

Judgement Aggregation and Rational Inattention

Atahan Afsar

Stockholm School of Economics

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- Endogenous information acquisition in political economy issues:
 - Topic 1: Incentives for information acquisition (and belief formation) in general elections
 - Topic 2: Judgement aggregation and collective decision making in committees

- Condorcet (1785): Majority rule is asymptotically efficient if
 - all individuals agree on state-dependent actions
 - exogenously receive conditionally independent informative signal about the true state
 - each individual votes according to her private information (votes informatively)
- Austen-Smith and Banks (1996): Informative voting does not always constitute a Nash equilibrium under the same assumptions about the information structure

Judgement aggregation and RI

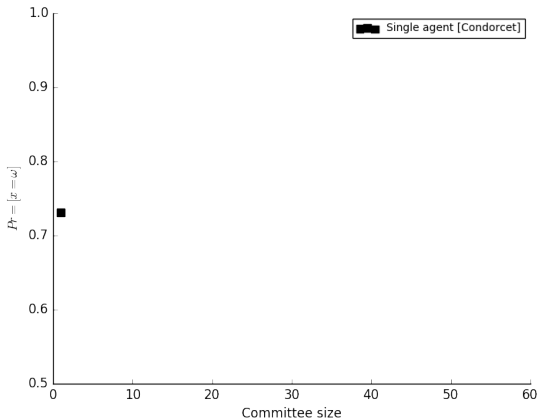
- Take RI from individual decision to collective decision
- Today exclusively on majority rule
- Focus on symmetric Nash equilibrium

- $n = 2k + 1$ committee members, $k \in \mathbb{Z}_+$
 - Rationally inattentive, linear cost in Shannon mutual information, common unit cost
- Two states $\omega \in \Omega = \{1, 2\}$
- Prior $\mu = Pr[\omega = 1]$
- The committee has to make a binary decision $x \in X = \{1, 2\}$
- $u(x, \omega)$ state dependent utility
 - Members want to match the collective decision with the state:
 - $u(x = 1, \omega = 1) = u(x = 2, \omega = 1) + e_1$, $e_1 \in \mathbb{R}_+$
 - $u(x = 2, \omega = 2) = u(x = 1, \omega = 2) + e_2$, $e_2 \in \mathbb{R}_+$
- strategy $\sigma_i = (\phi_i, \nu_i)$

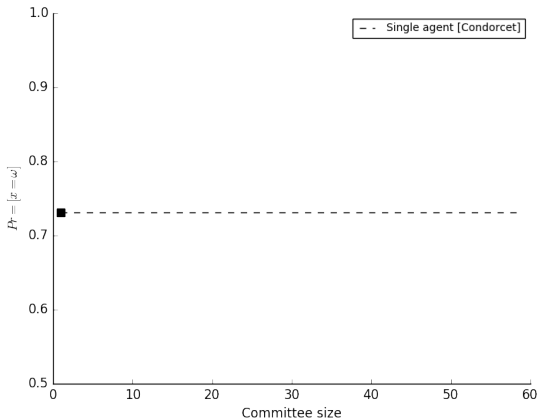
Symmetric case - a numerical example

- $\mu = Pr[\omega = 1] = \frac{1}{2}$
- $u(x = \omega, \omega) = 1$
- $e_1 = e_2 = 1$

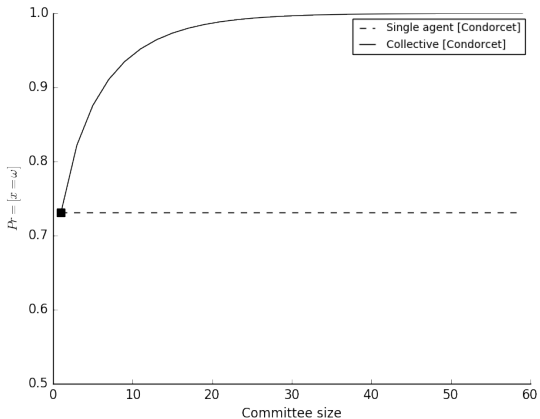
Symmetric case



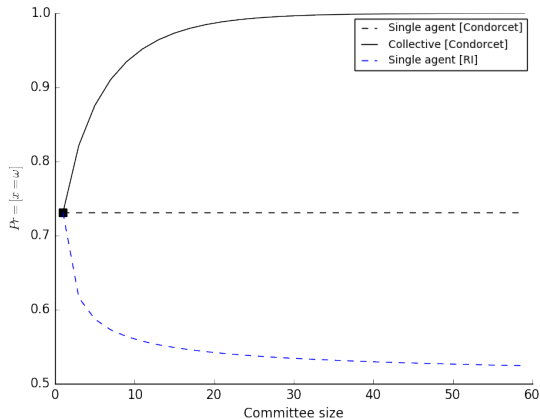
Symmetric case



Symmetric case

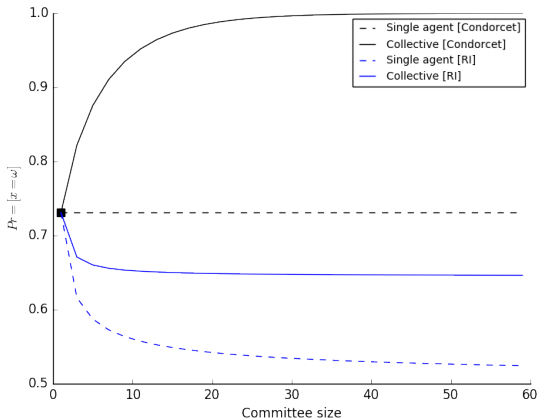


Symmetric case



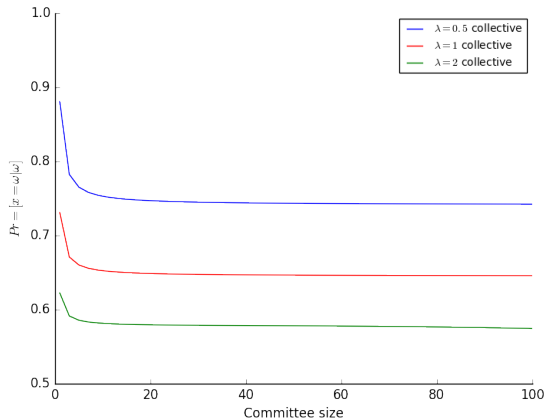
- Under completely symmetric situations there will be symmetric Nash equilibrium in which agent acquire information and vote informatively (Austen-Smith and Banks)
- privately acquired information decreases with the committee size (Down's rational ignorance)

Symmetric case



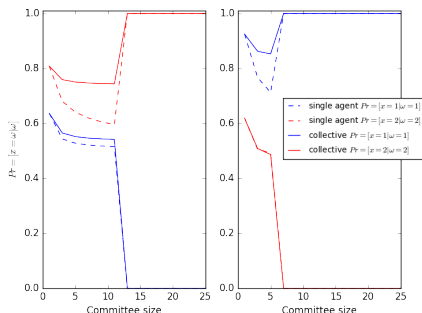
- Under completely symmetric situations there will be symmetric Nash equilibrium in which agent acquire information and vote informatively (Austen-Smith and Banks)
- privately acquired information decreases with the committee size (Down's rational ignorance)
- aggregate information also decreases with the committee size (contrary to Condorcet)

Symmetric case



Asymmetric priors

- Allocating attention to different states of the world: trade-off is similar to single DM case
 - Left figure:
 - $Pr[\omega = 1] = 0.45$, $e_1 = e_2 = 1$
 - Right figure:
 - $Pr[\omega = 1] = 0.45$, $e_1 = 2$, $e_2 = 1$



- There exists no informative symmetric equilibrium for large enough committees under the majority rule (Austen-Smith and Banks with endogenous precisions)
- In addition, it is an equilibrium for large enough committees not to acquire information and vote according to one's priors.

- Groundwork
 - Condorcet (1785), Austen-Smith and Banks (1996), Feddersen and Pesendorfer (1997)
- Endogenous information acquisition in collective decisions
 - Persico (2004), Martinelli (2006), Gerardi and Yariv (2007), Gershkov and Szentes (2009), Koriyama and Szentes (2009), Laslier and Weibull (2013)
- RI and generalizations
 - Sims (1998, 2003), Woodford (2012), Matejka and McKay (2015), Caplin et al. (2017), Fosgerau et al. (2018)
- Endogenous information acquisition in strategic settings
 - Hellwig and Veldkamp (2008), Yang (2015), Amir and Lazzati (2016), Martin (2017), Lindbeck and Weibull (2019)

- Transparency
 - Boards of some firms and central banks release their minutes
- Heterogeneity in preferences and in competence
- Different costs of information
- Moral motivations

- How would the transparency of individual votes change the incentives of information acquisition and voting, if individuals could be held accountable.
- Example: Bank of England and Swedish Central Bank releases minutes of executive board's monetary policy meetings.
- Levy (2007): agents with career concerns only, without endogenous information
- Gradwohl and Feddersen (2018): Persuasion setting without endogenous information. Shows transparency under asymmetric information, even in the absence of career concerns, might have adverse effect on information aggregation