How Much Disagreement is Good for Democratic Deliberation? An Exploration of the Structural Equation Model (SEM)

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Esterling, K. M., Fung, A., and Lee, E. (2015). How Much Disagreement is Good for Democratic Deliberation? *Political Communication* 32, 529-551.

Outline

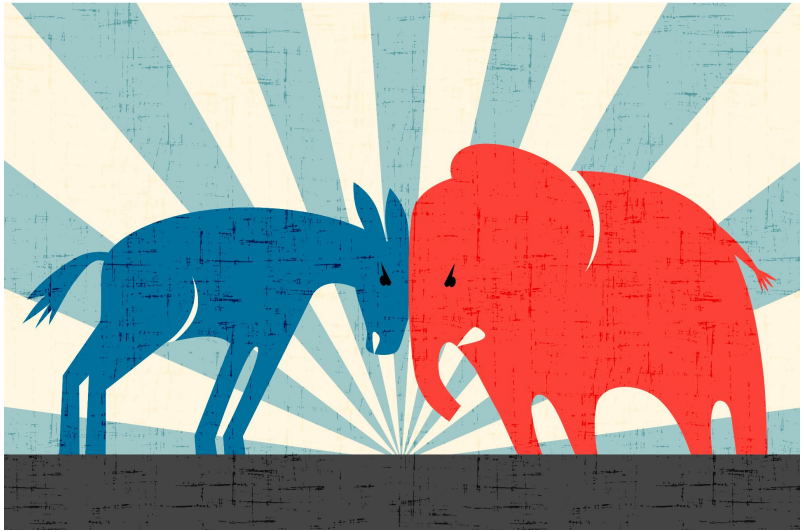
- Article overview
- Structural Equation Modeling Basics
- SEM in the article
- Results
- Discussion & Conclusion

How Much Disagreement is Good for Democratic Deliberation?

Article Overview

Background

- Deliberation requires:
  - Participants expressing disagreement
  - Disagreement is engaged with constructively
- Well functioning deliberation should induce disagreement curious response
  - Disagreement curious: decisions that result from disagreement have merit
  - Disagreement averse: avoid disagreements, resent challenge



Hypotheses

- “Here we propose a **method to evaluate quality of a deliberative institution** based on participants’ self-assessed satisfaction, and test the congruence between an empirical deliberation and its normative ideal (p. 530-1).”
  - H1: Individuals should rate quality of deliberation as highest when exposed to moderate or reasonable disagreement
  - H2: Individuals should prefer moderate levels of disagreement to homogenous discussions or conflict-driven discussions in which disagreement is impossible to overcome
- Evaluate effect of disagreement on participants’ satisfaction at structured deliberation event

Research Design: California*Speaks* Natural Experiment

- Aug. 11, 2007: 2k+ Californians gather in 8 locations throughout the state to discuss healthcare reform and policy recommendations
  - Spent entire day in groups of 8-10
  - Reported views through keypad responses
  - Filled out surveys before (pre-treatment) and after (post treatment)
  - Moderator ensured everyone spoke, enforced ground rules

Statistical Methods: Structural Equation Model (SEM)

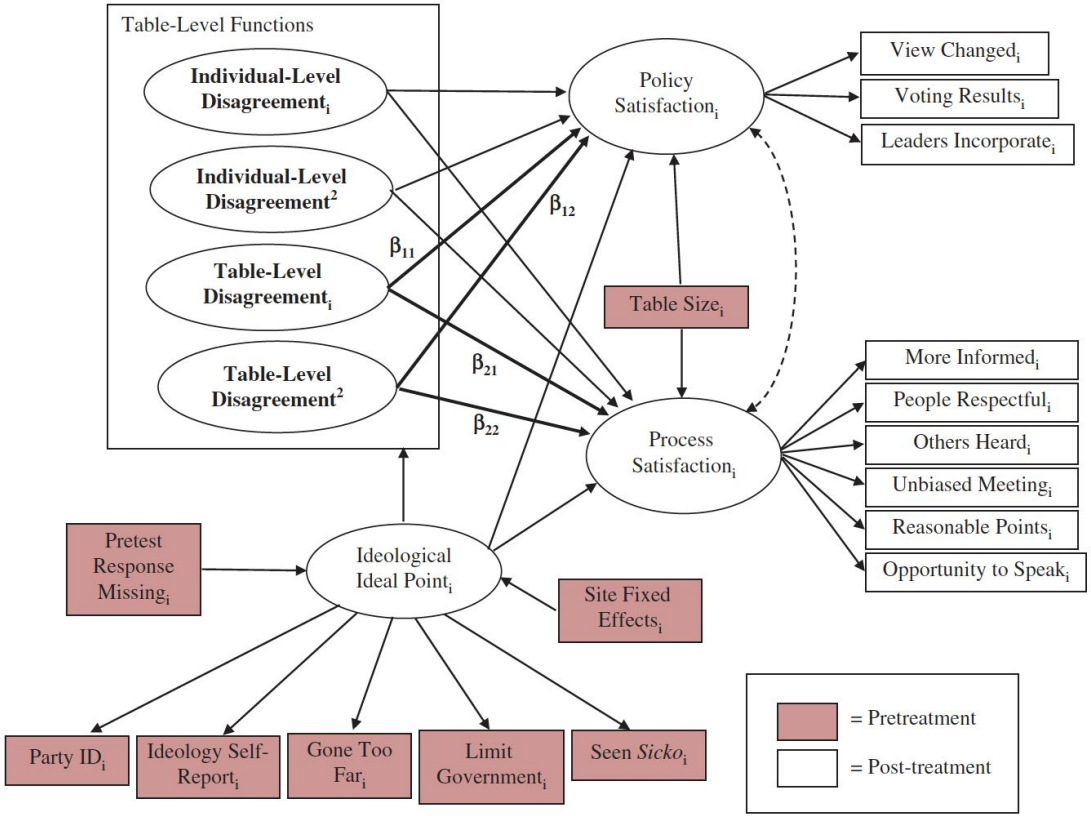


Figure 1. Deliberative satisfaction statistical model. Note: $_i$ = indexes participants; ^{2} = variable squared.

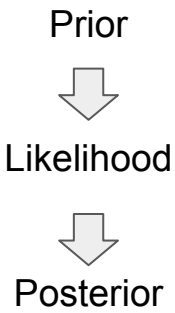
SEM: The Basics

- “Structural Equation Modeling (SEM) is a **methodology** for representing, estimating, and testing a **network of relationships** between variables.” (Suhr)
  - Requires specification of a model based on theory and research, rather than using default models
  - Tests hypothesized patterns of directional and nondirectional relationships among a set of observed (measured) and unobserved (latent) variables
  - Purpose is to account for variation among measured variables
- Used for **complex, multi-faceted constructs** measured with error

Suhr, D. (2006). The basics of structural equation modeling. Presented: Irvine, CA, SAS User Group of the Western Region of the United States (WUSS).

SEM: The Basics

- Suggested Approach (Suhr)
  - Review relevant theory for model specification
  - Specify a model (diagrams, equations) - “A statistical statement about the relations among variables (p. 3)”
  - Collect data
  - Descriptive statistics
  - Estimate parameters
  - Assess model fit
  - Respecify model if meaningful



SEM in Democratic Deliberation

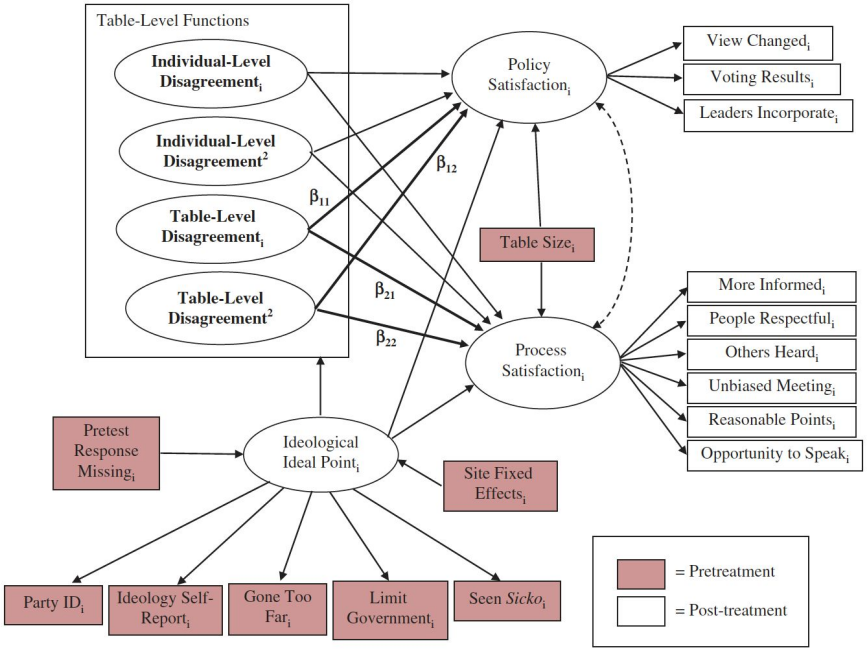


Figure 1. Deliberative satisfaction statistical model. Note: $_i$ = indexes participants; ^{2} = variable squared.

SEM in Democratic Deliberation

- Goal: Test whether and how disagreement causally related to participants' satisfaction with the deliberation
- Pretest variables
  - Table size
  - Site fixed effects
  - Party ID
  - Ideology self-report
- Post-treatment variables
  - Individual-level disagreement
  - Table-level disagreement
  - Process satisfactions (scale: more informed, people respectful, others heard, unbiased meeting, reasonable points, opportunity to speak)
  - Policy satisfaction (view changed, voting results, leaders incorporate)
- Regressed each deliberative satisfaction scale onto each disagreement measure

SEM in Democratic Deliberation: Measurements

- Satisfaction: normative deliberative theory predicts discussion will give participant deeper and fuller understanding of policy, may lead to change in preferences
  - High inter-correlation among acceptance, legitimacy, persuasion items
- Disagreement: correlation of pretreatment of ideological preferences and disagreement
  - Individual level: how much individual disagrees with group
  - Table level: how much disagreement amongst others at group that the participant observes
- Covariates: Ideology score, table size, fixed effects for each site

Results: Latent Variables

Table 1
Measurement model results

Coefficient/Parameter	Mean	SE
Process Satisfaction Factor Coefficients		
More informed	1	(Fixed)
People respectful	3.06*	(0.26)
Others heard views	2.56*	(0.19)
Unbiased meeting	1.27*	(0.09)
Reasonable points	1.76*	(0.12)
Opportunity to speak	2.25*	(0.17)
Policy Satisfaction Factor Coefficients		
View changed	1	(Fixed)
Voting results	2.81*	(0.19)
Leaders incorporate	1.82*	(0.16)
Ideological Ideal Point Factor Coefficients		
Party ID	2.01*	(0.16)
Ideology self-report	2.74*	(0.25)
Gone too far	1.67*	(0.12)
Limit government	0.91*	(0.08)
Seen *Sicko*	1	(Fixed)
Additional Model Parameters		
Correlation between process and policy factors (ρ)	0.56*	(0.04)
Table disagreement mean	0.88	(0.02)
Table disagreement standard deviation	0.18	(0.01)

*$p \leq 0.05$.

Results: Individual and Table Disagreement

- Individual: each participants estimated distance in ideological point space from mean of table (pretreatment)
- Table: estimated standard deviation of the ideal points of other participants seated at table (causal variable)

* graphs depict 100 bayesian posterior distributions of individuals

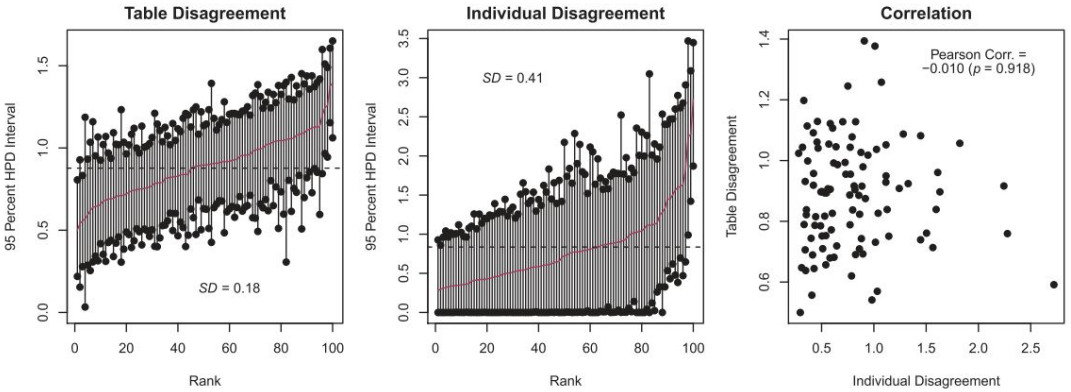


Figure 2. Disagreement levels across tables.

Results: Process and Policy Satisfaction

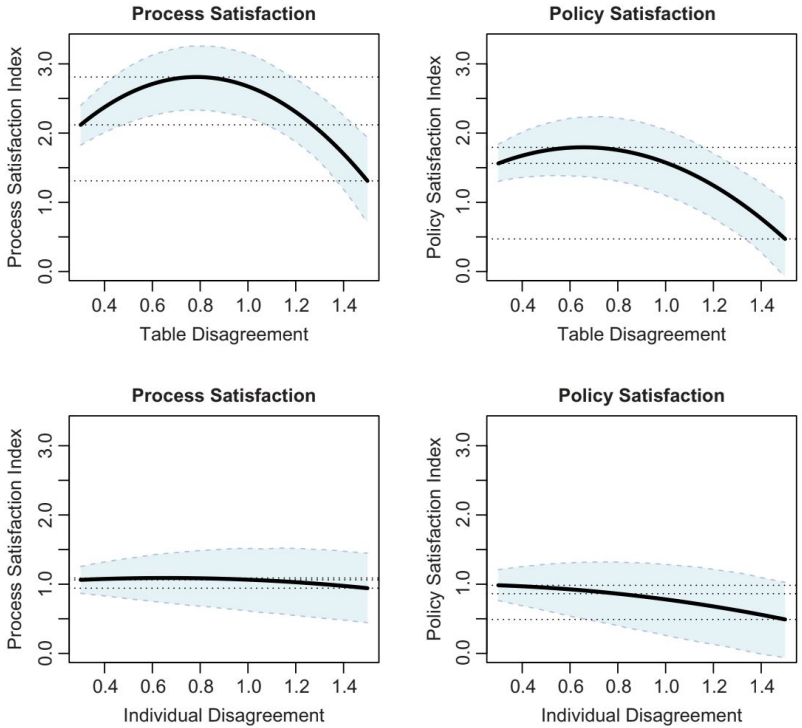


Figure 3. Deliberative satisfaction maximized at moderate levels of disagreement.

- Table disagreement shows disagreement curious pattern:
  - Low = moderate satisfaction
  - Moderate = high satisfaction
  - High = lowest satisfaction
- Individual disagreement: little dependence, all participants (extremists and centrists) equally satisfied with event

Discussion & Conclusion

- “Substantively, we show that satisfaction with the process and outcomes of deliberation has a non-monotonic relations with disagreement at this event (p/ 543).”
  - Individuals most satisfied with deliberation that involves moderate levels of disagreement
- “Democratic reasonableness in contemporary society might be achieved more broadly by creating more politically heterogeneous communities, workplaces, and public spaces that enable people to live, work, play, and deliberate over competing (political) worldviews in ways that they might not themselves choose (p. 545).”

Thank you!

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References

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Appendix A: Process Scale

Process

1. people at this meeting listened to one another respectfully and courteously (mutual respect);
2. other participants seemed to hear and understand my views (understanding);
3. even when I disagreed, most people made reasonable points and tried to make serious arguments (reason giving);
4. I am more informed about the challenges and options for health care reform in California (informative session);
5. the meeting today was fair and unbiased—no particular view was favored (agenda neutrality)
6. everyone had a real opportunity to speak today; no one was shut out and no one dominated discussions (inclusion and equal opportunity for participation).

Appendix B: Policy Scale

Policy

1. I personally agree with the voting results at the conclusion of today's meeting (Acceptance)
2. Decision makers should incorporate the conclusions of this town meeting into California's health care policy. (Legitimacy)
3. I personally changed my views on health care reform as a result of what I learned today. (Persuasion)

Appendix C: Ideology Scale

Ideology

1. We have gone too far in pushing equal rights in this country (5 point agree/disagree scale)
2. Liberal/moderate/conservative self-identification (3-point scale)
3. Political party self-identification (Democrat, Independent, Republican)
4. Have you seen Sicko? (yes/no)
5. Limit government's role to providing insurance coverage for the low-income or unemployed, or those who can't get insurance on their own (5-point agree/disagree scale)