

Competing Issue Definitions and Information Processing in Congress

Matthew C. Nowlin
Department of Political Science
College of Charleston

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Information and Policymaking

- ▶ Information used by policymakers to reduce uncertainty

$$x = p + \epsilon$$

- ▶ Information characterized as signals, therefore information processing is the processing of these signals

$$S \rightarrow R$$

- ▶ Content of those signals—information— θ
 - ▶ Issue definitions

Issue Definitions

- ▶ Given the complexity and ambiguity of many policy issues, they can be defined in different ways
- ▶ The issue space is multidimensional
- ▶ Issues definitions (redefinitions) are the structuring (restructuring) of the space
 - ▶ Altering which dimensions are salient
 - ▶ Adding/subtracting dimensions

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 - ▶ Altering which dimensions are salient
 - ▶ Adding/subtracting dimensions
- ▶ Policy actors signal which dimension(s) most salient
 - ▶ $S_A \rightarrow \theta_i \rightarrow R$
 - ▶ $S_B \rightarrow \theta_j \rightarrow R$
- ▶ Information for policymaking is a two-stage process

$$p = \theta + \epsilon$$

$$w = p + \epsilon$$

Institutions and Information Processing

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 - ▶ May distort signals of policy actors through amplification or dilution

Witnesses \rightarrow Committees $\rightarrow \theta$

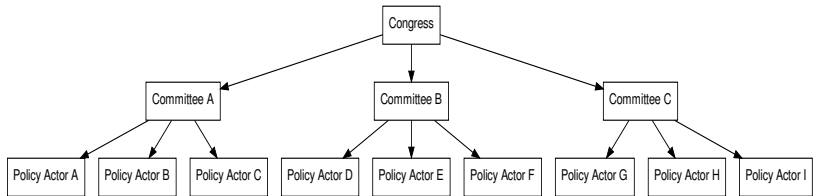
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- ▶ Leads to multiple and diverse sources of information

Layered Competition



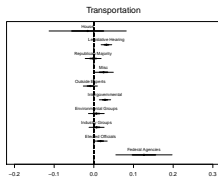
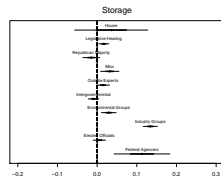
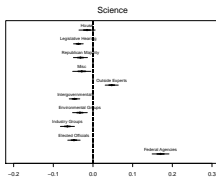
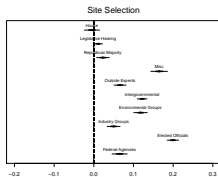
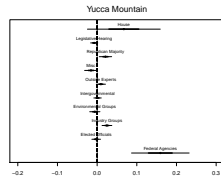
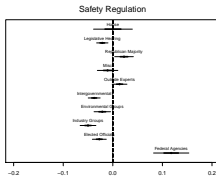
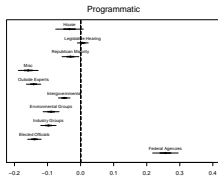
Theoretical Propositions

- ▶ **Proposition 1:** Information signals vary by witness type
- ▶ **Proposition 2:** Information signals vary by committee
- ▶ **Proposition 3:** Information uncertainty related to witness and committee diversity

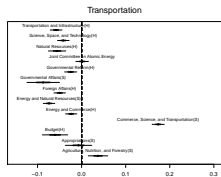
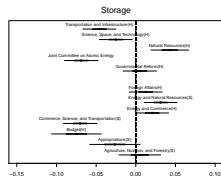
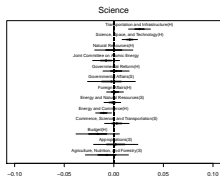
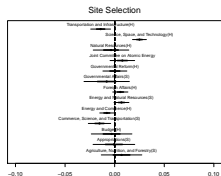
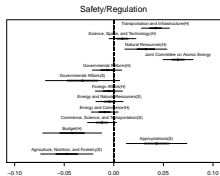
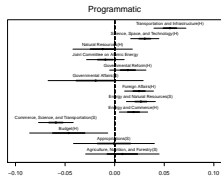
Data and Methods

- ▶ Congressional hearings about used nuclear fuel (UNF) from 1975 to 2012
 - ▶ 140 hearings and 1,271 opening statements of witnesses
- ▶ Estimate θ
 - ▶ Latent Dirichlet allocation
 - ▶ Seven dimensions of the UNF issue: programmatic, safety/regulation, Yucca Mountain, site selection, scientific/technical, storage, transportation
- ▶ Multilevel model
 - ▶ Level 1 (Varying slope): Witnesses type (affiliation), controls
 - ▶ Level 2 (Varying intercept): 14 Committees
 - ▶ Level 3 (Varying intercept): 19 sessions of Congress

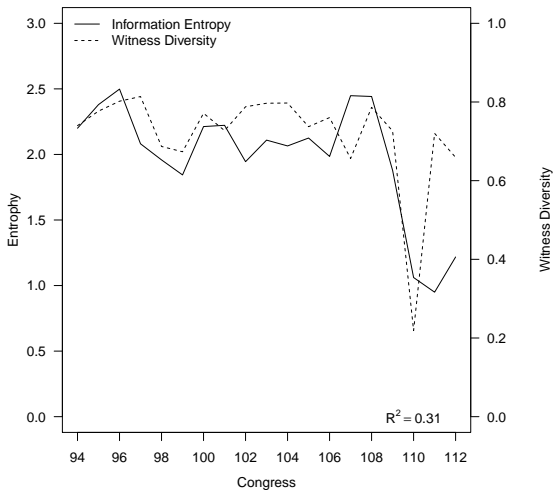
Results: Witnesses



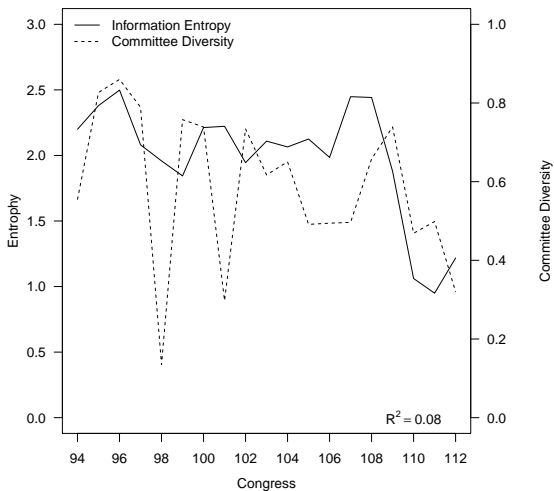
Results: Committees



Results: Uncertainty and Diversity



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Discussion and Conclusion

- ▶ Policy actors
 - ▶ Federal agencies → programmatic
 - ▶ Intergovernmental → site selection, transportation
- ▶ Committees
 - ▶ Few committees held majority of hearings
 - ▶ Commerce, Science, and Transportation (S) → transportation
- ▶ Next steps
 - ▶ Varying intercept, varying slope: strategic policy actors and venue shopping