Comparing attitudinal structures between political orientations:
a network analysis of climate change attitudes

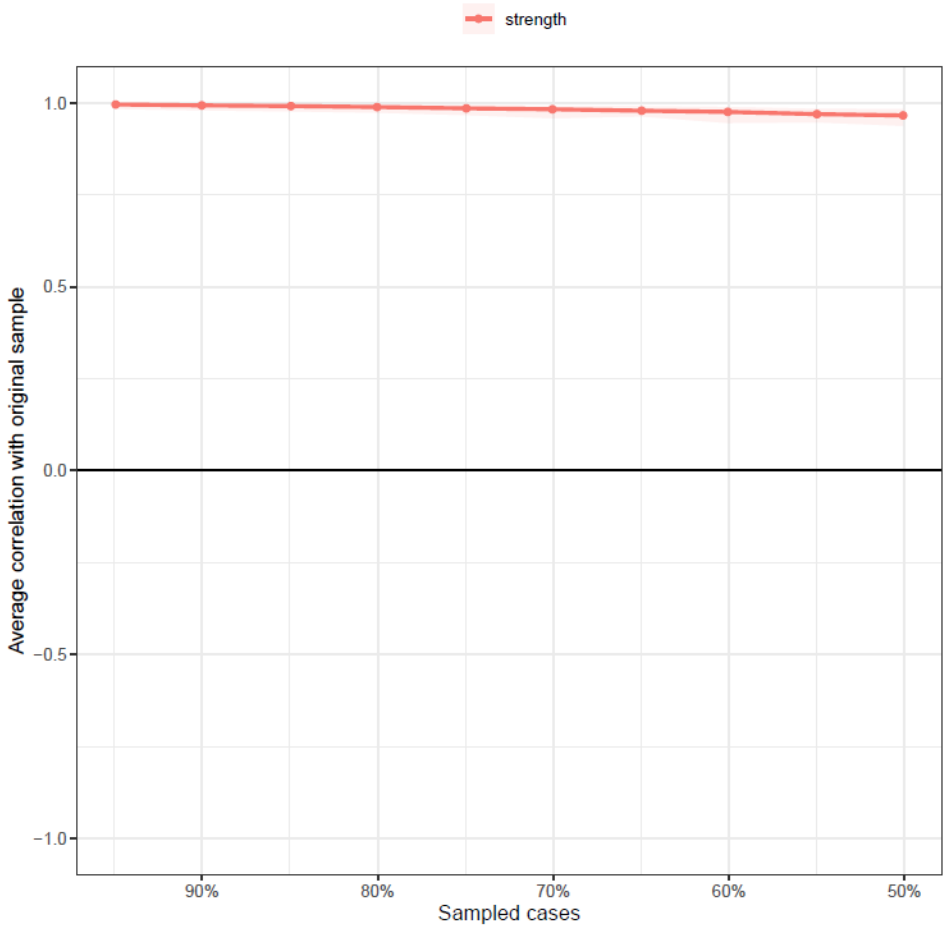
Supplementary materials

1. Robustness checks

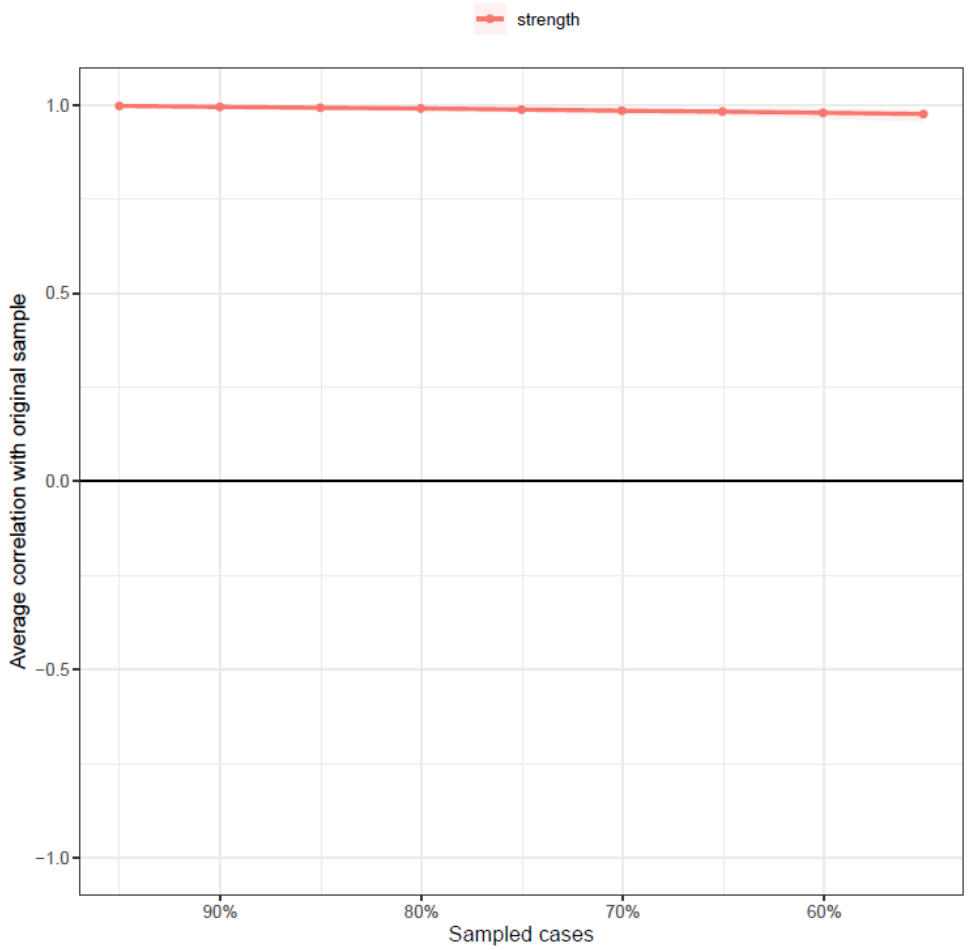
Centrality stability

We tested the stability of the estimated centrality indices (node strength) using a bootstrapping method from the *bootnet* R package (Epskamp, 2021).

Left



Right



This shows that when all respondents are drafted to estimate new networks, those networks correlate perfectly, and as the number of respondents drop to 50%, the networks still correlate extremely well. This indicates that the network structures are robust and not just a product of the exact sample size.

Edge stability - Political orientation

Please see supplementary documents StabilityL.pdf and StabilityR.pdf
Using bootstrapping from the *bootnet* package, we tested the stability of each edge in the networks. (bootstapped with 5000 iterations, intervals show 2.5th to 97.5th quartiles of bootstraps Ordered from the most positive to most negative edge)

Narrower groups

For the political orientation networks, we compared the estimated networks with networks derived from more extreme left/right groups, to see if this caused changes to the structures. This way the Left group consisted of people who responded 1→3 on the 1-11 Left/Right orientation scale (where the original group is 1→5), and Right was 9→11 (originally 7→11). Both the Left and Right networks were highly correlated with the networks of the narrower groups. Left ($r = 0.92$, 95% CI [0.91, 0.93], $p < 0.001$) and Right ($r = 0.92$, 95% CI [0.91,

0.93], $p < 0.001$). Because the patterns we find in networks based on the current groups are so strongly correlated with more more politically extreme groups, it is therefore unlikely that our results are merely artifacts of the division we chose.

2. Network Comparison Test Results

Descriptions of additional supplementary files:

1. **LeftCAN.csv, RightCAN.csv** weight adjacency matrices for the respective networks (weights). They can be accessed via Google Sheets here: https://docs.google.com/spreadsheets/d/1EKf8TWyKaW0oMkbF8e4Q2gD2i41ITNP1wbbzHp-X8vc/edit?usp=sharing
   and here
   https://docs.google.com/spreadsheets/d/1TpyPUhf0GITUfefP9QTQ_c5Hiit-Nkwpqtcdts_97_g/edit?usp=sharing
2. **NCT_cent.csv** strength and betweenness differences with associated p-values, where real values represent the test statistic of the right network subtracted from the left network (e.g. if the left node strength is higher, it will present as a positive figure here)
   The document can be accessed via Google Sheets here:
   https://docs.google.com/spreadsheets/d/1Ss6jj8NEf-pZb0N_zmx64L9a48SwIcO9vfxZZsiLhoI/edit?usp=sharing
3. **NCTedge.P.csv** *p*-values associated with edge differences.
   The document can be accessed via Google Sheets here:
   https://docs.google.com/spreadsheets/d/1d2k7ochTYxJ1MPqvLEw36-OEH4bf8k8mVsta1ZMS5zE/edit?usp=sharing