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"Extreme"Roll Call Analysis

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Roll Call Analysis

- U.S. Congress as canonical case?
- lots of legislators
- lots of roll-calls
- reasonable heterogeneity in voting profiles (less-than-perfect party loyalty)
- two-party system helps ensure unidimensional models fit well

Other settings?

- courts?
- U.S. Supreme Court: n=9
- 3 judge panels in Federal courts

Other settings?

- Westminster-style legislatures
- strong party discipline
- not as many roll calls
- possibly multi-dimensional

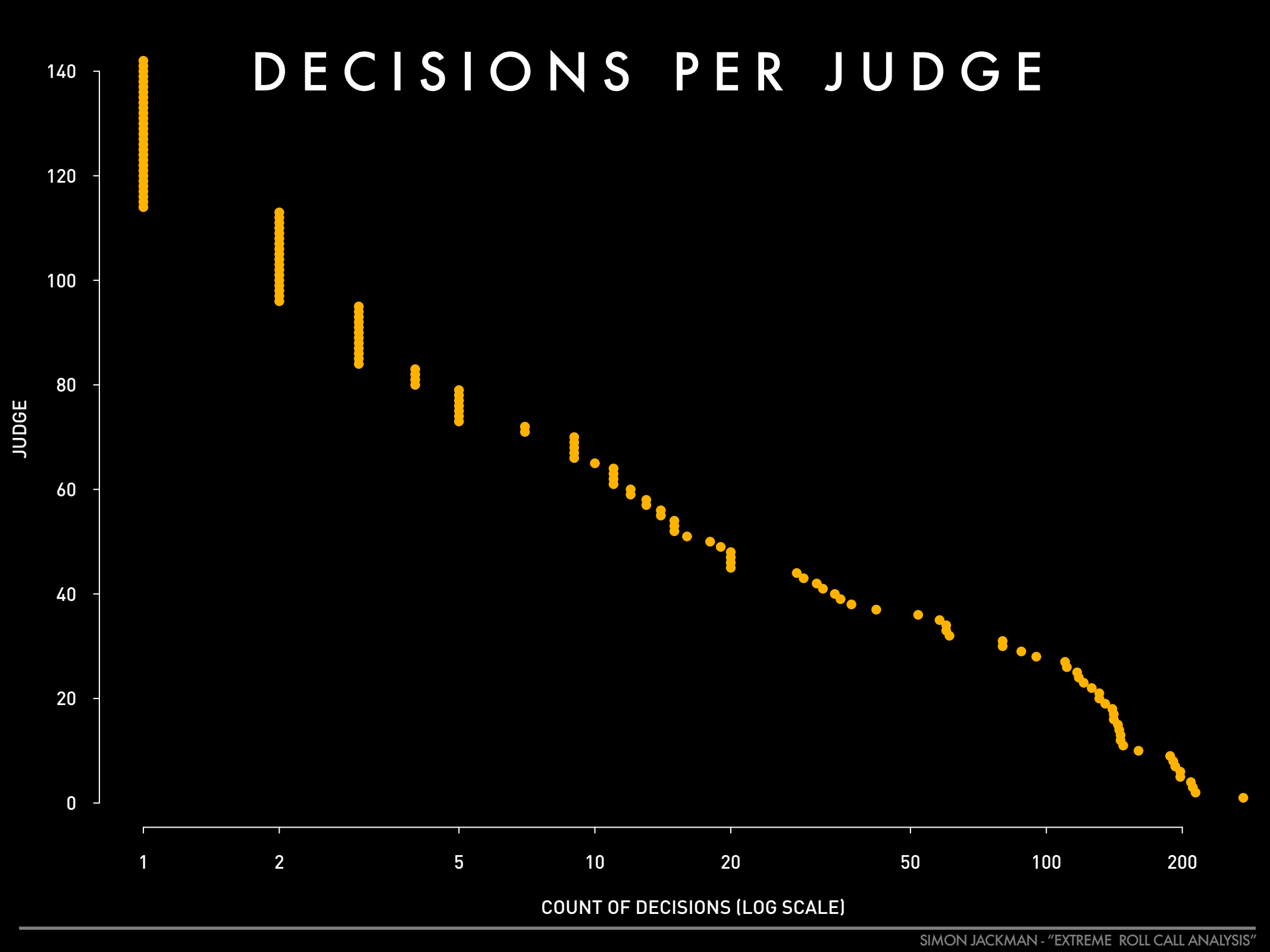
Two Examples

1. U.S. Federal Courts, 9th Circuit: panels hearing immigration cases (appeals for asylum)
2. Australian Senate, 1996-present.

Asylum Appeals

(David Law's dissertation)

- 9th Circuit (Western states)
- 3 judge panels hearing asylum cases
- 1,892 cases; 142 judges, 1992-2001
- plus 3 *en banc* appeals, each heard by 11 judges
- 5,676 binary decisions to model


DECISIONS PER JUDGE
JUDGE
140
120
100
80
60
40
20
0
1
2
5
10
20
50
100
200
COUNT OF DECISIONS (LOG SCALE)
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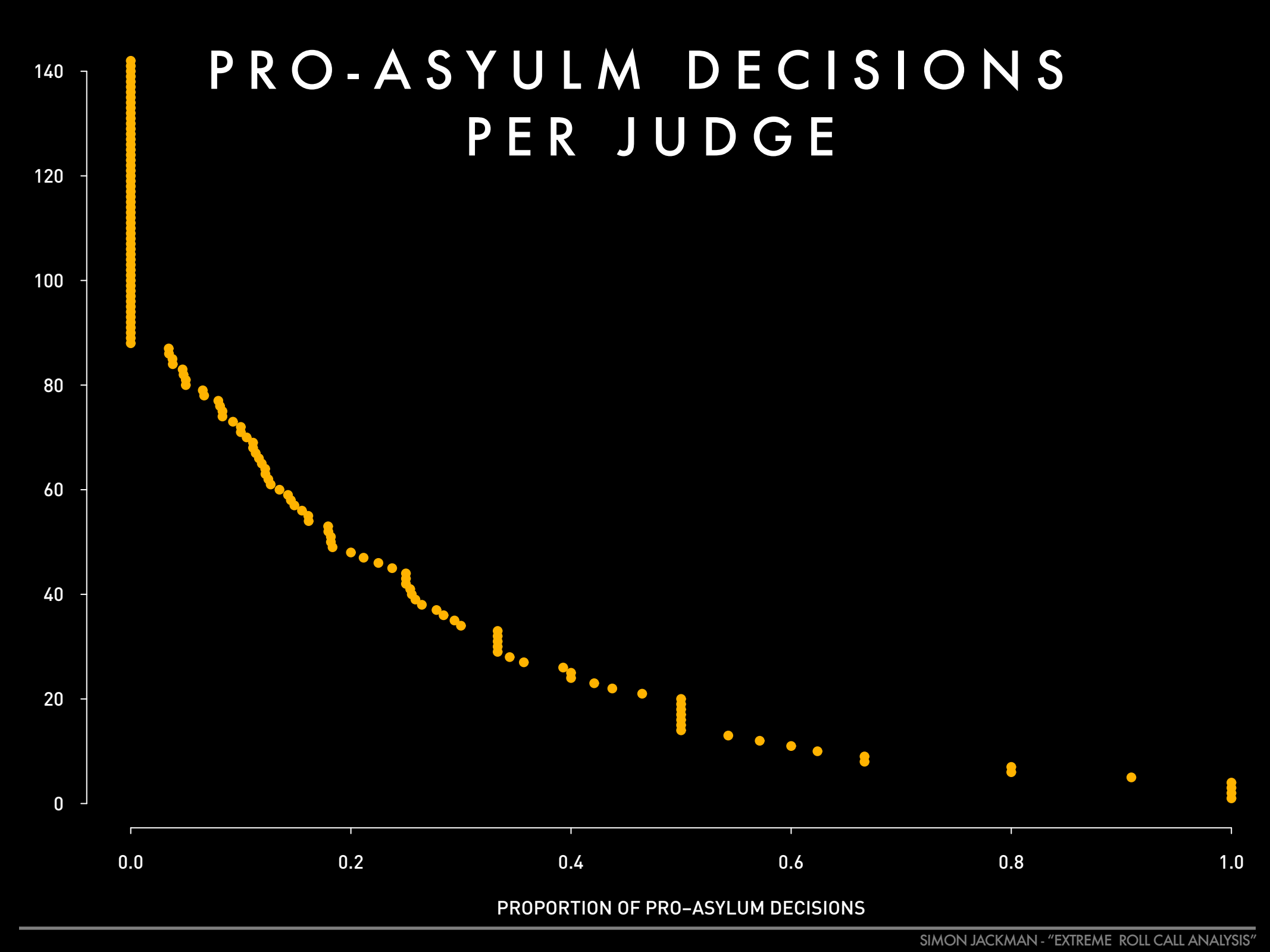
PRO-ASYULM DECISIONS PER JUDGE
140
120
100
80
60
40
20
0
0.0
0.2
0.4
0.6
0.8
1.0
PROPORTION OF PRO-ASYLUM DECISIONS
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Asylum Cases

- just 17% of appeals are successful
- 79% of decisions are unanimous rejections of the appeal

Sparseness in Data

- of 1,895 cases, only 103 are non-unanimous
- 57 different judges appear in these 103 non-unanimous cases
- of these 57 judges, 16 judges appear just once; only 25 appear 5 or more times
- of these 57 judges, only 19 have variation in their voting patterns

Fitting Spatial Voting Model

- unidimensional policy space
- each judge has an ideal point
- each case has 2 parameters: the "grant asylum" location and the "deny asylum location"

CJR quadratic/normal

$$
\begin{aligned}
U_i(Y_j) &= -(x_i - Y_j)^2 + \varepsilon_{ijY} \\
U_i(N_j) &= -(x_i - N_j)^2 + \varepsilon_{ijN} \\
Pr(y_{ij} = 1) &= Pr[U_i(Y_j) > U_i(N_j)] \\
&= F(x_i\beta_j - \alpha_j)
\end{aligned}
$$

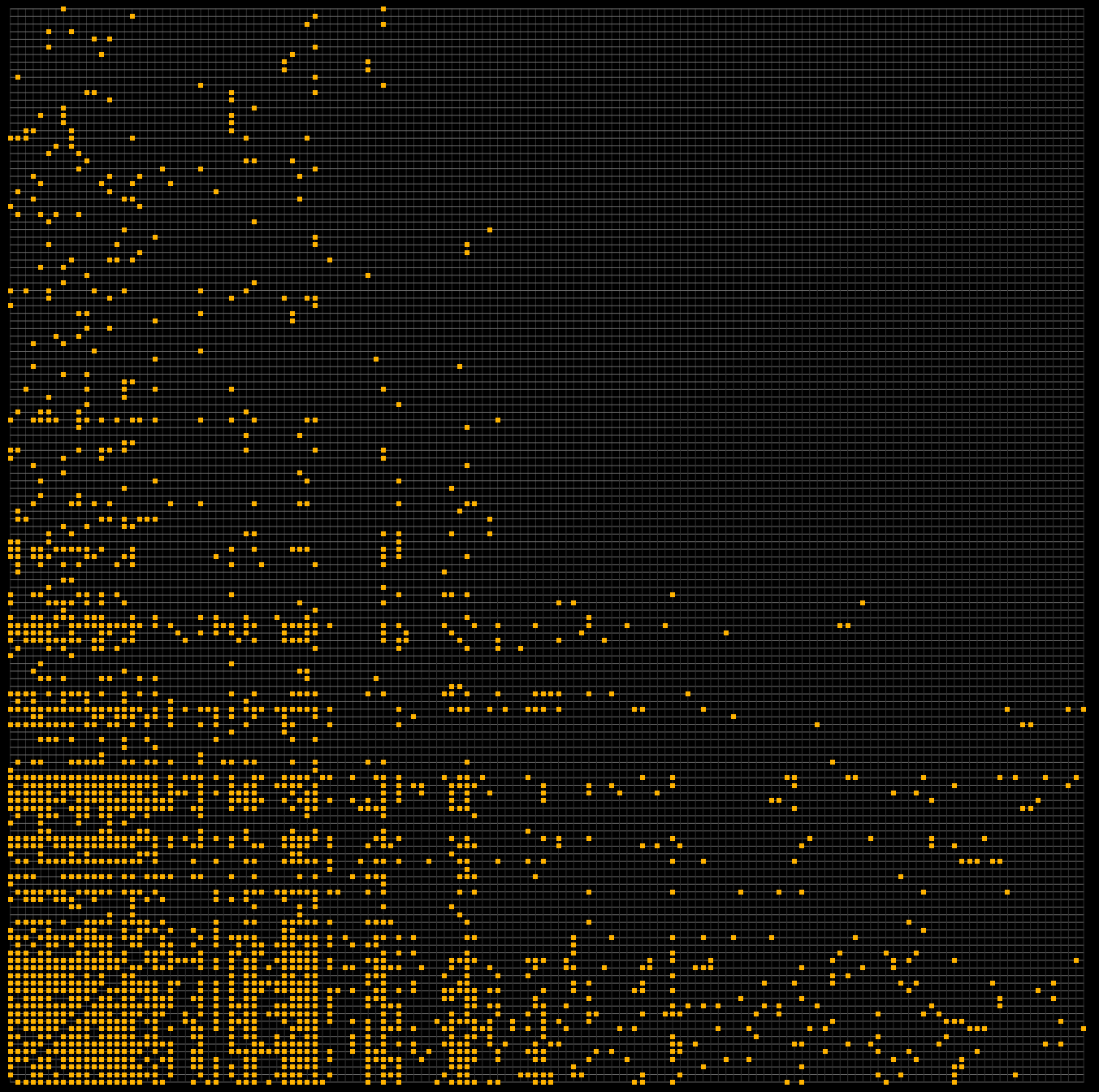
where

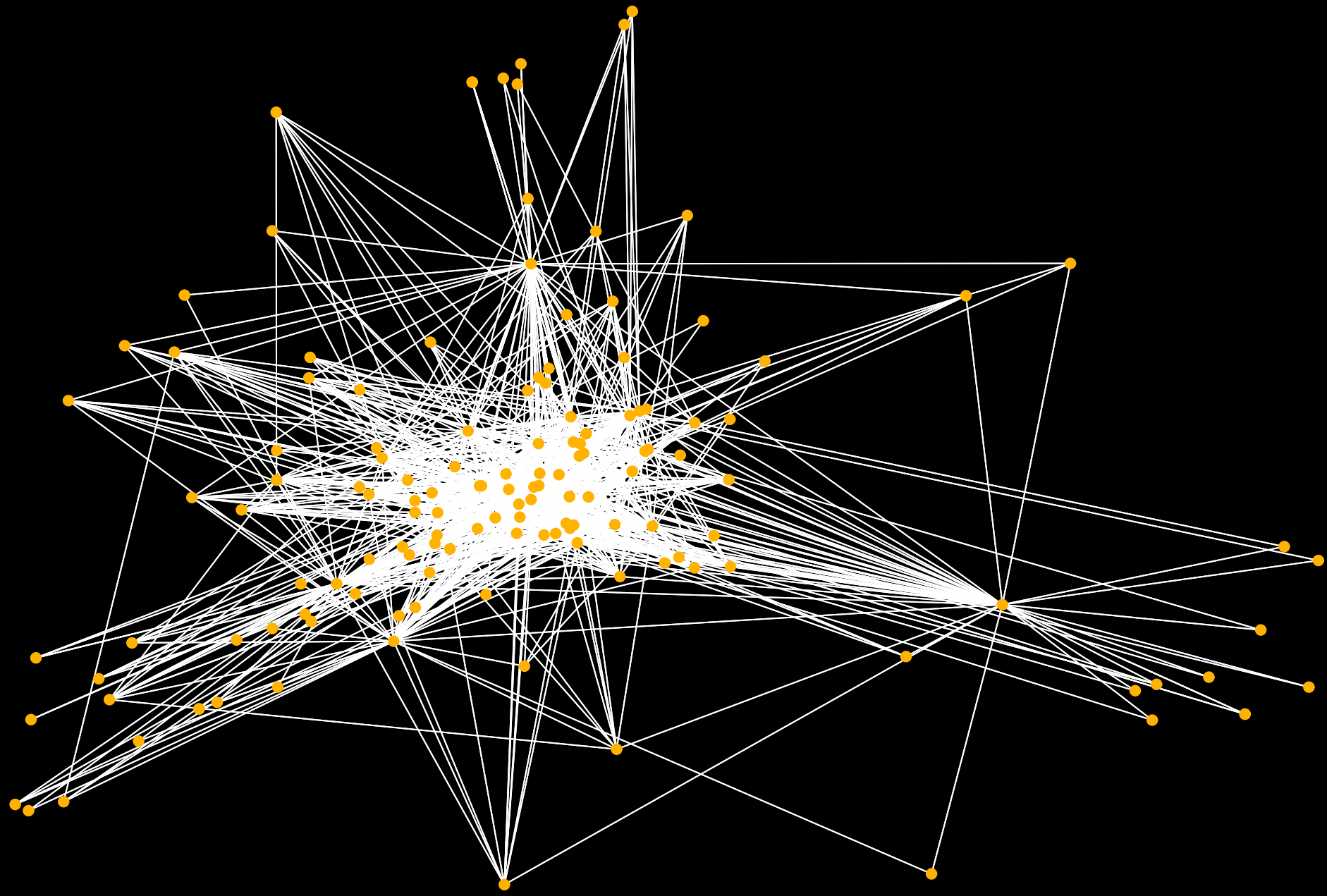
$$
\begin{aligned}
\beta_j &= 2(Y_j - N_j) \\
\alpha_j &= Y_j^2 - N_j^2 \\
\alpha_j/\beta_j &= \frac{Y_j + N_j}{2}
\end{aligned}
$$

CJR quadratic-normal

- identification: judge ideal points have mean zero, standard deviation one
- over-lapping generations structure across judges, through cases, means joint scaling feasible
- lots of unanimous panels; lop-sided and/or short voting histories; data relatively uninformative for most judges

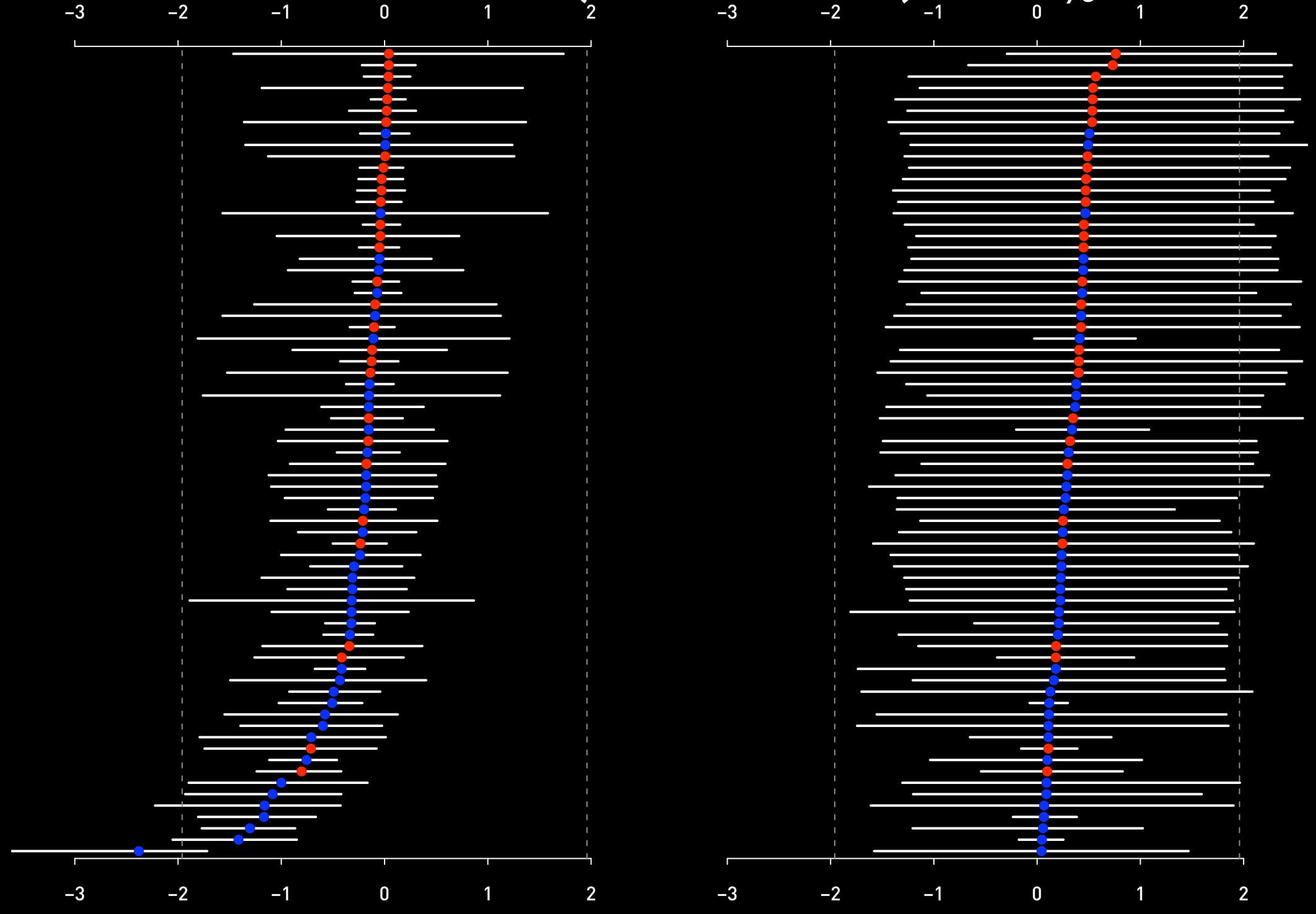
Overlapping Generations Structure (judges through cases)

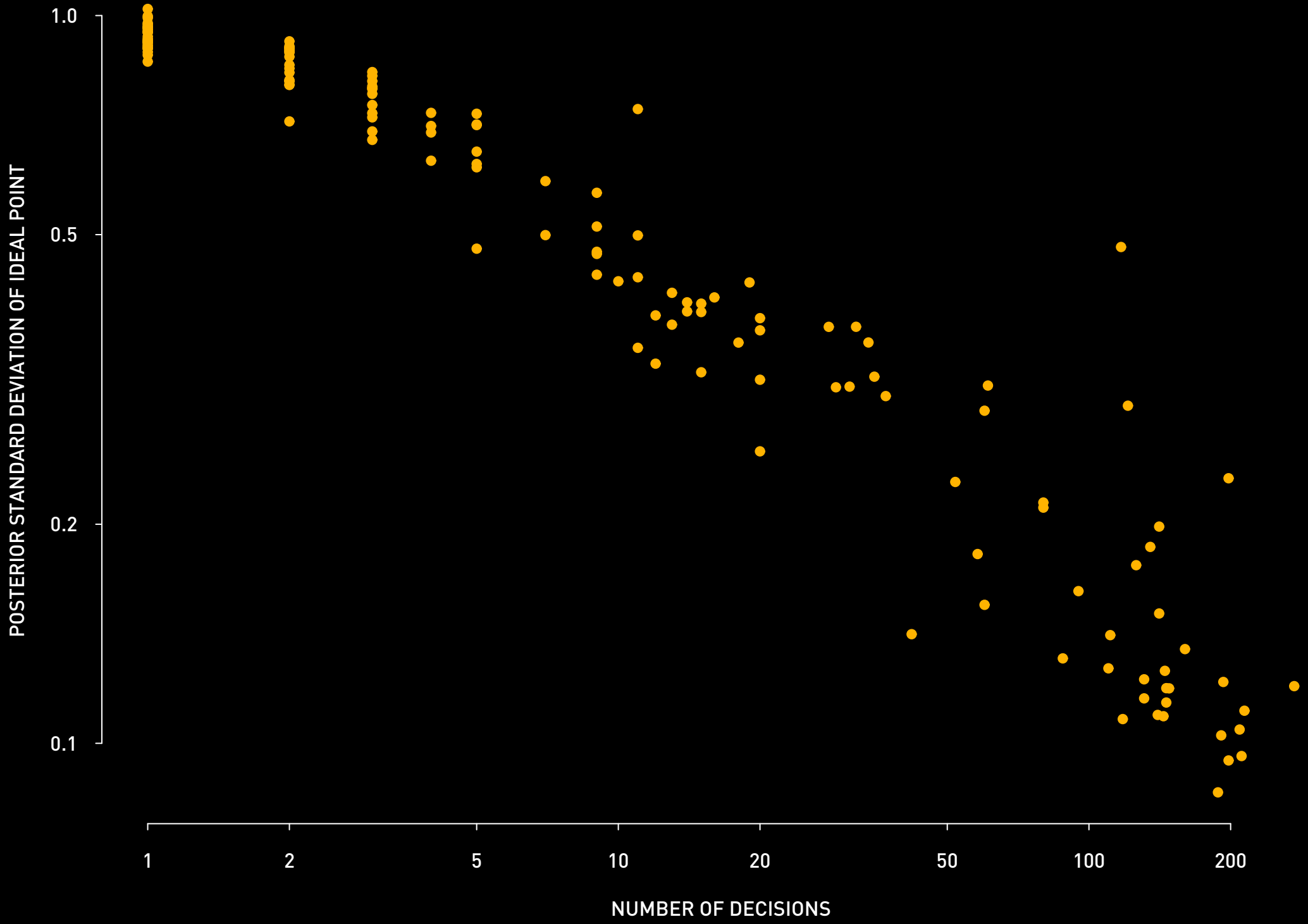




Undirected Graph Representation of Overlapping Generations Structure Among Judges through Cases

Ideal Point Estimates (Posterior Means) and 95% CIs





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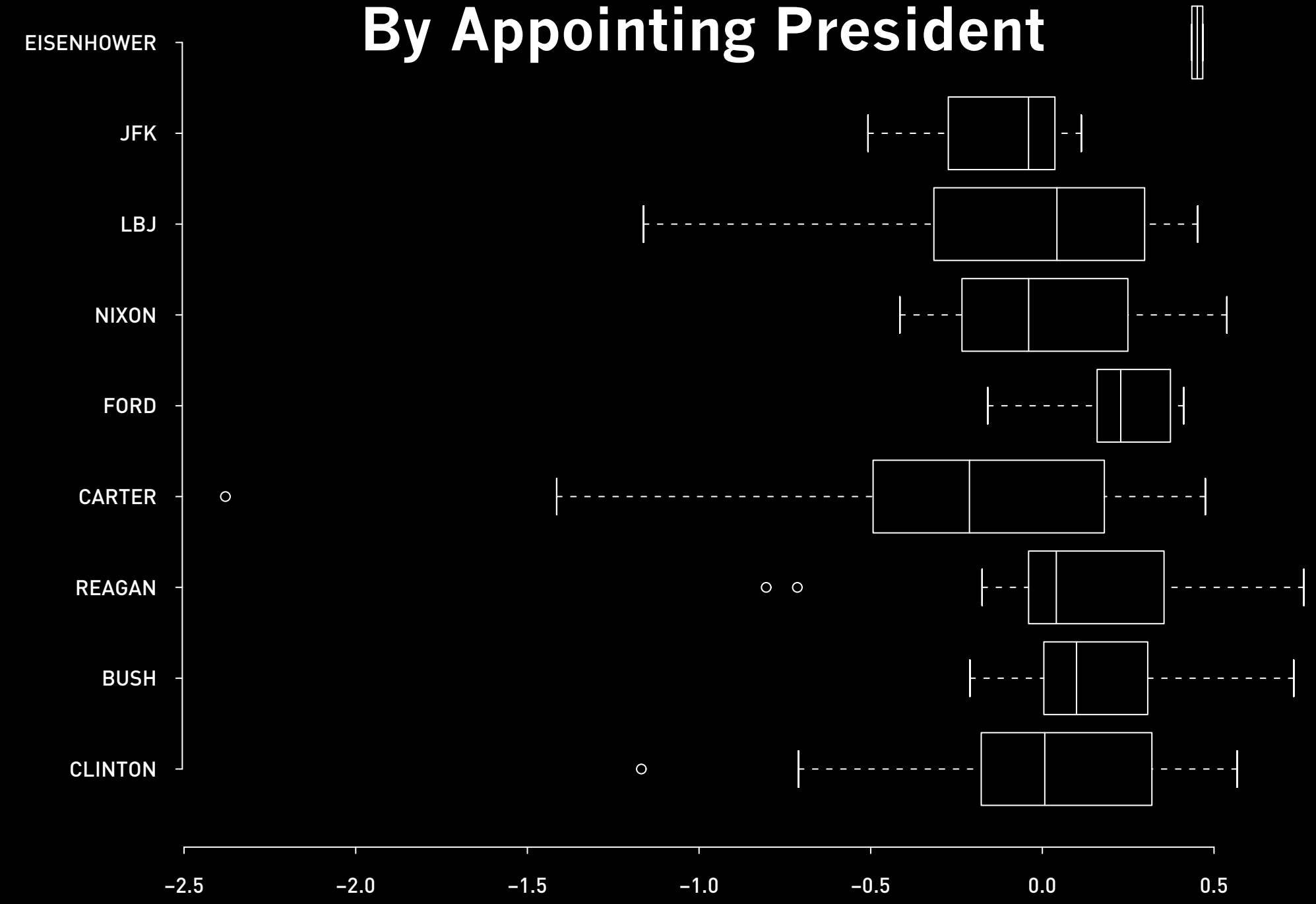
Simplifications

- hierarchical model (shrink ideal points to partisan-specific means)
- constrain “Yes” location to be the same parameter across cases
- hierarchical model, shrink Nay locations towards value specific to each country of petitioner

Breakdown of Judges by Appointing President

Clinton	33
Bush	19
Reagan	32
Carter	25
Ford	7
Nixon	10
LBJ	11
JFK	3
Eisenhower	2

Distribution of Ideal Point Estimates By Appointing President



Country of Petitioner

Country	n	%	success rate
Nicaragua	318	17%	22%
Philippines	247	13%	15%
Guatemala	224	12%	17%
El Salvador	184	10%	12%
India	114	6%	26%
Fiji	85	4%	18%

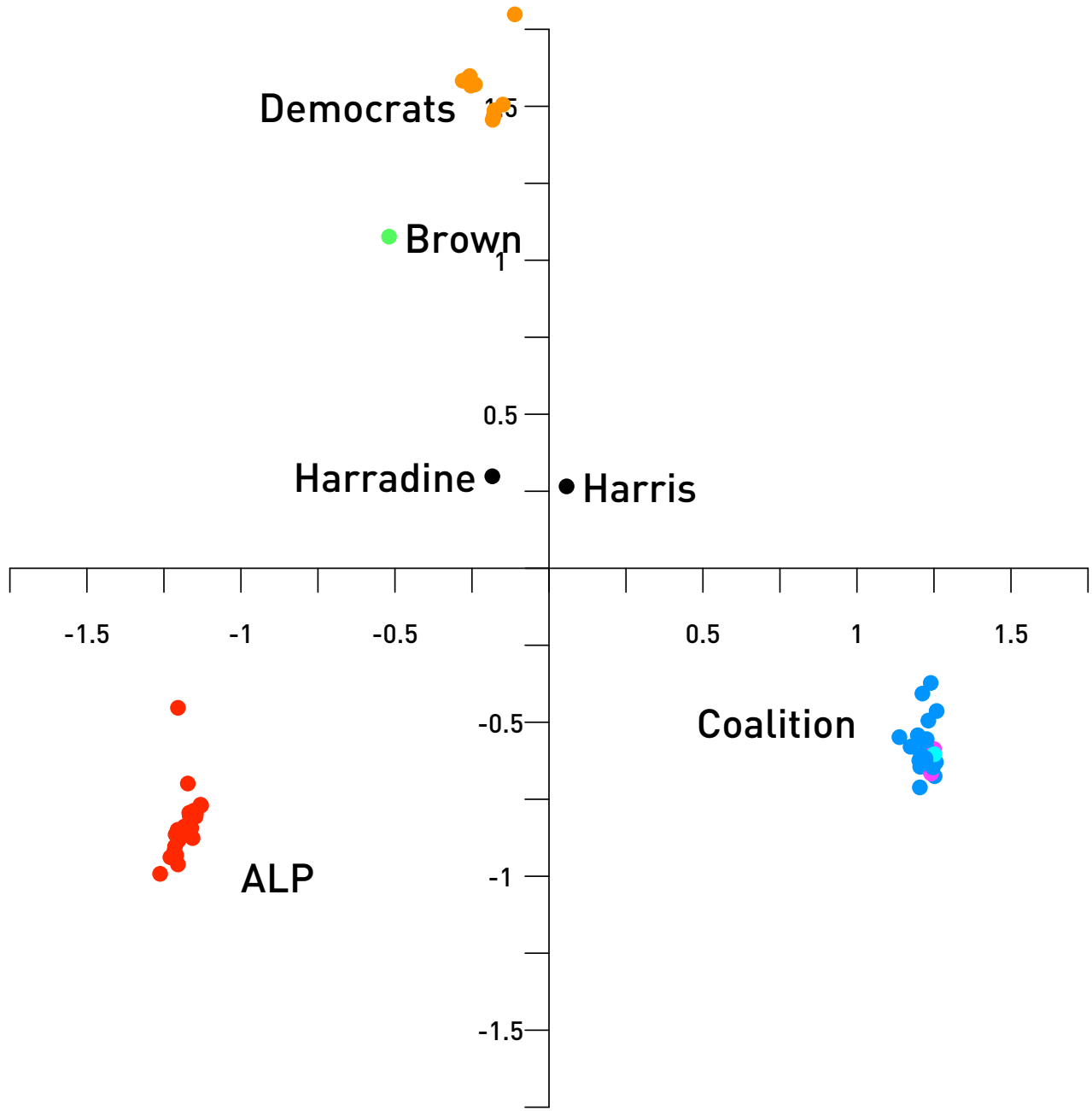
Australian Senate Data

- all recorded divisions, 1996-present
- 12 Senators per state, elected by Hare-Clark (quota-preferential); quasi-PR, hence minor parties and independents
- clear evidence of multidimensionality
- near-perfect party loyalty among major parties

Australian Senate Data

- several high-profile party switches/ defections over period
- conservative government (formed in lower house) lacked majority in Senate over the entire period
- govt will gain control on July 1, 2005

Australian Senate, 2001



Issues for Voteworld

- data standard?
- meta-data: what the rolls were about, time-stamping, etc.