Informative Cheap Talk in Elections

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September 2014

Motivation

- Candidates talk a lot during major elections
  - generally not concrete policy proposals
  - rather, broad statements about policy orientation

- Voters listen, even though talk is non-binding
  - hard to hold candidates accountable

- Why? If announcements are (largely) cheap talk:
  1. Can campaigns convey meaningful information?
  2. Wouldn't politicians just say whatever gets them elected?
  3. Why might politicians admit non-congruent or minority views?

This Paper

- Reputation concerns $\implies$ elected policymakers pander
  - re-election, post-political life, or legacy motives

- Pandering ↑ in voter uncertainty about PM's preferences
  - sufficient pandering bad for voter welfare
  - "known devil better that unknown angel"

- Under suitable conditions, informative cheap-talk campaigns
  - claims of non-congruence believed; credible commitment to not pander
  - claims of congruence are only partially believed; anticipate pandering

- Welfare and comparative statics
  - greater reputation concerns ↑ scope for informative cheap talk
  - informative campaigns can ↑ or ↓ voter welfare
  - informative campaigns can "protect" voter welfare

Relevance

- Pronouncing non-congruence in elections

  - Frequent slogan: "You may not always agree with me, but you will always know where I stand"

    - ▶ in practice, invoked to defend non-congruence
    - ▶ in our eqm, candidates effectively say this or "I share your values"

  - Evidence that candidates are not punished for appearing non-centrist

    - ▶ e.g. Stone and Simas (2010)

  - John McCain and straight talk; John Kerry and flip-flopping in 2004

- Pandering mechanism: candidates with known, even non-centrist preferences, willing to take policy actions others wouldn't

  - Nixon goes to China
  - Russ Feingold on Patriot act, Iraq war, Clinton impeachment

Related Literature: Reputational Distortions

- **Bad Reputation**
  - Scharfstein and Stein 1990, Morris 2001, Ely and Välimäki 2003

- **Pandering in politics**
  - Cukierman and Tommasi 1998, Canes-Wrone et al. 2001, Maskin and Tirole 2004
  - Over-pandering: Acemoglu et al. 2013, Fox and Stephenson 2014, Morelli and Van Weelden 2014

- **Our work** emphasizes
  1. voter welfare as a function of prior
     - known devil better than unknown angel
  2. implications for and interaction with preceding electoral campaigns

Related Literature: Non-binding Campaigns

- **Cheap-talk campaigns**
  - Complete info: Alesina 1998, Aragones et al. 2007
  - Incomplete info: Harrington 1992/93, Panova 2014, Kartik and McAfee 2007 (extension), Schnackenberg 2014

- **Costly signaling**
  - Banks 1990, Callander and Wilkie 2007, Huang 2010

- **Our work**
  - different mechanism why voters value certainty about candidate's type
  - post-election behavior affected by non-binding and costless campaign

Plan

Model

Model

Outline

- Representative voter

- Two candidates compete for office by making cheap-talk announcements of their policy preferences/orientation

- Elected official (PM) chooses policy after privately observing some state of the world

- Voter wants policy to match state

- Candidates care about
  1. being elected
  2. policy: may have congruent or non-congruent policy preferences
  3. reputation for being congruent

Model
Electoral Campaigns

- Two candidates, $i \in \{A, B\}$

- Candidates have policy types (private info):
  either congruent or non-congruent, $\theta_i \in \{0, b\}$

- Independent types; each candidate is congruent with prob. $p \in (0, 1)$

- Simultaenous non-binding and costless messages, $m_i \in \{0, b\}$

- Voter updates belief about each candidate to $p_i(m_i)$; then elects one

Model

Policymaking

- Elected candidate, PM, privately observes a state $s \in \mathbb{R}$

- $s \sim F$ with density f and support $[\underline{s}, \infty)$
  - allow for $\underline{s} = -\infty$ or $\underline{s} > -\infty$
  - on interior of support, f is differentiable and strictly positive

- PM chooses action $a \in \{\underline{a}, \bar{a}\} \subset \mathbb{R}$, where $\underline{a} < \bar{a}$

- Voter observes a (but not s), updates her belief about PM's type

$$\hat{p}(a, p_i) \equiv \Pr(\theta = 0 | a, p_i),$$

where $p_i \in [0, 1]$ is prob. of congruence when elected

Model

Voter's payoff

- Voter only cares about policy-state match:

$$u(a, s) = -(a - s)^2$$

- Welfare = voter's (ex-ante) expected utility

- Welfare maximizing rule: choose $\overline{a}$ if and only if

$$s > s_{FB} := \frac{\overline{a} + \underline{a}}{2}$$

- Let $U(\tau)$ be exp. utility when $\overline{a}$ chosen if and only if $s > \tau$

Model

- If a candidate is not elected, constant payoff normalized to 0

- If elected, a candidate of type $\theta \in \{0, b\}$ receives utility

$$c - (a - s - \theta)^2 + kV(\hat{p}) + v_\theta$$

  - $c > 0$, $k > 0$
  - $V(\cdot)$ is cont. differentiable, strictly $\uparrow$; normalize $V(0) = 0$ and $V(1) = 1$

- Were $k = 0$, a PM's cutoff would be

$$s_\theta := \frac{\bar{a} + \underline{a}}{2} - \theta$$

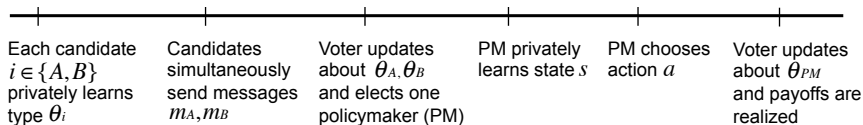 So non-congruent type, $\theta = b$, biased toward action $\bar{a}$

- v_θ chosen to equate both types' payoff from holding office were $k = 0$

Model

Interpreting reputational concern

- Reputational concern: legacy concerns or post-political-life benefits

- But also re-election motive

- One micro-foundation:
  - Second-period election between incumbent and random challenger
  - Voter's belief about challenger, q, is drawn from a cdf $V(\cdot)$
    - after incumbent has chosen his policy a
  - Game ends after second period, so 2nd period PM uses cutoff s_θ
  - Hence, voter re-elects incumbent if and only if $\hat{p} \geq q$
    $\implies$ prob. of re-election is $V(\hat{p})$
  - k is the value to being re-elected (e.g. $k = c$, perhaps discounted)

Model

Each candidate $i \in \{A, B\}$ privately learns type θ_i

Candidates simultaneously send messages m_A, m_B

Voter updates about θ_A, θ_B and elects one policymaker (PM)

PM privately learns state s

PM chooses action a

Voter updates about θ_{PM} and payoffs are realized

Solution concept: Perfect Bayesian Equilibrium

Assumptions

- The state distribution F and the bias b jointly satisfy:
  1. $\underline{s} < \frac{\bar{a} + \underline{a}}{2} - b$;
  2. On the domain $\left[\frac{\bar{a} + \underline{a}}{2} - b, \infty \right)$, $f(\cdot)$ is log-convex;
  3. $\mathbb{E}\left[s \big| s \geq \frac{\bar{a} + \underline{a}}{2} - b \right] > \frac{\bar{a} + \underline{a}}{2}$, or equiv, $U(\infty) < U(s_b)$.

- Office-holding is important relative to reputation: $c \geq k$.

Policymaking Stage

Policymaking Equilibrium

- PM is congruent with pr. $p \in [0,1]$; will be endogenized

- PM observes s and then (ignoring constants) chooses a to maximize

$$-(a - s - \theta)^2 + kV(\hat{p}(a))$$

- Any eqm is in cutoffs: PM of type θ chooses $\overline{a}$ if and only if $s > s_\theta^*$
  - necessarily, $s_0^* < \infty$ and $s_b^* < \infty$
  - we focus on interior eqa: either $s_0^* > \underline{s}$ or $s_b^* > \underline{s}$

- Voter updates belief by Bayes' rule:

$$\hat{p}(\underline{a}) = \Pr(\theta = 0 | \underline{a}) = \frac{pF(s_0^*)}{pF(s_0^*) + (1-p)F(s_b^*)}$$

$$\hat{p}(\overline{a}) = \Pr(\theta = 0 | \overline{a}) = \frac{p(1 - F(s_0^*))}{p(1 - F(s_0^*)) + (1-p)(1 - F(s_b^*))}$$

Pandering

- Cutoff s_θ^* is solution to

$$-(\bar{a} - s_\theta^* - \theta)^2 + kV(\hat{p}(\bar{a})) = -(\underline{a} - s_\theta^* - \theta)^2 + kV(\hat{p}(\underline{a}))$$

- Eqm reduces to following equations:

$$s_b^* = s_0^* - b,$$

$$s_0^* - \underbrace{\frac{\bar{a} + \underline{a}}{2}}_{s_0} = \frac{k\left[V(\hat{p}(\underline{a})) - V(\hat{p}(\bar{a}))\right]}{2(\bar{a} - \underline{a})}.$$

Proposition

The policymaking stage has a unique equilibrium.

1. **Pandering**: If $p \in (0, 1)$, then $s_0^*(p, k) > s_0 = s_0^*(0, k) = s_0^*(1, k)$.

2. **Comp stats**: $\forall p \in (0, 1)$, $s_0^*(p, k)$ is strictly $\uparrow$ in k, with

$$\lim_{k \to 0} s_0^*(p, k) = s_0 \text{ and } \lim_{k \to \infty} s_0^*(p, k) = \infty.$$

Welfare Effects of Changes in Reputation Concern

- Voter's welfare when PM is congruent is with prob. p is

$$\mathcal{U}(p,k) = pU(s_0^*(p,k)) + (1-p)U(s_b^*(p,k))$$

- For any $p \in (0,1)$, small amount of reputation concern helps:
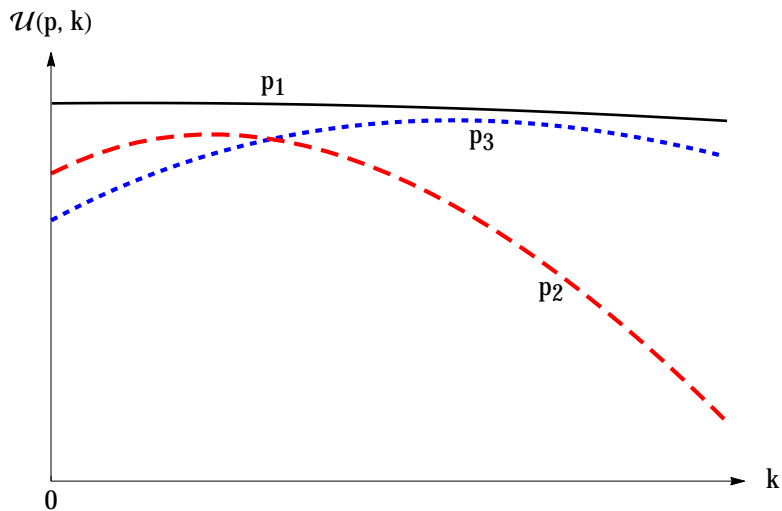
$$\frac{\partial \mathcal{U}(p,0)}{\partial k} > 0$$

  - small k induces pandering by both types
    $\implies$ 1st-order benefit from $\theta = b$, 2nd-order loss from $\theta = 0$

- But eventually, $\uparrow$ k is harmful: eventually, $s_\theta^* > s_{FB}$ for both types

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Lemma
$\forall p \in (0,1)$, $\mathcal{U}(p,k)$ *str. quasi-concave in k, and so has unique maximizer.*

Voter Welfare as a Function of k

Welfare Effects of PM's Congruence Probabability

- For any k, $\mathcal{U}(p,k)$ maximized when $p = 1$

- For any k, a little uncertainty is beneficial when p is low:

$$\frac{\partial \mathcal{U}(0,k)}{\partial p} > 0$$

- However, if k sufficiently large, $p = 0$ is not global minimizer

- For any $p \in (0,1)$, $\mathcal{U}(p,k) < \mathcal{U}(0,0)$ when k sufficiently large
  - because for both θ, $s_\theta^*(p,k) \to \infty$ as $k \to \infty$
 - uses asm. that $U(\infty) < U(s_b)$

Welfare Non-Monotonicity

Proposition

The voter's welfare, $\mathcal{U}(\cdot)$, has the following properties:

1 For all $k > 0$, $\mathcal{U}_p(0, k) > 0$ and $\mathcal{U}(1, k) > \mathcal{U}(p, k)$ for all $p \in [0, 1)$.

2 $\forall p \in (0, 1)$, there is a unique $\hat{k}(p) > 0$ s.t. $\mathcal{U}(p, \hat{k}(p)) = \mathcal{U}(0, 0)$, and

    (a) $\mathcal{U}(p, k) < \mathcal{U}(0, 0)$ if and only if $k > \hat{k}(p)$, and

    (b) $\hat{k}(p) \to \infty$ as either $p \to 0$ or $p \to 1$.

3 Consequently, if $k > k^* := \min_{p \in (0,1)} \hat{k}(p)$ then $\mathcal{U}(p, k) = \mathcal{U}(0, 0)$ for at least two values of $p \in (0, 1)$; while if $k < k^*$ then $\mathcal{U}(p, k) > \mathcal{U}(0, 0)$ for all $p > 0$.

Welcome as a Function of the Prior

Welfare as a Function of the Prior
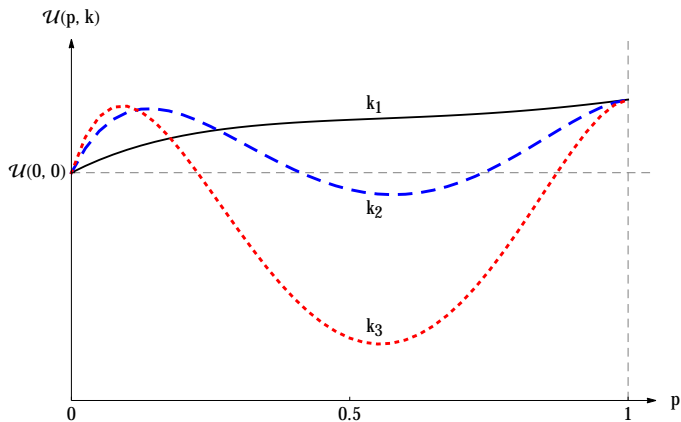
- better pool can harm voter
- $\mathcal{U}(p, k) < \mathcal{U}(0, 0) \implies$ eqm preference reversal over types

PM's Expected Utility

- Let $W(\theta, p, k)$ be expected utility of type θ (not incl. c)

> **Lemma**
>
> 1. *For any $\theta \in \{0, b\}$, $p \in (0, 1)$, and $k > 0$,*
>
> $$0 = W(\theta, 0, k) < W(\theta, p, k) < W(\theta, 1, k) = k.$$
>
> 2. *Moreover, for all $p \in (0, 1)$ and $k > 0$, $W(0, p, k) > W(b, p, k)$, and hence*
>
> $$W(0, p, k) - W(0, 0, k) > W(b, p, k) - W(b, 0, k).$$

- A limited single-crossing condition
  - for any $p \in (0, 1)$, congruent type expects to end with higher reputation

- Similar condition doesn't hold for arbitrary increase in prior
  - $p \in (0, 1) \implies W(0, 1, k) - W(0, p, k) < W(b, 1, k) - W(b, p, k)$

Campaign Stage

Cheap-Talk Campaigns

Preliminaries

- Each candidate i knows $\theta_i \in \{0, b\}$ and picks $m_i \in \{0, b\}$
  - play in policymaking stage will be as characterized earlier

- Uniformative eqa exist. Do informative eqa?

- A candidate's payoff if elected with belief p_i is
$$c + W(\theta_i, p_i, k)$$

- Focus on symmetric eqa. For each $i \in \{1, 2\}$ and $\theta \in \{0, b\}$,
$$\mu^\theta := \Pr(m_i = 0 | \theta_i = \theta)$$
and, for voter,
$$\sigma := \Pr(\text{electing } i \text{ with } m_i = 0 | m_1 \neq m_2).$$

- Let $p^m := \Pr(\theta_i = 0 | m_i = m)$ denote voter belief

- WLOG, $\mu^0 \geq \mu^b$. An eqm is informative if $\mu^0 > \mu^b$ ($\iff p^0 > p^b$).

Voter Indifference in Informative Equilibria

- If voter not indifferent between candidates who announce different messages, one message will lead to "much larger" winning prob.

- When c sufficiently large, this cannot be the case
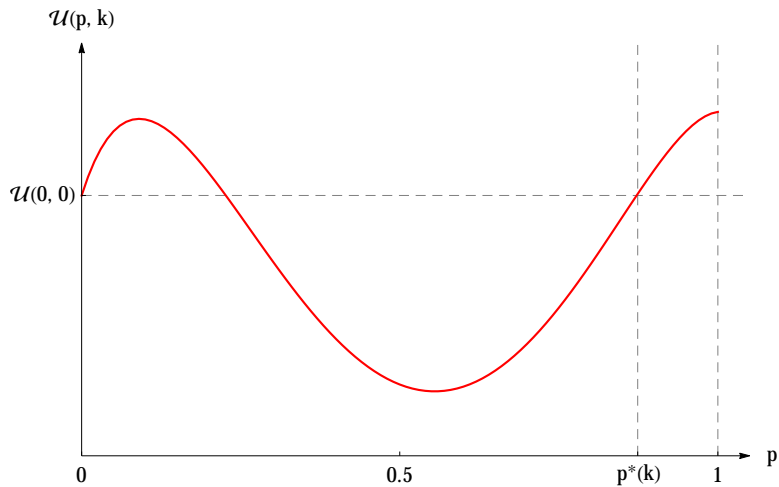 - recall assumption $c \geq k$

> **Lemma**
>
> *In any informative equilibrium, $\mathcal{U}(p^0, k) = \mathcal{U}(p^b, k)$.*

- A separating equilibrium does not exist

- A semi-separating equilibrium (either $p^0 = 1$ or $p^b = 0$) must have

$$1 = \mu^0 > \mu^b > 0 \text{ and hence } 1 > p^0 > p > p^b = 0$$

The Main Idea

Existence of Semi-Separating Equilibrium (1)

- A semi-separating eqm exists if and only if there is $p^0 > p$ s.t.

$$\mathcal{U}(p^0, k) = \mathcal{U}(0, 0)$$

  - $m = b$ is a credible commitment to not pander
  - $m = 0$ increases prob. of being congruent, but will entail pandering

- Non-congruent type made indifferent by voter's randomization, σ
  $\implies \sigma < 1/2$ because $W(b, 0, k) < W(b, p^0, k)$

- Congruent type strictly prefers $m = 0$ by limited single-crossing result

- Necessary and sufficient that $p < p^*(k)$, where

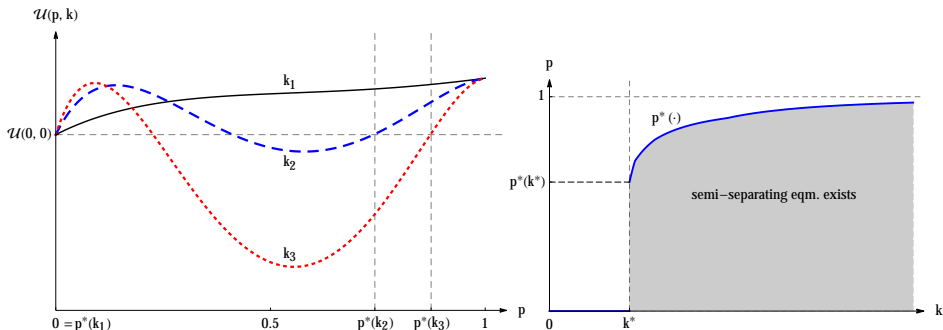 $p^*(k) \in [0, 1)$ is the largest solution to $\mathcal{U}(p, k) = \mathcal{U}(0, 0)$

- There is $k^* > 0$ s.t. $k \geq k^* \iff p^*(k) > 0$

# Existence of Semi-Separating Equilibrium (2)

Proposition

Semi-sep eqm exists if and only if $k \geq k^*$ and $p \in (0, p^*(k))$. Moreover:

1. $k \uparrow \implies$ set of priors for which a semi-sep eqm exists $\uparrow$.

2. For any p, there is a semi-sep eqm if and only if k is sufficiently large.

Campaign Welfare (1)

- Semi-sep eqm may not be unique, but welfare in any is $\mathcal{U}(0,0)$

- In uninformative eqm, welfare is $\mathcal{U}(p,k)$

- Inf. campaigns not always good: affect policymaking incentives
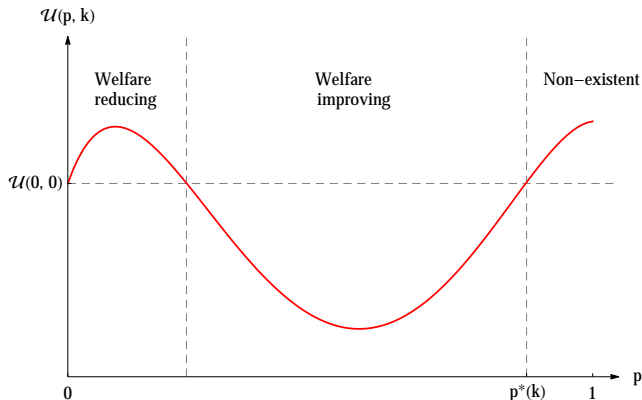
Campaign Welfare (2)

$$P^k := \{p : \mathcal{U}(p, k) < \mathcal{U}(0, 0)\}$$

- semi-sep eqm benefits welfare $\iff p \in P(k)$

Proposition

1. For any k and p, there is an eqm in which welfare $\geq \mathcal{U}(0, 0)$.

2. Above k^*, $P^k \uparrow$ in k, and $P^k \to (0, 1)$ as $k \to \infty$.

3. If $p \in P^k$, then $\dfrac{\partial}{\partial k}\left[\mathcal{U}(0, 0) - \mathcal{U}(p, k)\right] > 0$.

- campaigns protect voters from too much policy pandering

- greater $k \uparrow$ scope for beneficial inf. campaigns

- greater $k \uparrow$ benefits from inf. campaigns

Frequency of Non-Congruent Announcements

Focus on most-informative semi-sep eqm, i.e. $p^0 = p^*(k)$.

- $\Pr(m = b)$ is
  - decreasing in p
    - direct and indirect channel, as μ^b increases
  - increasing in k
    - $\uparrow$ pandering distortions $\uparrow$ benefit from no-pandering commitment

- Effects on heterogeneity of announcements can go either way

Extensions

▸ Other informative equilibria

▸ A limiting case

▸ More types and/or policy actions

▸ The reputation function

Recap

- Politicians' reputation concerns create non-monotonic prefs for voter
  - known devil can be better than unknown angel

- Allows for informative cheap-talk campaigns about policy orientation

- Candidates can reveal themselves to be non-congruent in election
  - credible commitment to not pander in office

- Informative campaigns can increase or decrease voter welfare

- Greater reputation concerns increase scope for and welfare benefits from informative campaigns

Extensions

Equilibria in which Both Types Randomize

- Any non-semi-sep but inform eqm must have both types randomizing

- Cannot rule out because no global single-crossing property:

$$W(0, p', k) - W(0, p'', k) - [W(b, p', k) - W(b, p'', k)]$$

  is not necessarily positive for $p' > p''$

- Yet, main themes hold for any informative equilibrium

  - Let Π^k be set of priors for which some inform eqm exists:

    $$\forall k, \ \exists k' > k : \Pi^k \subsetneq \Pi^{k'}$$

  - Best inform eqm can yield higher or lower welfare than uninform eqm

A limiting case

- Suppose candidates solely max electoral probability
  - if elected into office, policy behavior as before

- As if $c = \infty$

Proposition

In this limiting case,

1. Inform eqm $\iff \exists \, p', p''$ s.t. $p \in (p', p'')$ and $\mathcal{U}(p', k) = \mathcal{U}(p'', k)$.

2. For any p, as $k \to \infty$ there are inform eqa with welfare $\to \mathcal{U}(1, 0)$.

More Types and/or Actions

- Consider arbitrary finite number of types and actions
  - and more general preferences than quadratic loss

- Sufficient for non-monotonic voter preference in belief about PM:
  - sufficiently asymmetric prior on types
  - sufficiently symmetric prior on types

- Informative communication with three types ($\theta \in \{-b_1, 0, b_2\}$):
  - Two actions, asymmetric prior ($p(b_2) \gg p(b_1)$): two-message eqm in which $\{-b_1, 0\}$ announce one message, b_2 randomizes over that message and revealing itself.

  - Three actions, symmetric setting: three-message eqm in which 0 announces 0, types $-b_1$ and b_2 randomize between announcing 0 and revealing.

Endogenizing Reputation Function

- Have assumed politicians want to signal congruence when in office
  - micro-found via a second term that is unaccountable due to term limits

- If second term not free from reputational pressure, voter welfare from re-election can be non-monotonic in belief

- In 1st term, politician may even have an incentive to engage in "anti-pandering", analogous to current cheap-talk campaign

- Can illustrate in a simple two-period model in which the politician receives reputational payoff at the end of second period

- Ongoing work: "functional fixed point" of politicians' reputational value and voter's welfare