

# Congressional Cosponsorship: A Network Analysis

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## Introduction

Sponsoring bills is one way in which the 535 members of the US Congress communicate with each other and other political operatives, with their constituents and the broader public, and with donors. It is a way to signal ideology and intent.

### Research Questions

In a context of increasing political polarity, are bill cosponsorship networks becoming more partisan? How do political and demographic factors at the member level relate to bipartisanship?

## Data

Congressional records are public records made available by the Library of Congress. Information was collected regarding:

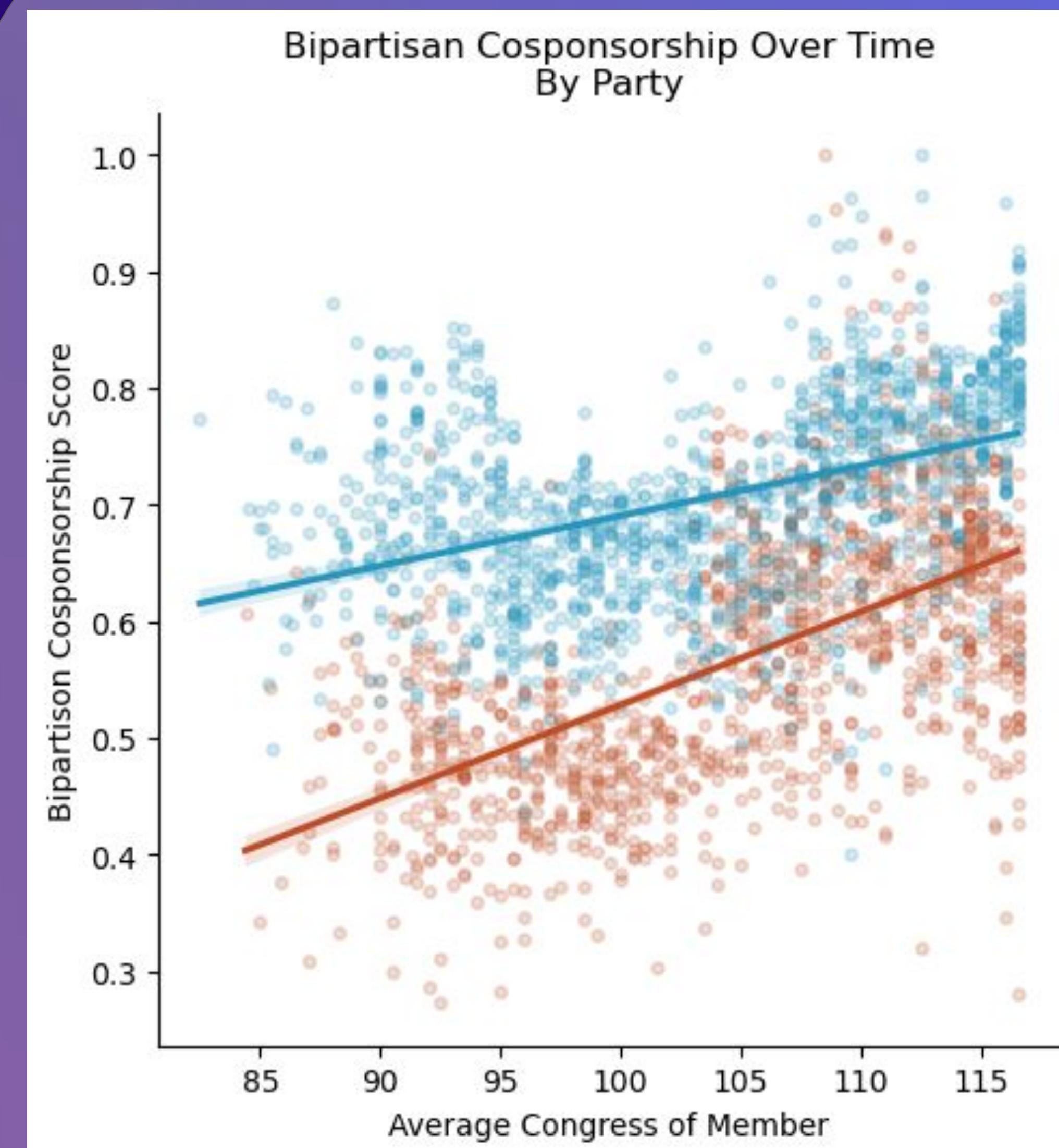
- ★ ~325,000 bills  
sponsored or cosponsored between 1973 and 2021 by
- ★ ~2,500 members of Congress  
together representing
- ★ ~1.7 million cosponsorship relationships

## Methods

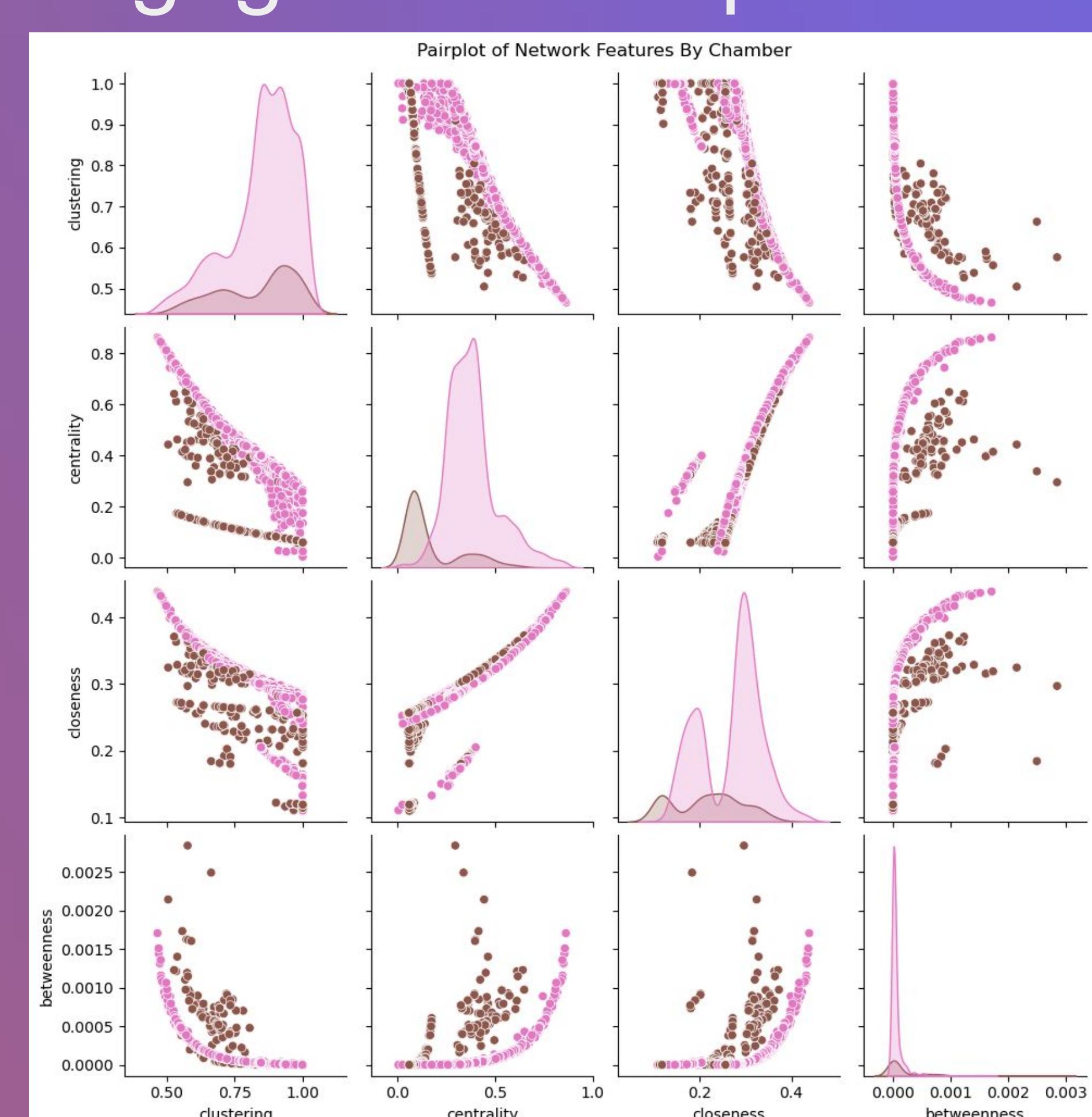
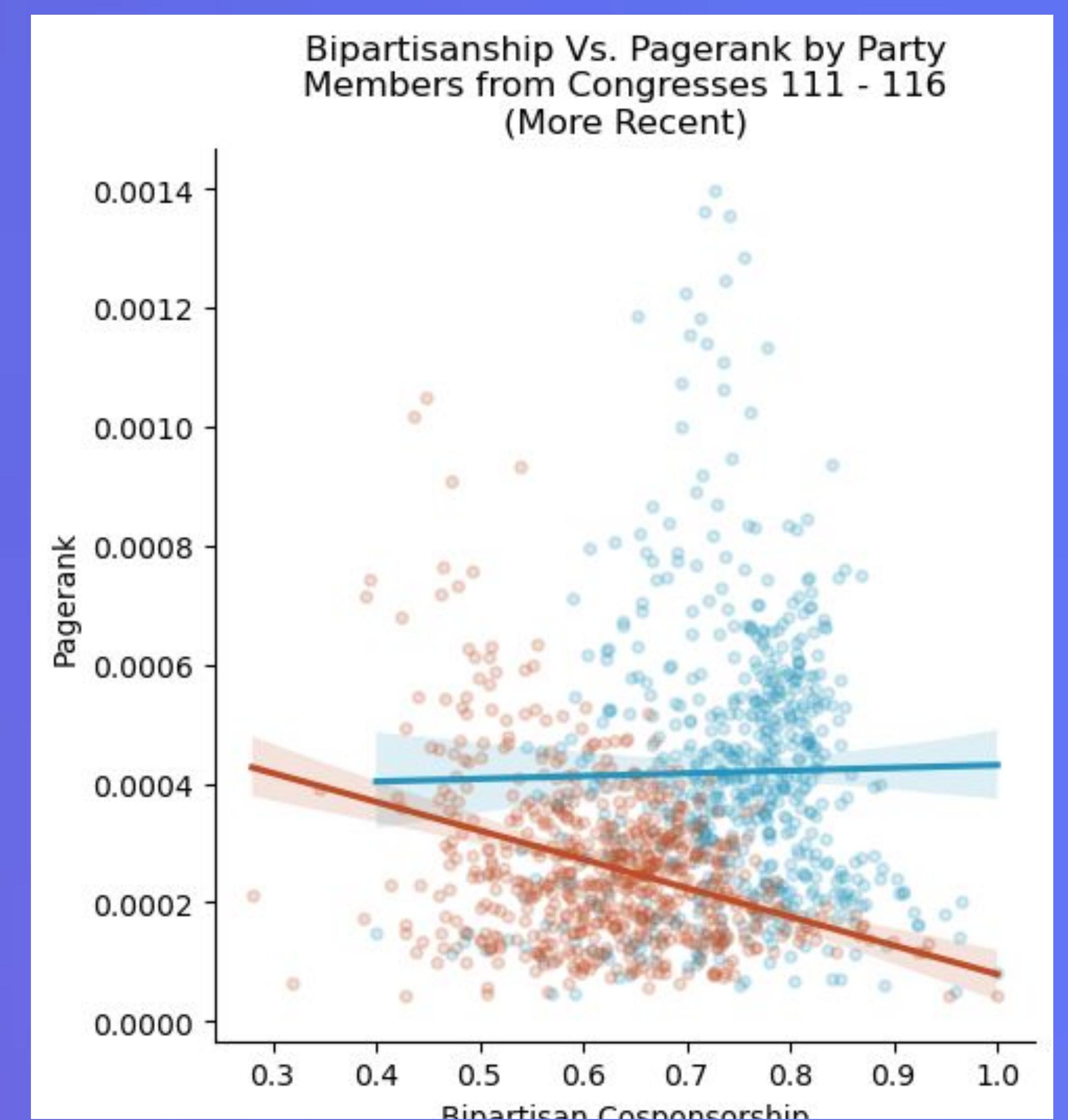
Connections between members were cast as a network in which nodes represent members and the edges between them are weighted according to the frequency of cosponsorship. This network was then analyzed by standard quantitative network measures of each node, e.g., variations of connectedness and centrality, as well as by bipartisanship score, a measure of how connected the member is outside of their own political party. This network data, aggregated at the member level, is then connected to other political and demographic information about each member; thus, these network and cosponsorship measures can be compared across political and demographic groups of members.

## Results

- ★ Despite growing political division, bipartisan cosponsorship is on the rise
- ★ Democrats engage in more bipartisan cosponsorship than Republicans



- ★ Though there is no relationship for Democrats, bipartisan cosponsorship is negatively correlated with pagerank centrality for Republicans over the last 5 Congresses (2009 - 2021); in other words, more legislatively important Republicans engage in less bipartisan behavior.



- ★ Each pair of network measures (centrality, clustering, closeness, and betweenness) is clearly and tightly correlated for Representatives, but the Senate is much more complicated than the House in terms of the interrelationship of members.