

## Methods Appendix

Perl ([www.perl.org](http://www.perl.org)) scripts were written to automate randomisations, counting and statistical operations on the data. The R package ([www.r-project.org](http://www.r-project.org)) was used to carry out statistical analysis.

### *Randomizations*

For both jurisdictions we carried out 100,000 randomisations of surname-party assignments. For each simulation we held the size of each party fixed as in the real data but randomly distributed politicians across the parties. This resulted in parties of the same size as in the real data but with a random sampling of the politicians. We then counted the number of Gaelic, English (and in Northern Ireland, Scottish) surnames in each randomized party. We calculated the means and standard deviations of the number of Gaelic surnames, English surnames (and in Northern Ireland, Scottish surnames) in the parties. These means represent the number of politicians with a given surname type expected by chance in a party of that size. We also counted the number of randomizations that had more or less Gaelic, English (and in Northern Ireland, Scottish) surnames than observed in the real data giving a direct measure of whether the level of a surname type seen in the real data is significantly more or less than expected by chance.

### *Regional analysis*

Ireland has historically been divided into four provinces (Leinster, Munster, Connacht and Ulster) and further subdivided into 32 counties. These counties are still used as modern administrative units. The Republic of Ireland consists of 26 of these counties with the six remaining counties (all from the historic province of Ulster) forming Northern Ireland. We used constituency names (always consisting of a county, a part of a county or parts or the whole of a number of counties) to place each TD in one of the four regions displayed in Figure 3: Dublin (the capital city and surrounding county), Leinster (the historic province of that name, minus Dublin), Munster (corresponding to the historic province of that name) and Connacht/ Ulster (all of the province of Connacht and the three Ulster counties in the Republic of Ireland). We excluded the small number of TDs (33 of 1156 TDs; <3 percent) who represented either constituencies that crossed regional boundaries or different constituencies in different regions at different times.