Committees and Information Acquisition

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APPLICATION OF MULTI-SENDER MODEL

Think of a legislative committee decision making problem in three parts:

1. Two Committee Members
2. A Legislature (Decision Maker)
Committee members are Senders with bias $b_i$.

- Action $y = x + \theta$.
- Legislature is Receiver with bias 0, $U^R(y, \theta) = -x^2$.
- $U^S_i(y, \theta) = -(x - b_i)^2$.
- Senders know $\theta$.
- $\theta \in [0, 1]$ uniformly distributed.
- $\rho_0 \in [-1, 0]$ is status quo.
COMPARE EFFICIENCY PROPERTIES OF RULES

- OPEN RULE: Standard Cheap-Talk, with “talk" interpreted as a proposed policy.
- CLOSED RULE: $S_1$ proposes; $S_2$ talks; $R$ picks either status quo or $S_1$’s proposal.
- MODIFIED RULE: OPEN, but $R$ must pick either status quo or one of two proposals.

If committee is homogeneous (equal biases), last two rules are equivalent.
Full revelation if biases are small by earlier result.
CLOSED RULE

$S_1$ can restrict outcome to status quo with appropriate proposal. This will be optimal when the status quo is optimal for $S_1$:

$$p_0 + \theta = b_1$$

In fact, the most informative equilibrium involves:

- the status quo for $\theta$ near $b_1 - p_0$. (Both $S_i$ like SQ.)
- Full information for $\theta$ extreme. (Both $S_i$ prefer $\theta$ to $p_0 + \theta$).
- Compromise: Leaving both Sender types at least as well off as status quo. If $S_i$ prefers status quo to $R$’s ideal, then compromise will lead majority to be indifferent between SQ and ideal.
DETAILS

- $\theta < -2b_1 - p_0$:
  S2 likes SQ less than 0. S1 propose 0. Only one possible result.
- $\theta \in (-2b_1 - p_0, -b_1 - p_0)$:
  S2 strictly prefers 0 to status quo. S1 does better than 0. S2 indifferent between two options.
- $\theta \in (-b_1 - p_0, b_1 - p_0)$:
  S1 and S2 both prefer status quo to R’s ideal. R indifferent.
- $\theta \in (b_1 - p_0, 2b_1 - p_0)$.
  S1 is indifferent between the two equilibrium choices. S2 does better than both.
- $\theta > 2b_1 - p_0$:
  R obtains ideal, which both senders prefer to status quo.
Imagine game in which $S_2$ did not exist. $S_1$ makes proposal, which $R$ can take or leave. There is an equilibrium in which only $R$ either gets his favorite or the status quo. There are pooling equilibria favorable to $S_1$ and unfavorable to $S_2$
Gilligan-Krehbiel Outcome

- \( \theta < -3b_1 - p_0 \):
  - \( S_1 \) obtains his favorite. \( R \) would prefer 0, but \( S_1 \)'s proposal is better for \( R \) than SQ.
- \( \theta \in (-3b_1 - p_0, -b_1 - p_0) \):
  - \(-2b_1 - \theta - p_0\), which is better than \( p_0 \) for both \( S_1 \) and \( R \).
- \( \theta \in (-b_1 - p_0, b_1 - p_0) \):
  - \( S_1 \) and \( S_2 \) both prefer status quo to \( R \)'s ideal. \( R \) indifferent.
- \( \theta \in (b_1 - p_0, b_1 - p_0) \):
  - SQ
- \( \theta > b_1 - p_0 \):
  - \( S_1 \) obtains ideal, which \( R \) prefers better than SQ. \( S_2 \) suffers.
MODIFIED RULE

This works the same as Open Rule.
Reason: It is sufficient to use one of the senders’ proposals as a punishment.
Results suggest that Open and Modified Rules are better for efficiency.
US congressional committees use closed rules. Why?

- Equilibrium Selection.
- Distributional concerns.
- Bad model.
VARIATIONS

- Noisy observations. (Full revelation is not robust.)
- Costly information acquisition. What happens in a proposal game in which sender’s must decide whether to acquire information? How does this depend on the rule and the order of communication?
- Is the status quo safer? Alternative assumptions on modeling uncertainty.
COMMITTEE DESIGN

Ottaviani-Sorensen
Preferences of Decision Maker:
Standard from symmetric 2 action, 2 state voting model
$(u(i, i) = 0; u(i, j) = −0.5, i \neq j)$. 
Expert advisors get signal, informative, binary signal.
Variations:
- Experts differ in quality.
- Experts care about the probability that they are viewed as good.
THE GAME

1. Decision maker orders experts.
2. Experts get signals.
3. Experts speak (publicly) according to the order.
4. Decision maker acts.
5. True state revealed.

Questions: How to organize debate to obtain best decision?
How do experts behave?
In particular, do experts truthfully report signal?
RESULTS

1. Informative equilibrium if and only if $p_i > \max\{q_i, 1 - q_i\}$. Experts with "unexpected" signal will herd to preserve reputation. $p_i$ precision of expert $i$; $q_i$ beliefs of that expert (when it is her turn).

2. Letting best expert speak first suppresses communication.

3. But speaking in inverse order of expertise need not be optimal.

4. Generally incomplete revelation with herding.

5. Otherwise few interesting general results.
UNANSWERED QUESTIONS

1. Optimal mechanism.
2. Different expert incentives.
3. Endogenous information.
5. Variations on knowledge assumptions.