

When Does Ranked-Choice Voting Reduce Polarization?

Yuki Atsusaka¹ Theodore Landsman²

¹University of Houston

²Georgetown University

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TexMeth 2025

University of Houston

software: `{neodowns}`

Primer

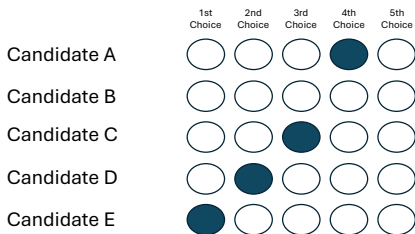
	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice
Candidate A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Candidate D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Number of ballots	Ranking profile
46	(A)
24	(B)
10	(C)
4	(C, B)
2	(E, A)
2	(E, C, A)
3	(E, D, C, A)
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A	46	45.5%	48	47.5%	54	53.5%	63	69.2%
B	24	23.8%	24	23.8%	24	23.8%	28	30.8%
C	14	13.9%	16	15.8%	23	22.8%	<i>eliminated</i>	
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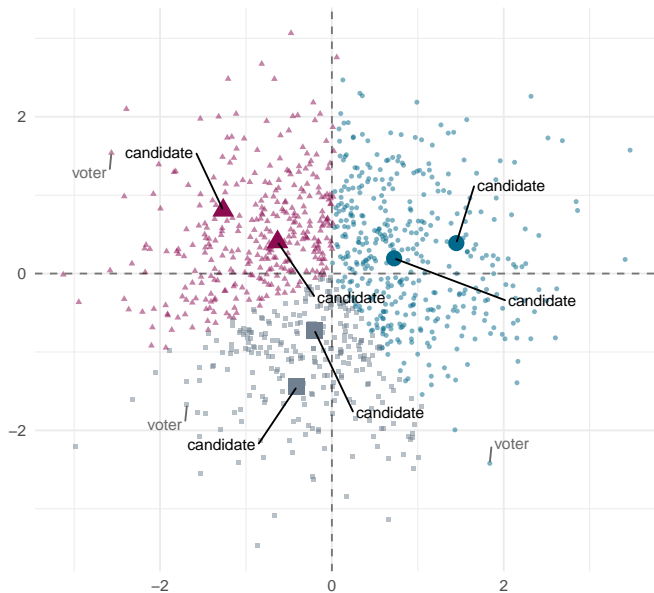
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 - 📊 Compute levels of co-ethnic voting + ideological polarization via Markov chains,  R package {neodowns}

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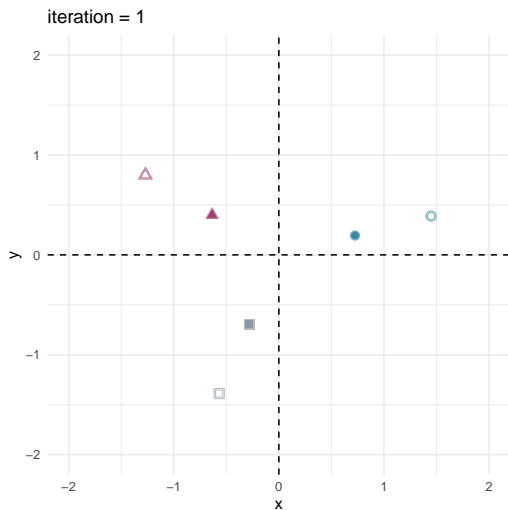


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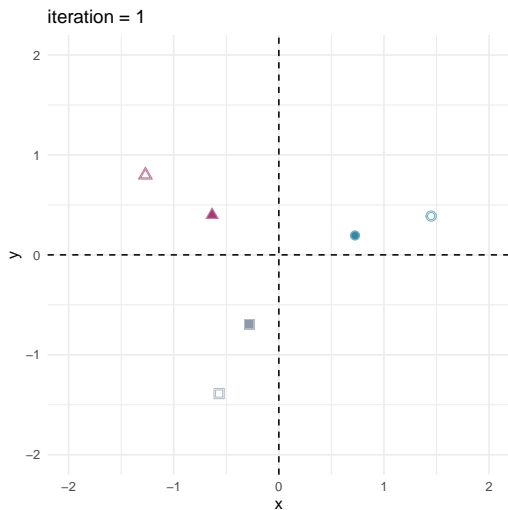
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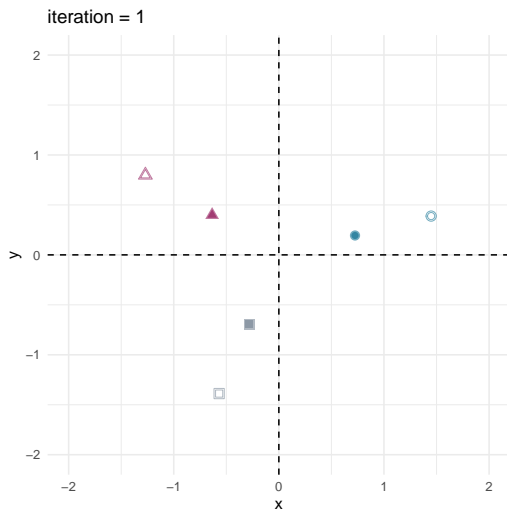
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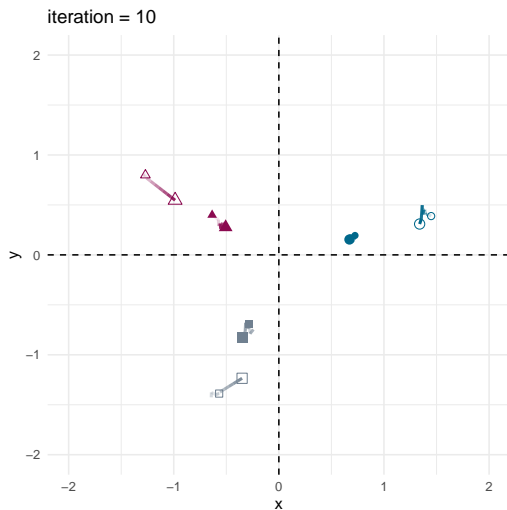
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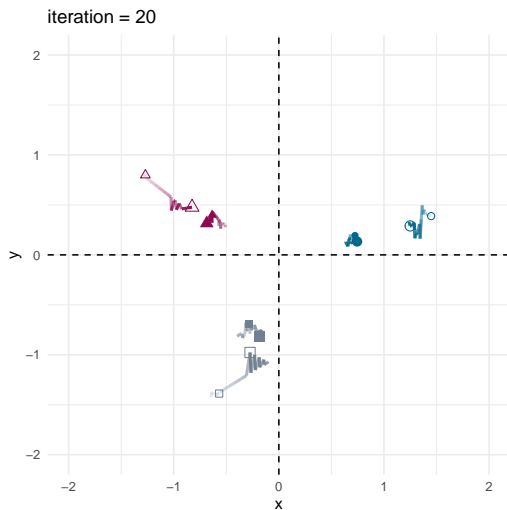
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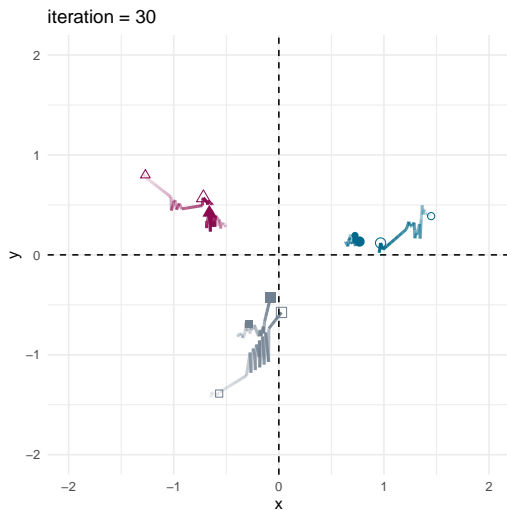
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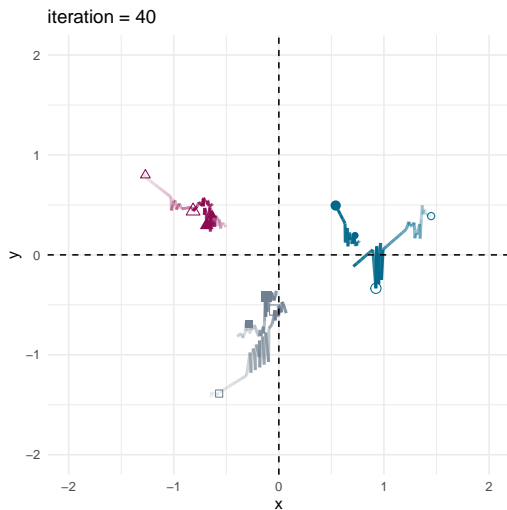
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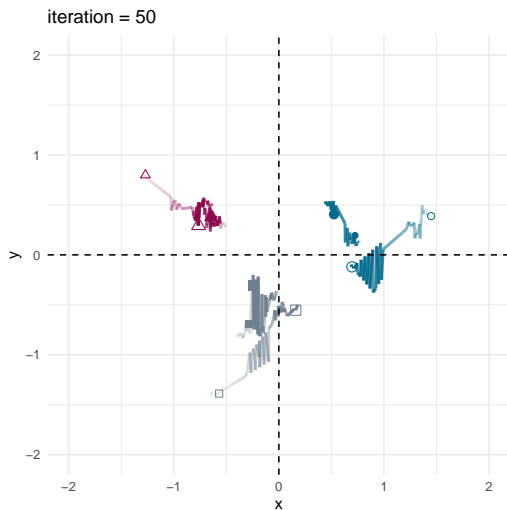
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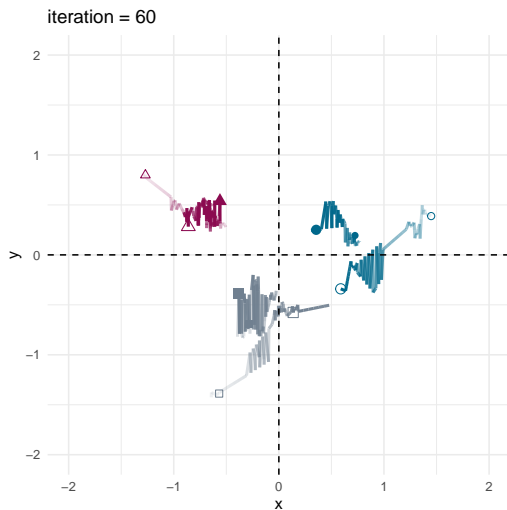
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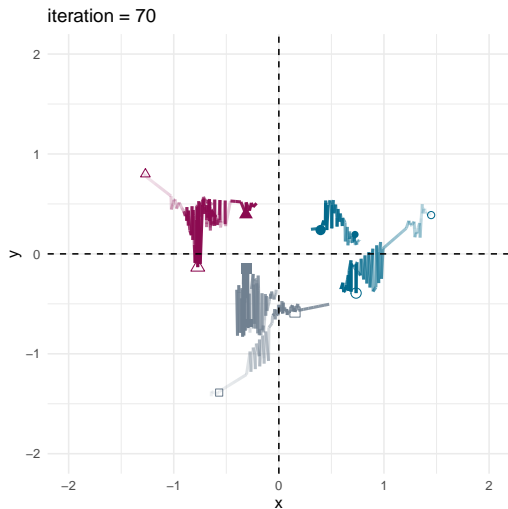
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V_{ij}
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utility

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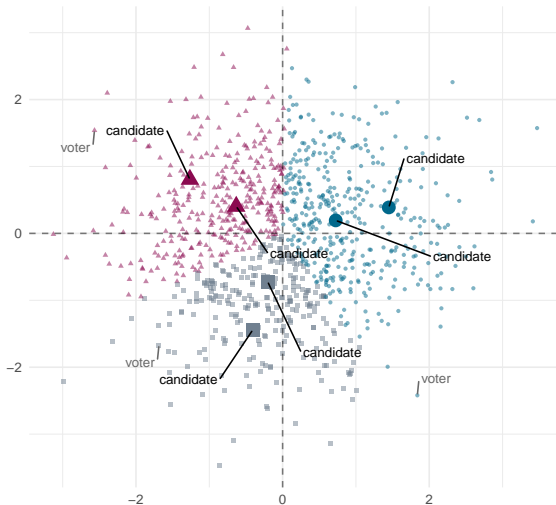
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Applications to ethnically divided societies

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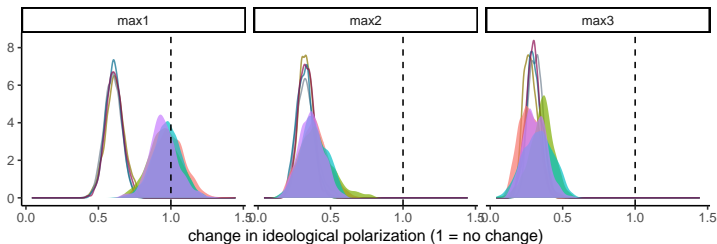
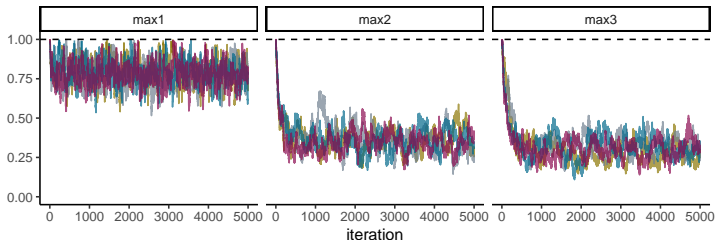
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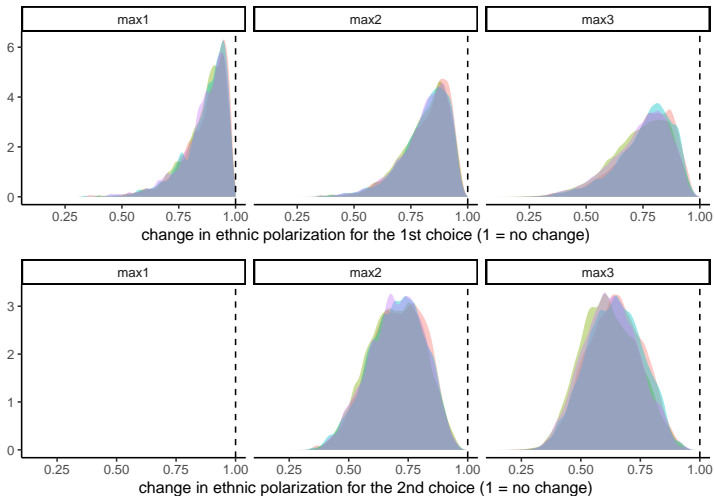


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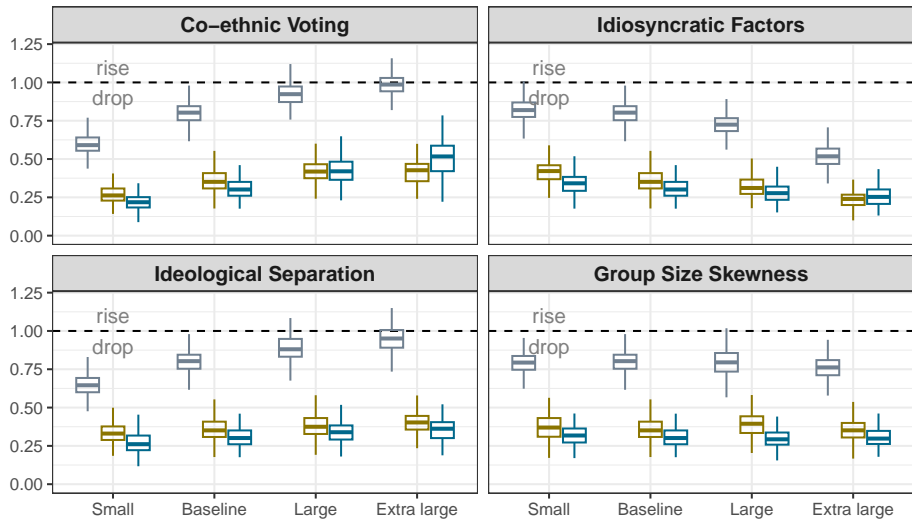
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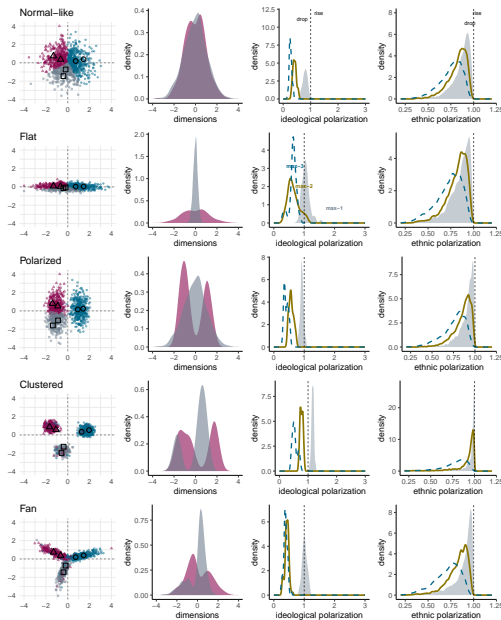
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max1 max2 max3

Ideological polarization



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