Have Women Changed the Political Debate?

Studying the Substantive Representation of Women in Postwar Britain

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After Tony Blair's landslide victory in 1997, 120 female MPs were returned. Overnight the number of women MPs doubled. To what extent, however, has the increasing presence of women in Parliament made more than a symbolic difference? In Westminster, and across the world, the question of whether female legislators have changed the substance of debate has generated enormous interest amongst political scientists and, to a lesser extent, among contemporary historians. Scholars have investigated, for example, whether women MPs have represented a hitherto marginalised "women's interest" or placed "women's issues" on the agenda. They have been held back, however, by the sheer volume of textual data that Parliament has generated: more than 677 million words have been recorded in Hansard since 1945. This has made a holistic and empirical analysis of a wide-ranging topic like gender extremely challenging (Blaxill and Beelen, 2016).

Notwithstanding these methodological hurdles, this paper asks whether the growing presence of women has changed the agenda of Westminster, and made it more receptive to the priorities of women MPs. We tackle this question as follows: First, we determine what issues women MPs have focused on—measured by calculating what policy issues they have engaged with. We mapped every speech to a code of the Comparative Agendas Project (John et. al., 2013) using supervised classification. We trained a linear SVM on different sets of coded data (Prime Minister's Questions and Acts of Parliament). This allowed us to map policy shifts over time and by gender, such as depicted in Figure 1.
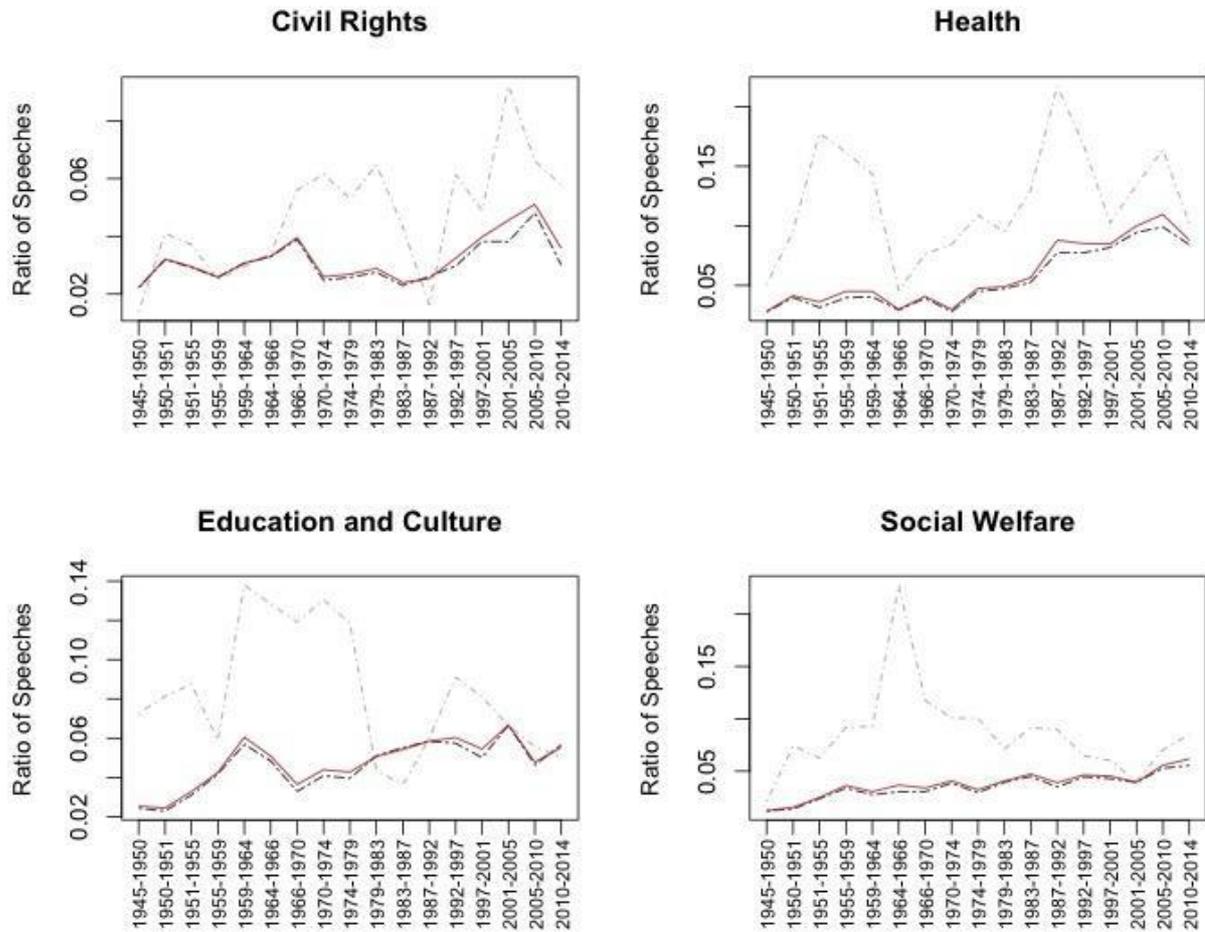
Figure 1: ratio of speeches on civil rights, health, education and social welfare. Red line represents the ratio for all MPs, black line for male MPs and grey line for female MPs

These figures suggest that topics prioritized by women MPs have risen in importance over time. However interesting, these aggregates don't allow us to make inferences about the preferences of *individual* (male or female) MPs. To tackle this issue we gauge the effect of gender on participation in parliamentary debates using negative binomial regression. For each year, we measure the number of speeches an MP contributed to a policy domain (the dependent variable). Other personal attributes serve as independent variables (party, party status (opposition or government), portfolio (minister or secretary of state) or seniority (age and number of times elected). To estimate the changing effect of gender over time we fit model 1 en 2 for each parliament, i.e. period between two general elections.

Model 2:

Speeches on "female" topics (Topic Topology=0, parliament i) = $\alpha + \beta^1$ Gender + β^2 Party + β^3 Party Status + β^4 Responsible + β^5 Seniority + ε

Model 3:

Speeches on "male" topics (Topic Topology=1, parliament i) = $\alpha + \beta^1$ Gender + β^2 Party + β^3 Party Status + β^4 Responsible + β^5 Seniority + ε

Figure 2 shows the fluctuating effect of gender (the estimated parameter β^1 for different parliaments i) on participation in so-called "Hard" (Economy, Defence and Energy, coded as one) and "Soft" (Health, Civil Rights and Welfare, coded as zero) policy areas (see also Bäck et. al., 2014) .

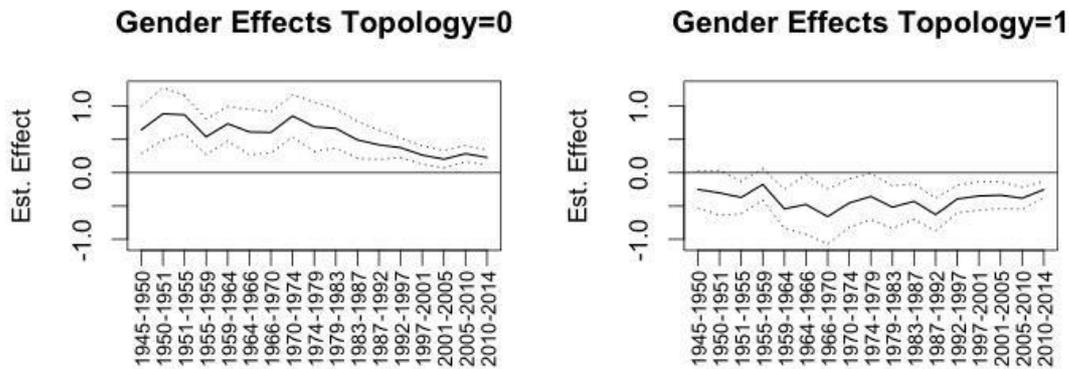**Gender Effects Topology=0**　　　　**Gender Effects Topology=1**

Figure 2: Interaction effects. The plot on the left, shows the effect on female MPs, the right the effect on male MPs. Dotted lines represent the 95% confidence intervals.

These results suggest a persistent but narrowing gender gap in Westminster. Male MPs do talk more about War, while female MPs are more prone to engage with debates about Welfare, but overall this gap tends to diminish as more women obtain seats in the House of Commons.

Lastly we offer tentative explanations and context for why the agenda of Westminster moved in the direction it did, and explores several mechanisms of change: first we examine the convergence/divergence of speech-behaviour and priorities (Figure 3). Here we see that male MPs have become more engaged with the traditional "Soft" topics. Women's debating profile, however, has remained more or less stable over time.
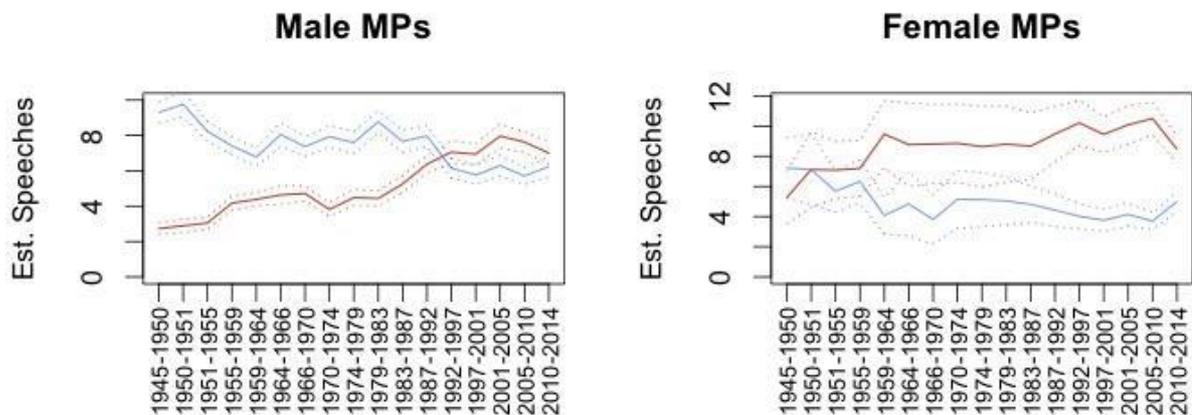
Male MPs　　　　**Female MPs**

Figure 3: predicted number of speeches for male (left) and female MPs (rights). The blue line represents the "male" topics, the red line the "female" topics. Dotted lines show the 95% confidence intervals.

Secondly we measure the difference women legislators made by quantifying motions they moved and the debate they thus generated (Figure 4).
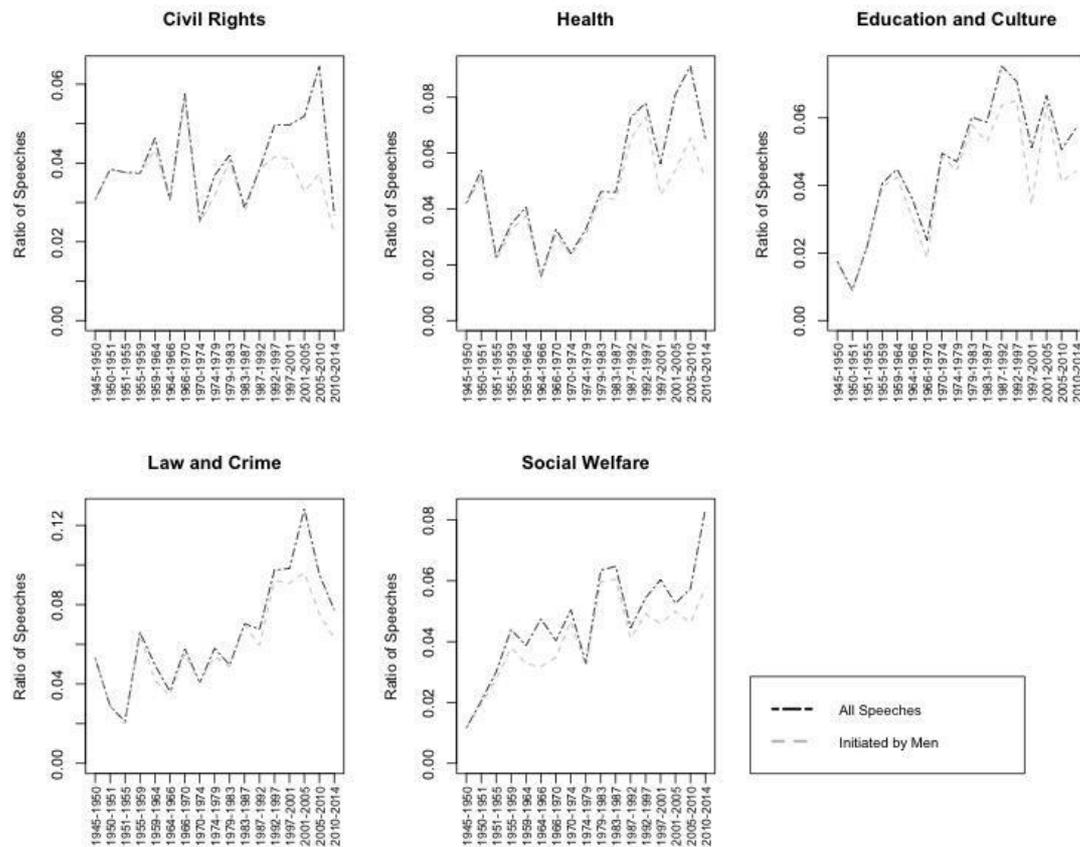

Figure 4: Comparison of debates generated by male and female motions. The grey line shows the amount of debate that resulted from motions moved by male MPs. The black shows the total amount of debate on a particular topic. The amount of debate initiated by women is, therefore, the area between the grey and the black lines.

Here we observe that, in the domain of Civil Rights and Welfare, women MPs have indeed increasingly instigated discussion.

Thirdly we quantify how influential women's voices were over the last sixty years. We apply the methodology proposed by (Blumenau, 2018): For each *debate* we computed the similarity between speeches based on their Tf-Idf representation. This resulted in a distance matrix, which we converted to a directed graph. The nodes in the network represent the individual speeches while the edges capture the (cosine) similarity between two speeches. We created an vertex pointing from node B to node A if B followed A in the sequence of speeches and $sim(A,B) > 0.25$. The centrality of an MP in this "citation network" reflects their influence in the debate.

Similarly to the preceding regression analysis (models 1 and 2) we computed the effect of gender (but now on the influence scores) controlling for personal attributes, participation in the discussion, and the presence of *other* women in the debate. Overall we found no gender effect, but observed that having women participating at higher rates (i.e. at least a quarter of the MPs who take the floor are female) amplifies their influence.

Bibliography

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