maternal line, challenges the core principles that underlie the institution, such as a history of unbroken male lineages. Put differently, monarchical reform is an important case of a *"clash of values"*, wherein institutional survival necessitates the sacrifice of deeply-held preferences or norms among those who seek its continuation the most.

We explore the determinants of and resolutions to this clash of values through the case of imperial succession in Japan, focusing on the conflicting priorities of conservatives versus sexists. The Chrysanthemum Throne is the foremost manifestation of political traditionalism in Japan, but its long-term viability is threatened by the dearth of male children through patrilineal lineage. Three options are currently under deliberation, but each poses an ideological challenge to traditionalists who prioritize male-only primogeniture (Kimizuka, 2018). The first is to allow patrilineal women to succeed the throne, including the daughter of the current emperor. The second is to accept matrilineal lineage, which would include the (potential) grandson of the current emperor through his daughter. However, those who embrace traditional gender norms may be wary of the ascension of female monarchs or non-male lineage. The third is to reincorporate cadet family branches whose succession rights were stripped after World War II, but this may undermine the legitimacy of the monarchical line among conservatives.

We examine the palatability of these options, the values that underlie their support, and how these attitudes can be changed, through a two-wave list experiment with intervening information treatments. The list experiment, also known as the item count technique, is a survey design where respondents are asked how many items, not which ones, apply to them. By randomly assigning a list that only includes non-sensitive items or a list that includes a

sensitive item in addition to the non-sensitive items, we can identify the proportion of those to which the sensitive item applies. The item count technique is an increasingly common approach to eliciting truthful responses on sensitive issues (Miller, 1984; Blair and Imai, 2012), such as expressing negative attitudes towards a royal person. Using this design, we measure how Japanese citizens would feel if the only daughter of the current emperor, who would be the next in line should the first or second reform option be adopted, succeeded the throne.

In addition, we estimate separate latent scales for two key flavors of traditionalism—conservatism and sexism. The former concerns preferences for status quo practices and hierarchies, which we measure using a battery of questions relating to policy issues, patriotism, and social order that encompasses both ideological preferences and pro-authority attitudes (Jost, 2017). The latter ties explicitly to gender attitudes relating to the competence and appropriateness of women in positions of power, which we estimate using an abbreviated version of the standard Ambivalent Sexism Inventory (Glick and Fiske, 1996).

In the first wave of our list experiment survey, we estimate baseline attitudes to distinct reform options. We find that opposition is greatest for the restoration of old imperial lines, and least for allowing female successors. However, respondents who score highly on our latent conservatism and sexism scales are more likely to oppose the latter than the former, with the pattern being stronger among conservatives.

We then conduct the list experiment survey again on the same set of respondents after an interval period. Prior to re-asking the list questions, we randomly assign three information stimuli that are designed to lessen the concerns of conservatives and sexists about a female monarch. These include information about the capability of female successors, the rarity of the status quo inheritance rule in other monarchies, and the strong possibility that the imperial line will die out. We then estimate whether the respondents' preferences regarding reform proposals changed based on the treatment presented. We find evidence suggestive of a backlash, although further analysis with greater power is necessary to fully assess the results.

This paper contributes to the literature on political values and gendered institutions by revealing a discordance between two traditional values: conservatism and sexism. Institutional survival may necessitate the sacrifice of deeply-held preferences or norms among those who seek its continuation the most. In the case of Japanese imperial succession, the persistence of conservative values, not sexist values, impedes efforts to reform statutory gender discrimination. The fact that conservatives are willing to sacrifice the paramount institution in political traditionalism in order to preserve its gendered character suggests that reforms to other symbolic institutions may face similarly strong opposition. In fact, the lack of substan-

tive or material stakes may make it harder to mobilize reformists, thus enabling ideologically committed conservatives to block changes to the status quo.

The remainder of this paper proceeds as follows. Section 2 reviews the literature on gendered institutions and explains our thesis concerning the clash of values. Section 3 explores the history and function of monarchies, both globally and in Japan, and how these connect to our experimental design. Section 4 describes our survey instruments, including the choice of sensitive items in the list experiment, the information treatments, and the randomization schemes. Section 5 presents the results of the two-wave experiment. We end the paper with a discussion about the future of monarchical succession in Japan, as well as the relevance of our research to the broader literature on political values and gendered institutions.

2 Gendered Institutions and Clash of Values

Social structures have long been built on the differentiation of women versus men's identities, expectations, and behaviors (Acker, 1992). While explicit sexism is frowned upon in a growing number of societies, it is not difficult to justify de jure laws and de facto practices based on religious or ideological principles—whether lip service or not. Nelson and Bridges (2003) write that male-female earning differentials persist because employers deny organizational influence to those in predominantly female jobs. Franceschet (2011), in analyzing hurdles to mandating gender equality, argues that legislators assign lower priority and stature to representatives who work on "women's issues". As Dalton et al. (2020) notes, discrimination with respect to employment, inheritance, or rights to land/capital ownership functionally reproduce men's status quo advantages.

The survival of explicit gender discrimination is typically connected to ongoing clashes in social values between progressives and traditionalists (World Bank, 2011), and the balance of power between them. However, the separation of ideological principles into progressives versus traditionalists is arguably simplistic, as traditionalists are not a unified bloc. Some traditionalists are "conservatives" who oppose drastic social changes, particularly those that are imposed from above by the state. This belief may be rooted in a respect for time-tested traditions and a libertarian tolerance of inequality that is attributed to free market capitalism (Jost, 2017). The psychology literature also points to status legitimizing ideologies that justify unequal opportunity structures and underlie some conservative attitudes (Duckitt and Sibley, 2010; Hodson et al., 2017). For example, those who evince social dominant orientations support, and may even prefer, hierarchies that distinguish between "superior" and "inferior" groups, with status quo elites categorized in the former. Even within majority groups, right-wing authoritarian attitudes, or a conformist preference for collective security,

are associated with prejudice against in-group members who threaten traditional norms and authority figures. Conservatives may thus resist social reforms that destabilize status quo power structures, whether these relate to gender or race or wealth.

Other traditionalists are "sexists" who may be open to social transformation as long as it does not involve gender. Values relating to gender are complex, but generally relate to views about the fitness and appropriateness of men versus women to serve distinct social functions. Glick and Fiske (1996) notes an important distinction between "hostile" versus "benevolent" sexism. The former represents antagonistic attitudes towards women's competence and is, for example, correlated with opposition to affirmative action measures such as legislative or electoral gender quotas. The latter, by contrast, reflects paternalistic ideas about women's role in society, such as a belief in women's greater purity and their need for men's protection. Beauregard and Sheppard (2021) show that benevolent sexists are more likely to support gender quotas in order to bring "women's perspectives" into policymaking.

Competing priorities among these subgroups, which we term "clashes in traditional values", can impede reform initiatives, to the point where the long-term viability of the practice or institution in question is threatened. On the one hand, conservatism and sexism are correlated: those with conservative views tend to hold prejudices such as sexism, racism, and homophobia (Austin and Jackson, 2019). On the other hand, socioeconomic and sociocultural values do not inherently overlap. Even if citizens embrace equality as an ideal, they may nevertheless reject the means through which it might be addressed. For example, small government conservatives may disagree with pro-egalitarian measures such as gender quotas, not (necessarily) because they are sexist, but because of concerns about granting the government powers to intervene in private sector decisions (Barnes and Córdova, 2016; Federico and Sidanius, 2002). This distinction, called the "principle-policy puzzle" or "principle-implementation gap" has been analyzed extensively in the context of race. These studies find that prejudice towards minorities and attitudes about the appropriateness of government intervention jointly determine approval of race-based affirmation action (Sniderman et al., 1993; Kinder and Sanders, 1996).

An oft-discussed example of how traditional values can impede gender neutrality is the failure of the Equal Rights Amendment (ERA) to the Constitution of the United States. Proposed by Congress in 1971, the ERA would prohibit the federal and state government from denying equal rights under the law on account of sex and give Congress the power to enforce this provision through legislation. The proposal had broad public support and was approved by overwhelming super-majorities in the House and Senate. However, it was only ratified by 35 out of the 38 states necessary and ultimately failed to be enacted. Manfredi and Lusztig (1998) argue that the ERA's defeat was due not to public opposition to its goals,

but to various social groups' fears of its possible redistributive consequences. For one, it could expand the federal government's power to regulate employment, which was anathema to conservatives and corporate interests. For another, it could allow women to serve in the military equally (including conscription) and influence maternal rights (including Roe v. Wade), which ran contrary to traditional notions of gender. Because the effects of the ERA on other legislation was unclear, and because the high hurdle for constitutional amendments made any changes, once made, hard to correct, the bill did not pass.

The ERA's failure illuminates the ways in which distinct strands of traditionalism may oppose reforms that improve gender equality, albeit for different reasons. Concerted resistance may be more likely when the policy change requires fundamental compromises to partisan, ideological, or normative principles about conceptions of an ideal society. This is particularly true if its material consequences for a broad swathe of society is uncertain or likely to be negative.

However, reforms whose material beneficiaries are minuscule constitute a different type of case. Extending full rights to small groups is unlikely to disadvantage a large number of current beneficiaries, and so public sentiment is more likely to be based on normative principles. A clear example is reforming monarchical succession, specifically male-only primogeniture which restricts succession to living sons and their male offspring. Granting inheritance rights to sisters and daughters would not alter the odds that non-royal family members, i.e. almost the entirety of society, can accede to the throne. Why, then, does this rule persist?

3 Monarchical Succession and the Case of Japan

Although absolute monarchies have become increasingly rare, replaced by alternative autocratic regime types or overthrown during democratization,[1] "royal families" have not died out. There are currently 43 *constitutional* monarchies, where elected leaders have discretion over the foreign and domestic functions of the government, but monarchs serve as nominal heads of state.[2] Their resilience is tied to the historical legacy of royal lines as familial foundations of the state, with patrimonial responsibility to their citizens (McDonagh, 2015). Monarchs continue to serve informal roles as symbols and spokespersons of national unity, particularly during and after natural disasters, wars, and other crises. Their faces are profiled on currency and their names are attached to universities and buildings. As with other civic or religious traditions that are celebrated across generations, royal families are living

[1] According to data from Gerring et al. (2021), the proportion of absolute monarchies among all regime types fell from 76.4% in 1851 to 24.5% in 1950, and just 7.6% in 2017.

[2] This number includes Commonwealth realms, but excludes absolute monarchies, such as Oman and Saudi Arabia.

reminders of their nation's founding and unity. Because monarchs are expected to be removed from partisan conflicts and electoral politics, their symbolic legitimacy carries great weight even in democracies (Dixon, 2020).

Their dependence on public acceptance, if not approval, has meant that constitutional monarchies cannot ignore modern social norms. This has put rules of male-only patrilineal succession in the crosshairs. As discussed by Corcos (2012), male succession was legitimized by a number of biases: that women were less intelligent; that women were more likely to obey their husbands than vice versa, making marriages to foreign princes problematic; that only men received military training, making them more capable of serving as heads of state. Where social norms shifted towards gender equality, however, male-only succession became harder to justify, and formal changes to absolute primogeniture (succession by eldest child regardless of gender) became more common in the late twentieth century. Sweden was the first country to amend its Act of Succession, which has constitutional status, to absolute primogeniture in 1980. The Netherlands followed in 1983, and then Norway in 1990, Belgium in 1991, Denmark in 2009, Luxembourg in 2011, and the United Kingdom in 2013. Others, such as Tonga, Spain, and Monaco, employ male-*preference* primogeniture, which does not exclude sons born from female heirs (matrilineal succession) or daughters in the absence of male-line sons. By contrast, Liechtenstein, Lesotho, and Japan still require monarchs to be male descendants of kings.

The actual timing and direction of changes to inheritance rules point to the importance of critical junctures. One such juncture, as seen in Sweden and the United Kingdom, is the impending marriage of crown heirs and the births of their children. Non-reforms also speak to the importance of context, particularly the sequence of children's gender. Spain has employed male-preference primogeniture since 1812, under which daughters succeed only in the absence of sons. Corcos (2012) discusses failed law suits filed against this rule in domestic and international courts, but the matter effectively became moot when then Crown Prince Felipe VI had no sons.

Given the strides made towards gender egalitarianism in civic-political rights, employment, and educational opportunities, the continuing survival of male-only succession in some constitutional democracies but not others is puzzling. Western cases suggest that while changes in legal norms and social values matter, the impetus for national soul-searching and reform is the potential birth of next generation royals. However, once a decision to reform (or not) status quo practices is made, the urgency for further changes wanes until questions about the youngest generation's succession arise.

This makes the case of Japan, where there is a dearth of patrilineal sons, an excellent laboratory to test how tensions between the reverence of tradition and need for monarchi-

cal reform can be resolved. In fact, because decisions about succession rules tend to be baked in for one generation or more, studying the issue as it is being debated is crucial to understanding how the public views the survival of constitutional monarchies.

3.1 "The Y-chromosome Must be Royal"[3]

The Japanese Imperial House is facing a long-term succession crisis due to the current male-only patrilineal succession law.[4] Because the current Emperor Naruhito's only child is a daughter, the heir presumptive is his younger brother, Fumihito. Fumihito has a son, Hisahito, who was born in 2006 and is the only male in the next generation of the Imperial House. While it is possible that Hisahito, still a teenager, will have male children, there will be no heirs under the status quo if he has no sons. With this Damocletian Sword hanging over monarchical survival, both houses of the Japanese Diet passed accompanying resolutions that urged the executive branch to compile proposals for Imperial House Law reforms in 2017, when they approved the previous Emperor Akihito's abdication.

Since 2017, two options have been discussed publicly. The first, and obvious, option is to extend the right of succession to current female Imperial House members and their descendants. Since both Naruhito and Fumihito have unmarried daughters who are formally in the Imperial House, this reform would increase the number of descendants in the line of succession from one to three and create two additional succession lines.[5]

The alternative, which some conservative politicians advocate, is to sustain the current male-only patrilineal succession by re-incorporating male descendants of those who became commoners in 1947. While the imperial line historically included cadet branches, these were formally excised during the Allied Occupation after World War II. Those who support this proposal claim that the imperial male line has never ceased and that its continuation is an essential tradition of the Japanese Imperial House. Whether rhetorically or seriously, these proponents maintain that all emperors have carried identical Y-chromosomes for over a thousand years (Cyranoski, 2006). They thus insist that succession should be limited to male descendants of male emperors, as female descendants and their sons lack the imperial Y-chromosomes.

[3]We thank Amy Catalinac for pointing to the existence of this phrase.

[4]For more detailed historical background, see SI A.

[5]Under the current law, female members leave the Imperial House when they marry commoners. Fumihito has two daughters, but the elder married and left the Imperial House in October 2021. Naruhito and Fumihito have three unmarried female second cousins who are still in the Imperial House, but it is unlikely that they succeed the throne under any of the proposed reforms.

3.2 Conservatism, Sexism, and the Chrysanthemum Taboo

While traditionalists broadly want to uphold the Imperial House, the succession issue is an iconic example of political dilemmas caused by the clash between two traditional values. On the one hand, accepting female emperors and/or their offspring is opposed by sexists. On the other hand, granting succession rights to de facto commoners undermines the historical sanctity of the imperial line, which conservatives oppose. It should be noted that these two values are not completely independent, as support for status quo practices implies a tolerance, if not a preference, for gender inequalities. The political psychology literature notes that sexism correlates with conservatism and anti-egalitarianism, and that political ideology is a strong predictor for not just sexism, but also racism and homophobia (Hodson et al., 2017; Jost, 2017; Austin and Jackson, 2019). Because the distinction between conservatism and sexism may differ at the elite and mass levels, as well as across national contexts, let us expand on the current political context in Japan.

Preferences for either option manifests itself along partisan grounds, particularly at the elite level. Postwar Japanese politics has been dominated by the Liberal Democratic Party (LDP), a conservative party which has been in government for all but four years since its founding in 1955. On nationalist issues, the party has long advocated a more hawkish foreign policy, including seeking a permanent seat in the United Nations Security Council, more active participation in international peace-keeping operations, and amending Article 9 of the national constitution, whose proscription of a formal military has been decried by conservative hawks (McElwain, 2020). This focus on ideological issues has increased since the 1990s, due to changes in the electoral system (Catalinac, 2016) and party leadership primaries (Sasada, 2010) that emphasized more programmatic policy competition. On socio-cultural matters, the LDP has been staunchly traditionalist: it is in favor of elevating the role of the family (over individuals) in social affairs, and of emphasizing the emperor's symbolic role as head of state. It has also opposed progressive social reforms, such as allowing married couples to adopt separate surnames or extending marriage and welfare rights to LGBTQ+ couples. These are reflected in its parliamentary representation: the LDP nominates very few women in elections, including just 9.8% in the 2021 lower house election.

Regarding the long-term viability of the Imperial House, LDP members include vocal supporters of reincorporating former cadet branches. According to the 2019 University of Tokyo-Asahi Survey (Taniguchi and Asahi Shimbun, 2019) of Upper House election candidates, 30% of LDP candidates supported the reintroduction of ex-imperial descendants, compared to 13% of all others. On allowing female emperors, the numbers were 32% to 70%, respectively. However, the LDP has stopped short of making any concrete proposals, either in parliament or in election manifestos.

Whether and how the Imperial House Law is amended will be shaped by public opinion. Constitutional monarchies depend on citizens' veneration for their survival; as discussed above, changing social values have prompted reforms in a number of Western countries. Indeed, Ruoff (2020) writes that the imperial family has striven to cast itself as a model "middle-class" household in the postwar period. At a strategic level, governments may hesitate to push changes that may cost them in elections. Should the conservative LDP be in power, the preferences of traditionalist voters, who serve as its base, may carry outsized weight, making the "clash of values" particularly salient to future debates.

That said, the public's views on whether and how to reform imperial succession is not easy to assess. Japan is undeniably a laggard on most metrics of socioeconomic and political gender equality. It ranked 120th among 156 countries in the World Economic Forum's Gender Gap Index in 2021. However, surveys that inquire about attitudes towards different reform proposals are rare. One reason is the "Chrysanthemum Taboo" (a.k.a "Kiku Taboo"). Lèse-majesté laws were abolished after WWII, and courts have upheld the right of free expression regarding the monarchy. However, extreme rightist groups have threatened, and in some cases carried out, violence against critics of the imperial system or individual Imperial House members (Ruoff, 2020). The mass media, which has been the frequent target of such threats, has self-regulated coverage of imperial matters, including critical commentary about imperial family members.

We suspect that citizens' stated attitudes may also be subject to social desirability biases, albeit in two opposing directions. On the one hand, there may be hesitation towards voicing criticism of the Imperial Family, even in an anonymized setting. On the other hand, there may be implicit psychic pressure to support reforms that would allow for female emperors, on grounds of political correctness towards gender issues. Both constraints suggest that we may not be able to assess preferences towards reforming imperial succession using traditional survey methods.

4 Experiment Design

The design of our experiment is motivated by our goal of estimating the "clash of traditional values" underlying preferences on controversial issues. In order to elucidate which values are in conflict over changes to imperial succession rules, and what factors can mitigate public hesitance to institutional reform, we conduct an original two-wave survey experiment with information treatments. This unique design is intended to 1) mitigate the social desirability bias when estimating attitudes to sensitive topics, 2) explore the salience of two traditional values—sexism and conservatism—that underlie sensitive attitudes, and 3) estimate the

effect of information treatments as a function of respondent characteristics. We use the item count technique (ICT) to elicit truthful responses on sensitive attitudes toward royal persons, and randomly assign information treatments in the second wave to identify the causal effect of the treatments on those sensitive attitudes. In short, our experiment is a factorial design in which the assignment of list questions for ICT and the information treatments are independent of each other.

4.1 Item Count Technique

Given the subject matter of our study, the primary hurdle is inquiring about the desirability of succession by particular members of the imperial family. Amendments to the Imperial House Law are inherently personal, in that they change the status of specific royal persons. Emperor Naruhito's only daughter, Aiko, is practically the only person whose inheritance status would be affected by the abandonment of male-only rule. Thus, voters' attitudes toward reforms should not be decoupled from their opinions about those whose status would be affected. Given the Chrysanthemum Taboo, there is likely to be social desirability bias for expressing attitudes toward royal persons. Accordingly, we use ICT to measure respondents' true preferences.

The item count technique elicits truthful answers by concealing respondents' item-specific answers from researchers (Miller, 1984; Blair and Imai, 2012). Instead of asking respondents directly about their attitudes towards imperial succession, we ask them to provide the total number of items in a list that upsets them.[6] Individual respondents' true preferences are hidden from the researchers: we only observe the *total number* of affirmative answers to a list of statements, not whether a respondent has answered affirmatively to the sensitive statement specifically. This additional layer of anonymity is expected to mitigate social desirability biases in surveys.

Respondents are randomly assigned to lists that include the sensitive item and to lists that do not. Due to randomization, the difference in the number of items selected between these lists is an unbiased estimator of the prevalence rate of agreement with the sensitive item. The item count technique has been used to measure attitudes about which survey respondents are expected to hide, such as discrimination against African Americans in the U.S. (Kuklinski et al., 1997) and support for combatants during wartime in Afghanistan (Lyall et al., 2013).

[6]We used a Japanese translation of the term "upset" instead of "refuse" or "oppose". Political scientists have used "upset" in list experiments to measure preference-based sensitive attitudes such as racial prejudice (e.g. Kuklinski et al., 1997). Moreover, because the latter two terms in Japanese represent strong negative sentiment, respondents would not think that items including those words should apply to them unless they have exceptionally strong attitudes.

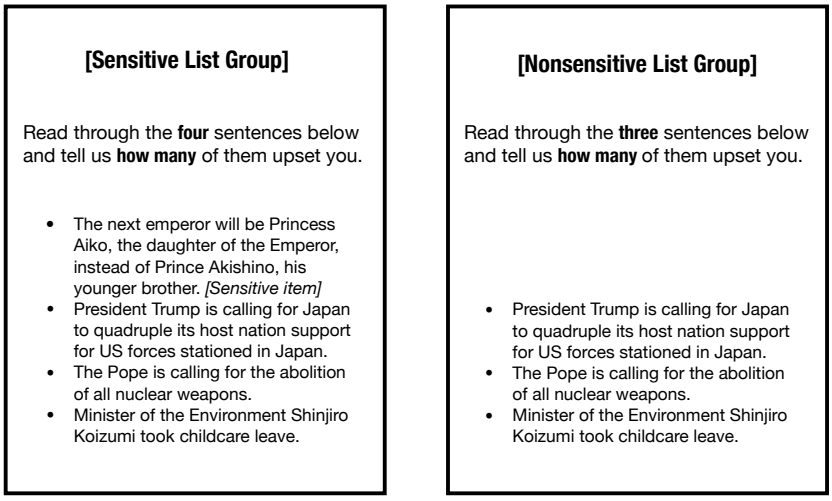

Figure 1: An Example of the Item Counting Technique (List Experiment).

Figure 1 provides a specific example comparing information presented to respondents in the *sensitive* group and *nonsensitive list* groups. The non-sensitive items were selected to be sufficiently controversial and negatively correlated, so as to avoid the list experiment's potential floor and ceiling effects (Blair and Imai, 2012; Glynn, 2013). Because considering either zero or all of the statements as upsetting will reveal respondents' attitudes towards the sensitive item (not upsetting or upsetting, respectively), respondents may obscure their true response, defeating the purpose of the item count design. An example of a non-sensitive but controversial statement in our context is, "Pope Francis urged Japan to accept more refugees."

In our survey, we estimate respondents' attitudes to reforming rights of succession—our dependent variables—by inquiring about four sensitive items. Two reference Princess Aiko, the current emperor's daughter, directly: one on Aiko replacing her uncle as the next emperor (i.e. absolute primogeniture), and the other about Aiko's hypothetical son ascending the throne in the future (i.e. matrilineal lineage). We include a third, more abstract, item that ask respondents whether they would feel upset if an unspecified female emperor ascends to the Chrysanthemum Throne. We also measure respondents' attitudes toward extending imperial status to pre-1945 ex-descendants of the Imperial House, in order to sustain male-only patrilineal primogeniture. Unfortunately, because there are no well-known public figures among these descendants, we cannot name them directly, as we do with the Aiko items. Translated texts of the four sensitive items are as follows:

1. `Princess Aiko`: The next Emperor will be Princess Aiko, the daughter of the Emperor,

instead of Prince Akishino, his younger brother.

2. `Female Emperor`: In the future, a female emperor will succeed the throne.

3. `Aiko's son (Hypothetical)`: If Princess Aiko, the daughter of the Emperor, has a son in the future, that child will have the right to succeed the throne.

4. `Imperial Descendant`: The descendants of the imperial family, who have lived as ordinary people since the end of World War II, gain the right to succeed the throne.

The complete ICT questions, including the non-sensitive items, can be found in Supplementary Information C.

4.2 Measuring Conservatism, Sexism and Other Covariates

A central theoretical interest of this paper is to understand how the "clash of traditional values", notably conservatism versus sexism, influences acceptance of distinct imperial reform proposals. Because these values are fundamental dispositions that underlie preferences on specific issues, they are best estimated as latent, multi-dimensional variables. Partisanship—a common indicator for social or ideological attitudes—is too blunt, as it subsumes both conservatism and sexism. At the same time, motivated partisan reasoning can prompt respondents to support or oppose specific policies, not because of value-based agreement, but rather because these are the positions of preferred candidates or parties.

Our strategy is to estimate these values separately, using pre-treatment (Wave 1) question batteries that were designed to carefully distinguish between them. Specifically, we use Bayesian factor analysis for ordinal response (Quinn, 2004) to compute a sexism score and a conservatism score for each individual. Bayesian factor analysis is an increasingly common approach to estimate latent variables. Compared with the traditional factor analysis, this model is better suited when mixing ordinal and continuous data. The Bayesian approach also allows us to easily calculate the posterior quantity of interest.[7]

To capture both benevolent sexism and hostile sexism, we construct our sexism score using a battery of six questions from the standard Japanese translation of the Ambivalent Sexism Inventory (Glick and Fiske, 1996; Ui and Yamamoto, 2001). The original instrument includes 22 items, from which we extract six questions that have high factor loadings. Principal component analysis shows that the one-dimension score effectively summarizes the six dimensions well, and the posterior traceplot suggests stable convergence.[8]

[7]We use the `MCMCordfactanal()` function from the `MCMCpack` package (Martin et al., 2011).

[8]We use the following six items to measure sexism scores: 1) Women do not have much social experience so experienced men should support them; 2) People who do not have intimate relationships, such as romance

We use four items related to political ideology in Japan to generate our conservatism scale. Conservative values cannot be separated from gender egalitarianism, including a wariness towards policies related to affirmative action, childcare, or equal employment and pay (Miura, 2012). However, incorporating these topics in our conservatism scale risks excessive overlap with our sexism variable. Accordingly, we asked questions to assess more nationalist and status-quo oriented attitudes underlying conservatism in Japan, as discussed in Section 3.2. These include items that previous studies have identified as relevant to conservative attitudes, including towards nationalistic education, patriotism, constitutional amendment, and social order (Taniguchi, 2020; Miwa et al., 2021). As with our sexism measure, results from principal component analysis and posterior traceplots suggest that the one-dimensional score captures the latent concepts of conservatism well. All four items are on a five-point Likert scale.

1. Which of these two sentences is closer to your views?
    - Option A: We should nurture more love for their country among citizens.
    - Option B: Love for their country should be left to the judgment of each individual citizen.
2. How proud are you of being Japanese?
3. Are you for or against amending the Constitution to specify the existence of the Self-Defense Forces?
4. Do you agree or disagree with making major changes to the current social order in some way?

We also collected additional demographic and attitudinal information of interest prior to treatment assignment. Demographic variables include `Age` decile, a binary `Female` indicator, and a binary `College` indicator (attended university of not). We also measure partisanship with a binary indicator, `LDP`, which equals 1 for LDP supporters, and 0 otherwise.

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or marriage, with the opposite sex are not truly happy; 3) Even if they are successful at work, men who are not in love to or married with women are missing something; 4) Men are able to play an active role thanks to the support of women behind the scenes; 5) Women are more compassionate to the vulnerable than are men; 6) Women have family responsibilities, so it would be a pity to give them too much responsibility. Consistent with prior research using the ASI, responses to each statement are on a six-point Likert scale, ranging from strongly disagree to strongly agree.

4.3 Information Treatment

Another key element in our research design is the information treatments. Immediately before answering the list questions in the second wave, we randomly assigned respondents to one of the following four groups with equal probability. Each group was shown different information relating to the imperial family. Three treatment arms were designed to alleviate distinct concerns among traditionalists about changing the male-only patrilineal succession rule.

First, those who embrace traditional gender norms may be concerned about the capability of women to fulfill the symbolic functions of the emperor. These include ceremonial state visits overseas, hosting international dignitaries, and embracing Japanese arts and customs. Accordingly, the *Capability* treatment shows Princess Aiko's personal achievements, including her fluency in English and skills in calligraphy and music.

Second, while conservatives may disapprove of reforms that entail progressive values and change the status quo, they would also like to sustain the Imperial House in the long run. Therefore, we expect those who espouse politically conservative values to be less opposed to gender-neutral primogeniture when they are told that the male line of imperial succession is endangered. The *Necessity* treatment displays the imperial family tree and emphasizes the dearth of male successors today compared to previous generations.

Finally, the *Global practice* treatment shows the rarity of male-only succession among other constitutional monarchies and emphasizes the outlier status of Japan. We hypothesize that this treatment may assuage concerns among both types of traditionalists. The fact that most peer countries allow female monarchs may prompt sexists to put aside fears about the intrinsic capabilities of women to serve this symbolic role. Among conservatives, this treatment may engender the sense that female monarchs are common solutions to ensuring stable royal succession, particularly among peer democracies.

***Capability* treatment** (Figure 2a) A photo collage that shows Aiko's extracurricular achievements. Images in the collage are chosen to show that Aiko is a well-rounded person with skills in calligraphy, music, and spoken English, and thus should be capable of taking on the ceremonial roles expected of the emperor.The collage captions describe the content of the images only. We intentionally avoid adjectives and language that may arouse emotions.

***Necessity* treatment** (Figure 2c) An imperial family tree that shows the difficulty of guaranteeing stable succession if the status quo rule is maintained. It puts the succession crisis in context by showing the imperial family tree over four generations. While there was no shortage of male successors two generations ago, there is only one qualified

male in the youngest generation. The red line shows the actual sequence of succession up to the current emperor, while the orange line indicates legitimate successors as of August 2020.

***Global practice* treatment** (Figure 2b) A cross tabulation of succession rules (rows) and political systems (columns) in other monarchies. Its purpose is to convey that Japan's imperial succession rule makes it an outlier among democracies. The figure excludes Commonwealth countries and elective monarchies (e.g., the Vatican).[9]

Control (Figure 2d) A distant-view photograph of *Shin-nen Ippan Sanga* (Citizens' New Year Greetings to the Imperial Family). This event is a well-known tradition in Japan that involves the imperial family. The photograph include all adult members of the imperial family, but it does not contain other national symbols.

To investigate these hypotheses empirically, we randomly assign to respondents information about Aiko's personal accomplishments, the necessity of enlarging succession lines, and the rarity of male-only succession among other constitutional monarchies. All information treatment arms and control follow the same format: respondents see a figure, accompanied by explanatory texts of similar length (in Japanese).

4.4 Protocol

Figure 3 illustrates the full workflow of our experimental design. Since the design consists of two experimental components, one being the list experiment and the other being the random assignment of information treatments, we use the following nomenclature. Respondents who receive list questions with the sensitive items are the *sensitive list group*, those who receive list questions without the sensitive items are the *nonsensitive list group*, those who were assigned to one of the information treatment arms are the *treatment group*, and those were assigned to the control are the *control group*. The design is implemented as follows.

Survey wave 1 Respondents were recruited from the national sample pool of Nikkei Research, a prominent survey vendor in Japan. The survey link was active between July 27th, 2020 to July 31st, 2020. There are 5,442 valid respondents in this wave. We employed quota sampling by age (20-69), gender, and region to match the most recent national census distribution. We used a block randomization scheme for treatment assignment, based on respondents' *gender* (two levels) and *party identification* (three

[9]We used Polity IV's 20-point score of regime type and coded a country as "democratic" if its score was 6 or higher. We used V-Dem's score if the Polity score was not available. If neither Polity nor V-Dem was available, we used Freedom House's Global Freedom Score.

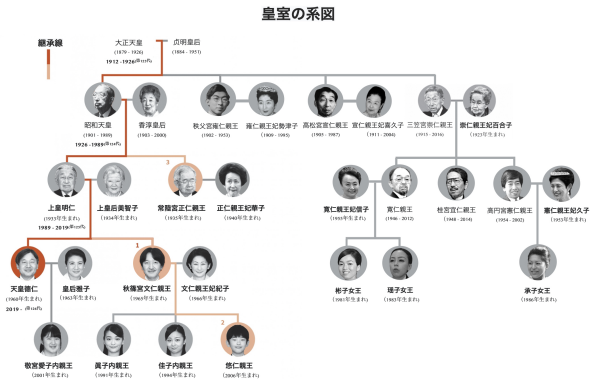
These three photographs feature Aiko, the daughter of the current Emperor. Left: Calligraphy written by Aiko in 2016, when she was a first-year middle school student; Top right: Playing the cello in the Gakushuin Orchestra in 2017; Bottom right: conversing in English with the actor Francesca Hayward during the premiere of the movie Cats in 2020.

(a) Capability Treatment

Succession Rule \ Political System	Democracy	Dictatorship
No gender restriction	England, Norway, Denmark, Spain, Sweden, Belgium, Netherlands, Luxembourg, Monaco	
Males given priority over females	Tonga	Thailand, Bhutan
Only males eligible	Lesotho, Liechtenstein, **Japan**	Kuwait, Saudi Arabia, Brunei, United Arab Emirates, Bahrain, Cambodia, Oman, Jordan, Morocco, Qatar, Eswatini

This table shows the regime type and rules of succession of monarchical nation-states around the world. Japan is located in the bottom-left cell, and it is a rare exception among democracies in having a male-only succession rule, which is more common among autocracies.

(b) Global Practice Treatment†



This figure shows the family tree of the imperial household. Because imperial succession is currently limited to men from the paternal line, the right of succession is limited to the three persons whose headshots are in the orange background, out of the 18 living members (whose names are bolded). Of the three, only one person is from a younger generation than the current Emperor.

(c) Necessity Treatment

This photograph features the New Year's public palace visit of 2020. New Year's Day in 2020 was the first New Year's public palace visit since the current Emperor ascended to the throne. The Emperor and Empress are at the center and the other imperial household members are around them.

(d) Control

Figure 2: Treatment Information. Subfigure (a), (b), and (c) are three treatment arms, and subfigure (d) is the information presented to the control group. Respondents assigned to each group saw the image along with the captions (in Japanese) below.
†We realized there is an error in this table after we fielded the survey. Spain and Monaco should be in the row of "Males given priority over female."

levels).[10] Within each block, half of the respondents were assigned to the *sensitive list group* and received the questionnaire *with* sensitive items in the list questions. The other half were assigned to the *nonsensitive list group* and received the questionnaire *without* sensitive items in the list questions. The random assignment was conducted on the Qualtrics platform, which relies on the Mersenne Twister algorithm. Each respondent saw all four list questions, but they were shown on separate pages in a random order. The "next page" button on each page was hidden for five seconds so that respondents could not click through. SI B explain in detail how the sensitive and nonsensitive were selected, and how each list question is constructed.

Time interval Respondents were not contacted by the research team between August 1st, 2020 and August 20th, 2020. The 20-day gap is enough spacing for memory on wave 1 to decay (Hill et al., 2013) and minimize within-subject spillover in the second wave.

Survey wave 2 All respondents from the first survey wave were invited to participate in the second wave, through Nikkei Research. The survey link was active between August 21st, 2020 to August 24th, 2020. 3,156 responses were valid and entered the analysis. Before answering the second wave survey, they were randomly assigned by Qualtrics to one of four groups (three treatment arms and one control). The informational intervention was randomized completely, i.e. treatment assignment was *independent* of whether respondents answered the sensitive or non-sensitive lists in the first wave. Respondents saw only one of the subfigures in Figure 2 after assignment. We programmed the survey interface so that they cannot click through to the following page until 20 seconds had passed, so as to better ensure that they would read the treatment/control information carefully. After the information treatment, each respondent then proceeded to the second wave survey questions. Respondents who were in the *sensitive list group* were assigned to the same group in this round, as were those in the *non-sensitive* list group. In other words, identical list questions were used in the first and second waves.[11]

[10]The three levels are respondents who 1) identified as LDP supporters, 2) identified with none of the existing political parties, and 3) chose a non-LDP party.

[11]The attrition rate is 46.1%, which is comparable to other multi-wave online surveys in Japan according to our survey vendor. We did not find any correlation between dropout status and response to list questions in the first wave. This makes us less concerned about the self-selection problem in our case. See SI I for more information.

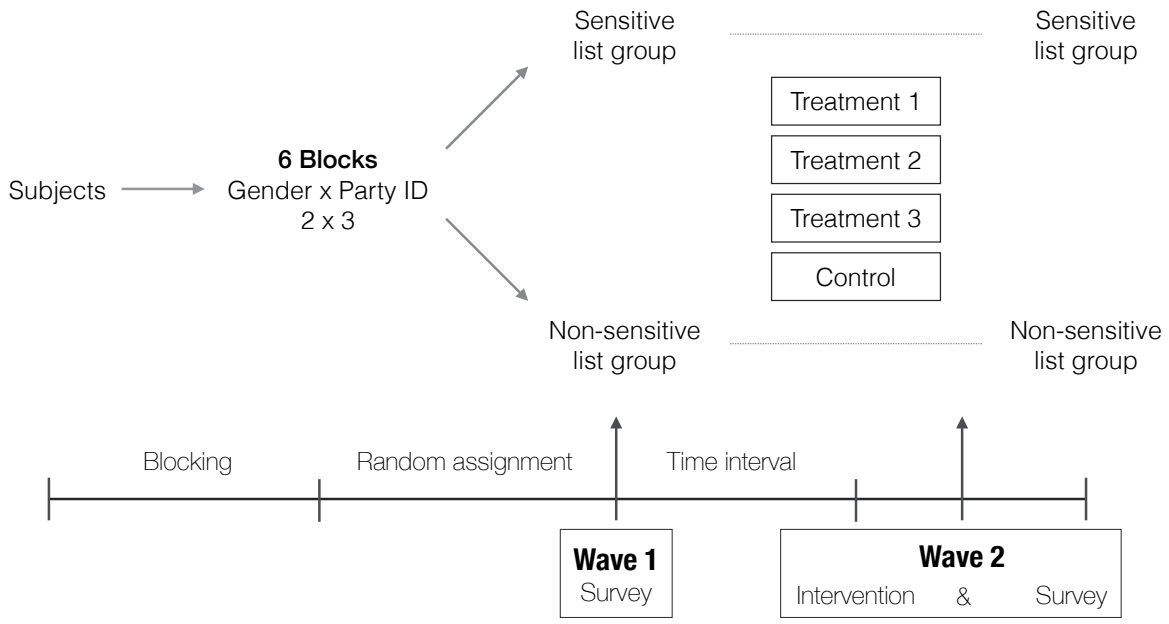


Figure 3: Research Design

4.5 Estimation

Our analyses proceed in two steps. First, we use the standard ICT analysis to estimate the baseline prevalence rate from the first wave survey (Imai, 2011; Blair and Imai, 2012).[12] The goal is to examine the extent to which respondents oppose different monarchical reform proposals, and how these attitudes vary across key subgroups, including between conservatives and sexists. The results for this analysis are presented in Section 5.1.

Next, we estimate the effect of information treatments on sensitive attitudes by a difference-in-difference-in-differences estimator in Section 5.2, using responses from both survey waves. The estimator first computes the difference-in-differences estimates based on two survey waves and the information treatment within each list group, and then take the difference in the diff-in-diff estimates between the sensitive and non-sensitive list groups. Formally, our

[12]The analysis is performed using the `ictreg` function in the `list` package version 9.2 (Blair and Imai, 2010) of **R** (R Core Team, 2022).

estimator denoted by $\hat{\tau}$ is defined as:

$$\begin{aligned}\hat{\tau} \equiv & \left\{ \left(\frac{\sum_{i=1}^{N} Y_{i2} D_i T_i}{\sum_{i=1}^{N} D_i T_i} - \frac{\sum_{i=1}^{N} Y_{i1} D_i T_i}{\sum_{i=1}^{N} D_i T_i} \right) \right. \\ & \left. - \left(\frac{\sum_{i=1}^{N} Y_{i2}(1-D_i) T_i}{\sum_{i=1}^{N} (1-D_i) T_i} - \frac{\sum_{i=1}^{N} Y_{i1}(1-D_i) T_i}{\sum_{i=1}^{N} (1-D_i) T_i} \right) \right\} \\ & - \left\{ \left(\frac{\sum_{i=1}^{N} Y_{i2} D_i (1-T_i)}{\sum_{i=1}^{N} D_i (1-T_i)} - \frac{\sum_{i=1}^{N} Y_{i1} D_i (1-T_i)}{\sum_{i=1}^{N} D_i (1-T_i)} \right) \right. \\ & \left. - \left(\frac{\sum_{i=1}^{N} Y_{i2}(1-D_i)(1-T_i)}{\sum_{i=1}^{N} (1-D_i)(1-T_i)} - \frac{\sum_{i=1}^{N} Y_{i1}(1-D_i)(1-T_i)}{\sum_{i=1}^{N} (1-D_i)(1-T_i)} \right) \right\} \end{aligned} \tag{1}$$

where i denotes respondents, D_i is the information treatment indicator, $T_i \in \{0, 1\}$ denotes the sensitive list status with $T_i = 1$ indicating the sensitive list, Y_{ij} is i's response to the list question in wave j.[13] Under the standard assumptions[14] of list experiments, we can point identify the average treatment effect with list design. (See proof in SI H).

We use nonparamatric bootstrapping with a thousand replications to compute the standard errors and construct confidence intervals of the point estimates, as it is more accurate in small samples than closed-form asymptotic inferences (Gonçalves and White, 2005).[15]

5 Results: Who Opposes Changes to Succession Rules, and Why?

We first describe baseline attitudes towards reforming rules of imperial succession, using responses to the list questions in the first wave. We also estimate differences across subpopulations, focusing on variations by our conservatism and sexism scores. Finally, we examine the effects of the information treatments on changing these attitudes, utilizing responses from both survey waves.

5.1 Who Opposes Women's Succession?

Figure 4 presents the results from the standard list experiment in the first wave (n=5,442). Each estimate denotes the proportion of respondents who are upset by (i.e. are opposed to)

[13] See SI G for more details.

[14] There are three assumptions: 1) randomization, 2) no design effect, and 3) no liar. See Imai (2011) for more details.

[15] We derived the asymptotic variance estimator in appdendix G.

the sensitive statement. All estimates are positive and statistically significant from zero, suggesting that a non-negligible proportion of the general population opposes all four possible solutions to Japan's succession crisis. `Imperial Descendant`, or the restoration of succession rights to far-flung descendants of the imperial family, elicits the strongest opposition, estimated at 0.254 (s.e. 0.027). This option is considered to be the only viable solution to preserving the male-only patrilineal succession rule. The least controversial is `Female Emperor`, or permitting the ascension of a female emperor in principle (0.062, s.e. 0.023), although the more specific case of granting eligibility to Aiko (`Princess Aiko`) is less popular (0.136, s.e. 0.018). Allowing Aiko's hypothetical son to inherit the throne (`Aiko's Son`), which would expand the pool of male successors by accepting matrilineality, has an estimated opposition of 0.113 (s.e. 0.023). In short, it appears that respondents would prefer to keep the imperial family as is, but allow for changes to the male-only or patrilineality requirements.

While these estimates provide a snapshot of social attitudes that are less susceptible to social desirability biases, of greater interest is *who* favors or opposes changes to succession rules. Figure 5 presents estimated differences in the proportion who are upset by each sensitive item across distinct sub-populations. Our primary factors of interest are latent sexism and conservatism, but for reference, we also show differences by gender (female or not), age (above 60 or in their 30s), educational attainment (university-educated or not), and party identification (LDP supporter or not). Positive values denote that that sub-population is more likely to oppose a particular statement. Each sensitive item is denoted by a different marker: Aiko as emperor (solid circle), female emperor (open circle), Aiko's hypothetical son (open square), and imperial descendant (open triangle).

Beginning with demographic characteristics, we find that female respondents are more likely to oppose the restoration of far-flung imperial descendants. The estimated difference is positive and statistically significant, meaning that a higher proportion of women are upset by this statement than men. Regarding age, respondents in their sixties and above are less likely to be upset than those in their thirties and below, although the estimates are not statistically significant. We find no consistent differences between those who are university educated or not, or between those who support the ruling Liberal Democratic Party or not.

Our key interest is to examine whether the level of opposition varies based on respondents' `sexism` and `conservatism`—the core traditional values that are in tension with respect to imperial succession. Figure 5 shows differences in attitudes between those who score one standard deviation above and below mean scale values. The results indicate that sexism and conservatism are associated with different levels of opposition to the sensitive items. First, both groups are less upset by the restoration of imperial descendants. Since this is the option

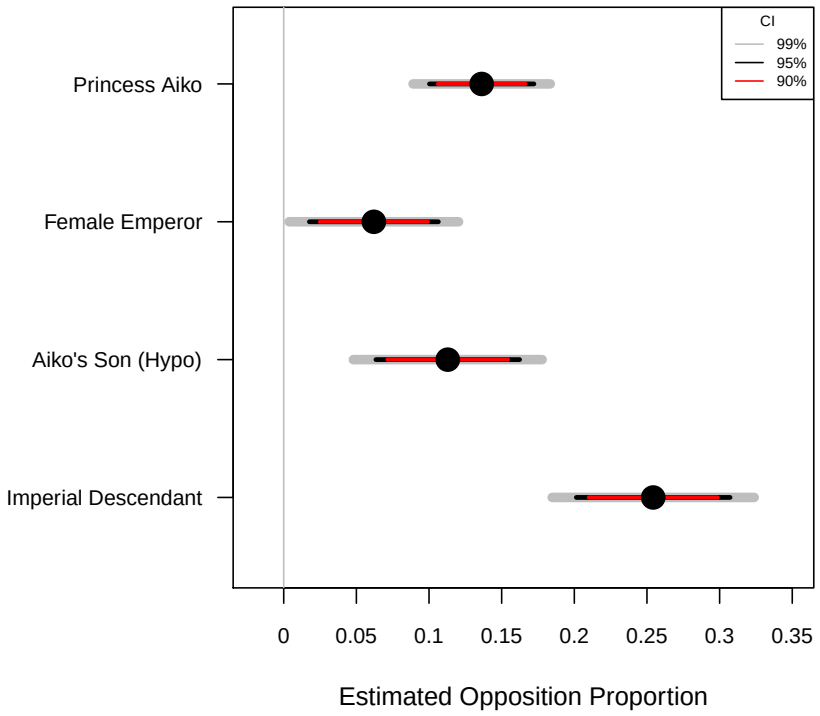


Figure 4: Estimated proportion of population who are upset by the four sensitive items. 90%, 95% and 99% asymptotic confidence intervals are represented by red lines, black lines, and gray lines, respectively.

most likely to preserve the "traditional" male-only patrilineal succession, it is not surprising that these latent dimensions are associated with greater acceptance of this change. Second, conservatives are more likely to oppose having a *female emperor in principle*, while those with higher sexism scores are more likely to oppose having a female emperor *in the concrete case of Aiko*. Further, among those with higher sexism scores, we find greater opposition to the succession of Aiko's hypothetical son than among conservatives. The results generally hold after adjusting for multiple hypothesis testing (see SI F for more detail).

The baseline analysis suggests that while those who score high in conservatism and high in sexism are unified by their support for the status quo male-only patrilineal succession, there is a schism between the two subgroups. Conservatives seem to prioritize the male-only principle over patrilineality. Sexists are more likely to oppose changes when specific female

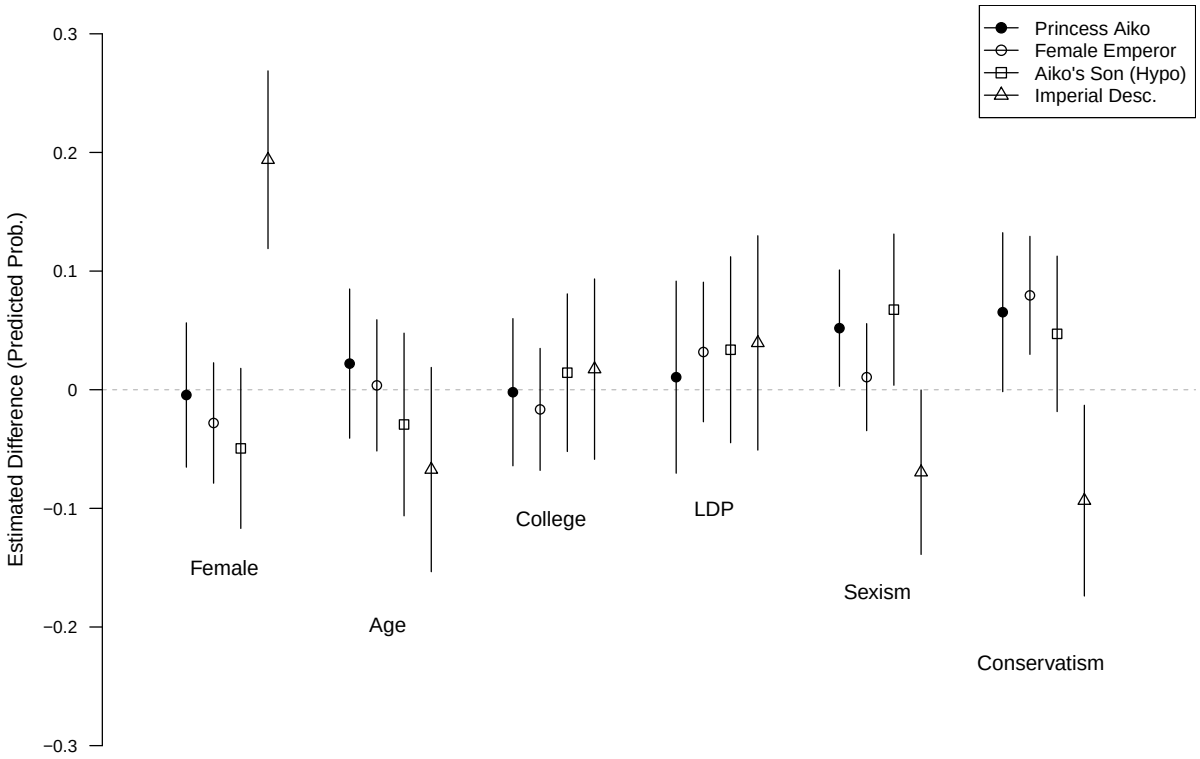


Figure 5: Estimated difference in the average predicted probabilities of being upset by the four sensitive items between *sub*-populations. Solid circles represent the sensitive item `Princess Aiko`, open circles represent `Female Emperor`, open squares represent `Aiko's Son (Hypo)`, and open triangles represent `Imperial Descendants`. The solid lines represents the 95% asymptotic confidence intervals.

figures are evoked.[16]

5.2 What Factors Sway Public Attitudes?

Next, we examine the degree to which these attitudes are malleable versus ingrained. As noted above, our three information treatments are designed to address possible concerns about changing the male-only patrilineal succession rule. First, the *Capability* treatment seeks to assuage beliefs that women may be incapable of performing the symbolic roles

[16]SI D.5 discusses several methodological concerns, including the design effects (De Cao and Lutz, 2018) regarding the ICT design.

expected of the emperor. Second, the *Global Practice* treatment shows that the Japanese status quo is rare for a consolidated democracy, and that other constitutional monarchies have liberalized their hereditary requirements. Third, the *Family Tree* treatment connotes the necessity for some type of reform, given the dearth of legitimate male successors in future generations. Because these treatments emphasize different facets and consequences of changing succession rules, we also expect them to have non-uniform effects on attitudes towards the four sensitive items.

Figure 6 shows the effects of the three treatment arms relative to the control group, estimated by the diff-in-diff-in-diff estimator defined by Equation (1). In summary, none of the treatment arms produces a statistically significant effect on any sensitive items. The directions of the effects are informative, nevertheless. First, the *Capability* treatment's point estimates are in the expected negative direction on the Aiko item, meaning that information about Aiko's capability reduces opposition to her enthronement. The effect of the *Capability* treatment on the Imperial Descendant item is positive, meaning that the treatment increases opposition to measures that preserve male-only patrilineal succession, which is also expected. The estimated effects of these two treatment arms on the other sensitive items are in the opposite direction from expectation, although none of the point estimates is statistically significant at the 5% level.

Second, there is an unusual pattern regarding the *Global Practice* treatment. This information, which presents the fact that Japan is an outlier among democratic countries in keeping male-only monarchical succession, appears to *strengthen* negative attitudes towards any rule changes. Particularly surprising is the backlash against female emperors in general. We expected most respondents to become less hesitant about accepting a female emperor once they were made aware that most monarchies in the world allowed women to ascend the throne. One interpretation is that the fact that Japan is an outlier stimulates people's pride in the institution's unique tradition and history, making them prefer to uphold the status quo. We will furthur explore the heterogeneous effect of this treatment below.

Lastly, the *Family Tree* treatment, which notes the dearth of male heirs, does seem to reduce opposition to the Aiko item, but it is not statistically significant. The treatment effects on other sensitive items are also indistinguishable from zero.

The item counting technique estimates from the first wave, represented in Figure 4, suggest that conservatism and sexism are salient to support for or opposition to reforming imperial succession, albeit for different reasons. As such, the effects of our three information treatments may also differ based on these values. Figure 7 shows the treatment effects of the three treatment arms relative to the control group by value orientation. Because conservatism and sexism may be correlated values, we take the additional step of dividing respondents

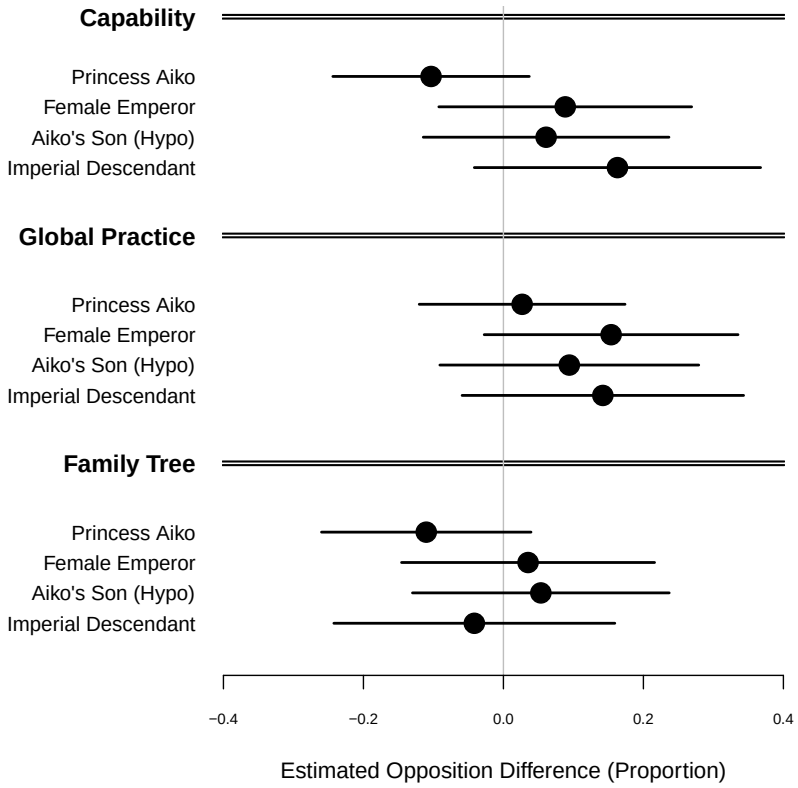


Figure 6: Effects of informational treatments on the estimated change (across two waves) in the proportion of respondents who are upset by the four sensitive items. The interpretation of the treatment effects is relative to the `control group`. `Princess Aiko`, `Female Emperor`, `Aiko's Son (Hypo)` and `Imperial Descendant` represent the four sensitive items. The solid lines represent the 95% nonparametric bootstrap confidence intervals.

into four groups by whether they scored above or below the mean on each dimension. We then examine the effects of the three treatment arms on the four outcome measures, so as to assess which value dimension drives beliefs about reforming imperial succession. Figure 7a is for those who score low on conservatism but high on sexism. Figure 7b is for those who score high on conservatism but low on sexism. Figure 7c is for those who score high on both conservatism and high sexism.

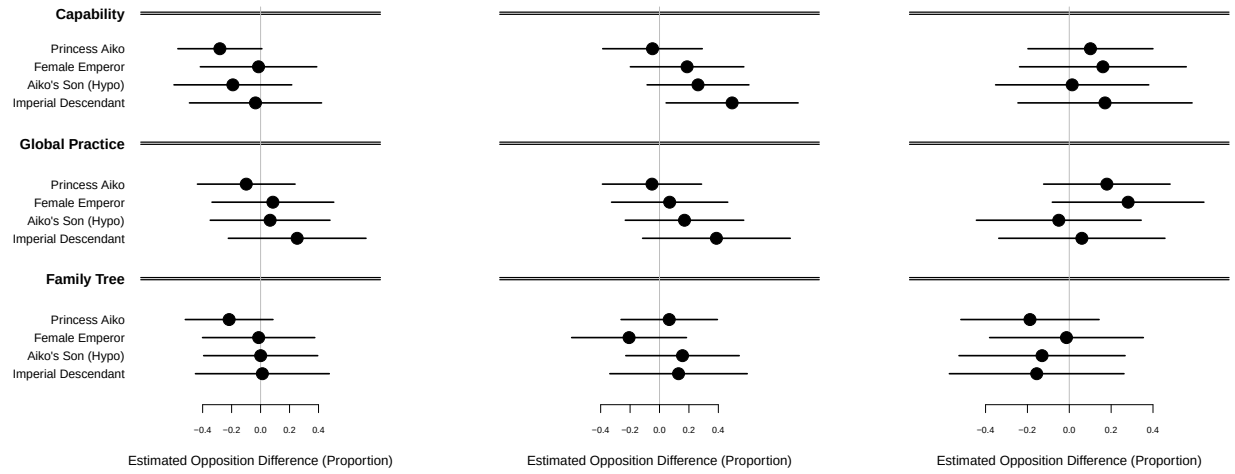
Again, except for some subgroups, almost all effects are not statistically significant. The *Capability* treatment reduces opposition for the Aiko item for people who score low on conservatism but high on sexism (Panel A). Moreover, the *Capability* treatment increases opposition for the imperial descendant item for those score high on conservatism but low on sexism (Panel B). The statistical significance should be interpreted with caution, however. These results are indistinguishable from zero once we account for multiple hypothesis testing using a lenient Benjamini-Hochberg correction method.

How should we interpret the null results? There are two possibilities: the design fails to detect a non-zero effect, or the true effect is indeed zero. On the first view, both statistical power and experimental design might be contributing factors. For the ICT in particular, the anonymity afforded in this technique comes at a cost: loss of power and higher variance (Miller, 1984). For instance, Blair et al. show that when the difference-in-prevalence is about 15%, we need a sample size of 4,500 to detect it with power at 80% (2020, p.9). The baseline suggests that other than `Imperial descendants`, the prevalence rate of all other items is under 15%. The two-wave design reduces the sample size further in the second wave. In retrospect, the survey is underpowered.

On the experimental design, because the treatment effects are estimated by comparing the treated group relative to the control, selecting more powerful treatments or using a different control will likely change the results. One limitation was that because Princess Aiko was a minor during our research period, we had few options to make valid and convincing treatments that also abided by ethical concerns. Alternatively, we could have chosen a control that does not mention the imperial family at all. We decided to opt for a control (Figure 2d) that is about the imperial house but not directly connected to the imperial succession. This choice allows us to distinguish different rationales for supporting the rule change with more precision. We are *not* comparing the effect of imperial framing. Rather, we are exploring *which justification* is more convincing. This choice can be thought of as a harsh test.

If the design and estimation strategy missed a true non-zero effect, one issue to consider is the direction of the treatment effect estimates. Recall the sign of backlash we observed in Wave 1. Comparing the effects of *Global Practice* on the female emperor item, Figures 7a and 7b suggest that a high score in only one dimension does not lead to a backlash. The estimated backlash effect, if any, is driven by respondents who espouse both traditional political and gender values. When sexism is added to political conservatism, these values become powerful hurdles to de-gendering imperial succession, even if it would endanger succession itself.

To ascertain the second possibility that the true effect is indeed zero, future research may use what we have learned in this study, such as increasing the sample size, choosing sensitive items with a higher prevalence rate, and selecting information treatments that produce stronger changes. While these also come with tradeoffs, relating to research ethics and plausibility, they may allow researchers to estimate the treatment effects more precisely, determining whether the null effect we observe here is true.



(a) Low Conservatism & High Sexism (b) High Conservatism & Low Sexism (c) High Conservatism & High Sexism

Figure 7: Effects of informational treatments (`Capability`, `Global Practice`, `Family Tree`), relative to `Control`, on the estimated proportion of *sub*-populations who are upset by the four sensitive items across two waves. `Princess Aiko`, `Female Emperor`, `Aiko's Son (Hypo)` and `Imperial Descendant` represent the four sensitive items. The solid lines represent the 95% confidence intervals. Subfigure (a) summarizes the results of respondents who scored below average in conservatism but above average in sexism; subfigure (c) presents the results of respondents whose conservatism score and sexism score are above average. The solid lines represent the 95% asymptotic confidence intervals.

6 Concluding Remarks

The inability to reconcile the contemporary need for monarchical reform with the historical values that legitimized the monarchy can impede necessary institutional changes, hastening its demise. The number of absolute monarchies has steadily declined since the 20th century, but over forty nation-states still retain constitutional monarchs as their head of state. These royal families serve important, albeit informal, functions as living reminders of national history and non-partisan symbols of civic unity. Maintaining the linkage between tradition-based legitimacy on the one hand and contemporary social relevance on the other requires a delicate balancing act.

The foremost manifestation of this tension is the question of whether and how to reform rules of monarchical succession. The restriction of legitimate claimants to male descendants through the paternal line reduced the frequency of succession conflicts, but it increased the risk that there would be no legitimate male heir once monarchies became embedded in democracy, removed cadet branches, and proscribed concubines. A simple solution that is compatible with contemporary norms for gender equality is to extend rights of succession to daughters and their offspring. However, this reform may be opposed by voters and legislators

with more traditional gender values and conservative political ideologies, who ironically are also more likely to have strong affinities for royal families.

We examine the nature and consequences of such "clashes in traditional values" using the case of imperial succession in modern Japan. Beyond the current emperor and his brother, there is only one legitimate successor in the youngest generation. This has precipitated calls to reform the Imperial House Law, but every proposal conflicts with some cherished preference or value. Permitting the emperor's daughter, Aiko, to succeed as empress runs counter to traditional gender norms of the monarch as the "father" of the nation. Allowing Aiko's (hypothetical) child to ascend the throne violates the historical principle that "the Y-chromosome must be royal." Restoring far-flung male relatives to the official line would expand the pool of male patrilineal descendants, but also dilute the legitimacy of the Imperial House. The topic itself is politically sensitive, since public criticism of imperial practices, much less of the imperial family itself, risks harassment and violence from far-right nationalists.

Using a two-wave survey experiment that combines item counting techniques with information treatments, we analyze the determinants of opposition to monarchical reform. In the first wave sample, we find that the restoration of distant imperial descendants is the least popular option, while allowing for female emperors is considered the most palatable. However, those who score high on our conservatism and sexism scales are less opposed to the former and more wary of the latter.

In the second wave, we randomly presented three types of information to respondents, and then re-asked their preferences regarding imperial succession. Overall, we find that informing respondents of the capabilities of Princess Aiko, the dearth of male successors, or the global prevalence of female monarchs does not change their responses to the sensitive items. However, there is tentative evidence of backlash, particularly among those with greater conservatism and sexism scores. Respondents who were shown the rarity of male-only patrilineal succession in advanced-industrialized democracies actually expressed greater opposition to allowing women to succeed the throne. In addition, there is some evidence that attitudes towards female monarchs in the abstract and the succession of Aiko in particular differ. Information that was designed to demonstrate Aiko's capability, as well as information that illustrated the dearth of male heirs in Japan, both weakly reduced opposition to Aiko's succession. Collectively, these suggest that many respondents value the status quo rule because of its global rarity, not in spite of it. However, opposition to female emperors may be mitigated by how the personal image of female descendants are cultivated in the public sphere.

This paper offers three broader contributions to the literature. First, attitudes towards

symbolic institutions cannot be easily reduced to differences along a single progressive-traditional ideological dimension. In the case of gendered institutions, such as monarchical inheritance, it is valuable to separate traditionalism into convervatism and sexism. Similar disaggregations of traditionalism may be relevant to debates over race- or ethnicity-based institutions. While traditionalists may, on average, be more hostile to changing historical practices or legacies, there are critical differences among them on which reforms are more palatable than others.

Second, we also find that changing attitudes towards symbolic institutions, which reflect deeply-held values, may require concerted public relations efforts that go beyond the treatments used in this study. Our information treatments did not change respondents' preferences at statistically significant levels, although this may be related to the need for more power (increasing the sample size), as discussed in Section 5.2. Alternatively, our results may reflect the fact that monarchical succession has limited material impact on most citizens, and so preferences are dictated almost entirely by normative or cultural values, which take more time to influence. While this may be possible should political elites nudge supporters towards more progressive reforms, we are ultimately pessimistic. Most LDP politicians seem unwilling to accept female monarchs, and many seem to favor the re-integration of male descendants of former cadet branches, even though this is the least popular option in our survey experiment.

Third, we developed and applied a novel two-wave survey design using item count techniques for measuring sensitive attitudes and for estimating treatment effects on these attitudes. We derived a difference-in-differences-in-differences estimator that allows researchers to estimate the effect of treatments when using the item count technique. We believe that this design can be used to explore treatment effects on other sensitive attitudes, such as support for authoritarian leaders and regimes, which also suffer from social desirability bias.

References

Acharya, A. and A. Lee (2019). Path Dependence in European Development: Medieval Politics, Conflict, and State Building. *Comparative Political Studies 52*(13-14), 2171–2206.

Acker, J. (1992). From sex roles to gendered institutions. *Contemporary sociology 21*(5), 565–569.

Austin, D. E. J. and M. Jackson (2019). Benevolent and hostile sexism differentially predicted by facets of right-wing authoritarianism and social dominance orientation. *Personality and Individual Differences 139*, 34–38.

Barnes, T. D. and A. Córdova (2016). Making space for women: Explaining citizen support for legislative gender quotas in latin america. *Journal of Politics 78*(3), 670–686.

Beauregard, K. and J. Sheppard (2021). Antiwomen but proquota: Disaggregating sexism and support for gender quota policies. *Political Psychology 42*(2), 219–237.

Blair, G., A. Coppock, and M. Moor (2020, August). When to Worry about Sensitivity Bias: A Social Reference Theory and Evidence from 30 Years of List Experiments. *American Political Science Review*, 1–19.

Blair, G. and K. Imai (2010). list: Statistical methods for the item count technique and list experiment. Available at The Comprehensive R Archive Network (CRAN).

Blair, G. and K. Imai (2012). Statistical Analysis of List Experiments. *Political Analysis 20*(1), 47–77.

Catalinac, A. (2016). *Electoral Reform and National Security in Japan: From Pork to Foreign Policy*. Cambridge University Press.

Corcos, C. (2012). From Agnatic Succession to Absolute Primogeniture: The Shift to Equal Rights of Succession to Thrones and Titles in the Modern European Constitutional Monarchy. *Michigan State Law Review:1587-1670*.

Cyranoski, D. (2006). Y chromosome fuels dynastic dilemma. *Nature 439*(7079), 898–898.

Dalton, P., D. Devrim, R. Blomeyer, and S. Mut-Tracy (2020). *Discriminatory Laws Undermining Women's Rights: In-depth Analysis*. European Parliament.

De Cao, E. and C. Lutz (2018, October). Sensitive survey questions: Measuring attitudes regarding female genital cutting through a list experiment. *Oxf. Bull. Econ. Stat. 80*(5), 871–892.

Dixon, R. (2020). Gender and Constitutional Monarchy in Comparative Perspective. *Royal Studies Journal 7*(2), 1–9.

Duckitt, J. and C. G. Sibley (2010). Personality, ideology, prejudice, and politics: a dual-process motivational model. *J. Pers. 78*(6), 1861–1893.

Elkins, Z., T. Ginsburg, and J. Melton (2014). Characteristics of national constitutions, version 2.0. *Comparative Constitutions Project*, 29–42.

Federico, C. M. and J. Sidanius (2002). Racism, ideology, and affirmative action revisited: the antecedents and consequences of" principled objections" to affirmative action. *Journal of Personality and Social Psychology 82*(4), 488.

Franceschet, S. (2011). Gendered institutions and women's substantive representation: Female legislators in argentina and chile. In *Gender, Politics and Institutions*, pp. 58–78. London: Palgrave Macmillan UK.

Gerring, J., T. Wig, W. Veenendaal, D. Weitzel, J. Teorell, and K. Kikuta (2021). Why Monarchy? The Rise and Demise of a Regime Type. *Comparative Political Studies 54*(3-4), 585–622.

Glick, P. and S. T. Fiske (1996). The Ambivalent Sexism Inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology 70*(3), 491–512.

Glynn, A. N. (2013). What Can We Learn with Statistical Truth Serum? *Public Opinion Quarterly 77*(S1), 159–172.

Gonçalves, S. and H. White (2005, September). Bootstrap standard error estimates for linear regression. *Journal of American Statistical Association 100*(471), 970–979.

Hill, S. J., J. Lo, L. Vavreck, and J. Zaller (2013, October). How quickly we forget: The duration of persuasion effects from mass communication. *Political Communication 30*(4), 521–547.

Hodson, G., C. C. MacInnis, and M. A. Busseri (2017). Bowing and kicking: Rediscovering the fundamental link between generalized authoritarianism and generalized prejudice. *Personality and Individual Differences 104*, 243–251.

Hughes, M. M., P. Paxton, and M. L. Krook (2017). Gender quotas for legislatures and corporate boards. *Annual Review of Sociology*.

Imai, K. (2011). Multivariate Regression Analysis for the Item Count Technique. *Journal of the American Statistical Association 106*(494), 407–416.

Inglehart, R. (2007). *Postmaterialist Values and the Shift from Survival to Self-Expression Values*. Oxford University Press.

Inglehart, R. and P. Norris (2003). *Rising Tide: Gender Equality and Cultural Change Around the World*. Cambridge University Press.

Iversen, T. and F. Rosenbluth (2010). *Women, Work, and Politics: The Political Economy of Gender Inequality*. Yale University Press.

Johnson, H. (2017). Pipelines, Pathways, and Institutional Leadership: An Update on the Status of Women in Higher Education. Technical report, American Council on Education's Center for Policy Research and Strategy.

Johnson, S. K., D. R. Hekman, and E. T. Chan (2016). If There's Only One Woman in Your Candidate Pool, There's Statistically No Chance She'll Be Hired. *Harvard Business Review*.

Jost, J. T. (2017). Ideological asymmetries and the essence of political psychology. *Political Psychology 38*(2), 167–208.

Kimizuka, N. (2018). *Rikken kunshusei no genzai: Nihonjin wa shōchō tenno wo iji dekiruka [Constitutional Monarchy Today: Can the Japanese Sustain "the Emperor as the Symbol of the State"?]*. Tokyo, Japan: Shincho-sha.

Kinder, D. R. and L. M. Sanders (1996). *Divided by Color: Racial Politics and Democratic Ideals*. Chicago: University of Chicago Press.

Kokkonen, A. and A. Sundell (2014). Delivering Stability—Primogeniture and Autocratic Survival in European Monarchies 1000–1800. *American Political Science Review 108*(2), 438–453.

Kuklinski, J. H., M. D. Cobb, and M. Gilens (1997). Racial attitudes and the "new south". *Journal of Politics 59*(2), 323–349.

Lyall, J., G. Blair, and K. Imai (2013). Explaining support for combatants during wartime: A survey experiment in Afghanistan. *American Political Science Review 107*(4), 679–705.

Manfredi, C. P. and M. Lusztig (1998, April). Why do formal amendments fail?: An institutional design analysis. *World Politics 50*(3), 377–400.

Mantel, H. (2013). Royal Bodies. *London Review of Books 35*(04).

Martin, A. D., K. M. Quinn, and J. H. Park (2011). MCMCpack: Markov chain monte carlo in R. *Journal of Statistical Software 42*(9), 22.

McDonagh, E. (2015). Ripples from the First Wave: The Monarchical Origins of the Welfare State. *Perspectives on Politics 13*(4), 992–1016.

McElwain, K. M. (2020). When candidates are more polarised than voters: constitutional revision in japan. *European Political Science 19*(4), 528–539.

Menaldo, V. (2012). The Middle East and North Africa's Resilient Monarchs. *The Journal of Politics 74*(3), 707–722.

Miller, J. D. (1984). *A new survey technique for studying deviant behavior*. PhD Dissertation. George Washington University.

Miura, M. (2012). *Welfare through Work: Conservative Ideas, Partisan Dynamics, and Social Protection in Japan*. Cornell University Press.

Miwa, H., R. Arami, and M. Taniguchi (2021, May). Detecting voter understanding of ideological labels using a conjoint experiment. *Political Behavior*.

Nelson, R. L. and W. P. Bridges (2003). *Legalizing gender inequality: Courts, markets, and unequal pay for women in America*, Volume 47. Cambridge University Press.

Quinn, K. M. (2004). Bayesian Factor Analysis for Mixed Ordinal and Continuous Responses. *Political Analysis 12*(4), 338–353.

R Core Team (2022). *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing.

Rokeach, M. (1972). *Beliefs, attitudes and values: A theory of organization and change*. Jossey-Bass.

Ruoff, K. J. (2020). *Japan's Imperial House in the Postwar Era, 1945–2019*. Harvard University Press.

Sasada, H. (2010). The electoral origin of japan's nationalistic leadership: Primaries in the ldp presidential election and the "pull effect". *Journal of East Asian Studies 10*(1), 1–30.

Sniderman, P. M., R. A. Brody, and P. E. Tetlock (1993). *Reasoning and Choice: Explorations in Political Psychology*. Cambridge: Cambridge University Press.

Taniguchi, M. (2020). *Gendai Nihon no Daihyousei Minshu-Seiji: Yuukensha to Seijika*. University of Tokyo Press.

Taniguchi, M. and Asahi Shimbun (2019). The university of Tokyo-Asahi survey.

Ui, M. and M. Yamamoto (2001). Reliability and validity of a Japanese version scale of Ambivalent Sexism Inventory (ASI). In *Proceeding of the 42nd Annual Conference of the Japanese Society of Social Psychology (Aichi, Japan)*, pp. 300–301.

UN Women (2020). Facts and figures: Women's leadership and political participation.

World Bank (2011). Gender Equality and Development in the Middle East and North Africa region.

World Economic Forum (2021). Global Gender Gap Report 2021.