The Autocrat's Credibility Problem and Foundations of the Constitutional State

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How art thou a king but by fair sequence and succession? Now, afore God... if you do wrongfully seize Hereford's rights... and deny his off'red homage, you pluck a thousand dangers on your head, you lose a thousand well-disposed hearts, and prick my tender patience to those thoughts which honor and allegiance cannot think.

William Shakespeare, Richard II

Introduction: a central moral-hazard problem in politics. To compete for power under any system, a leader needs active voluntary support of many people.
These supporters must be motivated by some expectation of future reward if they win.
But when rivals have been defeated, a ruler may be able to enjoy the fruits of power without such broad support, and so may be tempted to ignore the claims of past supporters.
A leader's promises may be doubted if nothing constrains rulers to fulfill past promises.
So constitutional constraints may make a leader competitively stronger than absolutism.
Central thesis: As a minimal constitutional structure, a strong leader needs a court or council where his active supporters can collectively judge his treatment of them.
The norms which they expect of their leader are a personal constitution for him, which he must uphold or forfeit their trust.

A model of contests for power (R,λ,s,c,δ)

An island principality yields income R that can be consumed or allocated by the ruler.

The ruler is the leader who won the most recent battle on the island.

Battles occur whenever a new challenger arrives, at a Poisson rate λ.

(In any time interval ε, P(challenger arrives) = $1-e^{-\lambda\varepsilon} \approx \lambda\varepsilon$ if $\varepsilon \approx 0$.)

A leader needs support from captains to have any chance of winning a battle.

Pr(leader with n captains wins against a rival with m captains) = $p(n|m) = n^s/(n^s+m^s)$.

Let c denote a captain's cost of supporting a leader in battle.

The prince and the captains are assumed to be risk neutral and have discount rate δ.

Consider a leader who has n supporters, but expects all rivals to have m supporters.

(For simplicity, we will always assume stationary expectations about rivals.)

If the leader has promised to give each supporter an income y (as long as the leader rules)

then, when there is no challenger, a supporter's expected discounted payoff is

$U(n,y|m) = (y-\lambda c)/[\delta+\lambda-\lambda p(n|m)]$.

For these captains to rationally give support in battle, we need $p(n|m)U(n,y|m) - c \geq 0$.

The lowest income y satisfying this participation constraint is $Y(n|m) = (\delta+\lambda)c/p(n|m)$

The leader's expected disounted payoff is:

$V(n,y|m) = (R-ny)/[\delta+\lambda-\lambda p(n|m)]$ when he rules with no immediate challenge,

$W(n,y|m) = p(n|m)\, V(n,y|m) = p(n|m)(R-ny)/[\delta+\lambda-\lambda p(n|m)]$ on the eve of battle.

Absolute leaders who are subject to no third-party judgements

An absolute monarch is one who is released from all constraints of law.
An absolute leader who cheated a supporter would not be punished by anyone else, although of course the cheated individual might be less likely to support him in the future.
(An absolutist would have no incentive to pay supporters if even those cheated don't react.)
So a leader is absolute when his relationships with all supporters are purely bilateral, as if supporters have no communication with each other.

Against m, a force of n captains is <u>feasible for an absolute leader</u> iff there exists some wage rate y such that $y \geq Y(n|m)$ and $V(n,y|m) \geq V(k,y|m)$ $\forall k \in [0,n]$.
First is participation constraint for captains, second is absolutist's moral-hazard constraint.
(When $n = \text{argmax}_{k\geq 0} V(k,y|n)$, the leader could recruit new captains before battle if new recruits cost y/λ: $V(n,y|m) = R/(\delta+\lambda) + \lambda[W(n,y|m)-ny/\lambda]/(\lambda+\delta)$.)

Let $v(n|m) = V(n,Y(n|m)|m) = [R-nc(\delta+\lambda)/p(n|m)]/[\delta+\lambda-\lambda p(n|m)]$,
and let $w(n|m) = W(n,Y(n|m)|m) = [p(n|m)R-nc(\delta+\lambda)]/[\delta+\lambda-\lambda p(n|m)]$.

<u>Proposition 1.</u> If n>0 and y satisfy the feasibility condition for an absolute leader against m, then there exist $k > n$ such that $v(k|m) > V(n,y|m)$ and $w(k|m) > W(n,y|m)$.

<u>Proof.</u> [Easy if $y>Y(n|m)$.] $Y'(n|m) < 0$. AbsFeas => $V'(n,y|m) \geq 0$. [′ = deriv wrt 1st.]
So with $y=Y(n|m)$, $v'(n|m) = V'(n,y|m) - Y'(n|m)n/[\delta+\lambda-\lambda p(n|m)] > 0$.
So an absolute leader could always benefit by commitment to maintain a larger force.

Communication among supporters in the leader's court

Now suppose captains communicate at court, and a complaint by any captain could switch them to a distrustful equilibrium, where nobody trusts the ruler to reward supporters. Complaining-only-if-cheated is incentive compatible, as captains expect $U>0$ on eqm path. With challenges at rate λ and no support, the ruler's expected payoff would be $R/(\delta+\lambda)$. So we say n is <u>feasible for a leader with a weak court</u> against m iff $v(n|m) \geq R/(\delta+\lambda)$.

$V(0,y|m) = R/(\delta+\lambda)$, so feasible for absolutist => feasible for leader with a weak court.

This court is called "weak" because it cannot change the arrival rate of new challengers. But when a ruler is known to have no support, immediate challenges may be more likely. Then loss of confidence at court could lead to a rapid downfall of the leader. So we say n is <u>feasible for a leader with a strong court</u> against m iff $v(n|m) \geq 0$.

<u>Proposition 2.</u> Suppose that n is feasible for a leader with a weak court against m.
Then $nY(n|m)/R \leq p(n|m)\lambda/(\delta+\lambda)$ and $n \leq R\lambda p(n|m)^2/[c(\delta+\lambda)^2]$.
If $n > 0$ and $s>0.5$ then $m \leq M_0 = [R\lambda(2s-1)^{2-1/s}]/[4s^2 c(\delta+\lambda)^2]$.

<u>Proof.</u> $v(n|m) = [R-nY]/[\delta+\lambda-\lambda p] \geq R/(\delta+\lambda)$ is equivalent to $nY/R \leq p\lambda/(\delta+\lambda)$.
With $Y = c(\delta+\lambda)/p$, we get $n \leq R\lambda p^2/[c(\delta+\lambda)^2]$.
With $p = n^s/(n^s+m^s)$, we get $n = m[p/(1-p)]^{1/s}$,
and so $m \leq [(1-p)/p]^{1/s}\, p^2\, R\lambda/[c(\delta+\lambda)^2]$. With $s>0.5$, this has $\max_{p\in[0,1]} = M_0$.
M_0, the bound of suppression against weak courts, becomes small when λ is small.

Global feasibility and negotiation-proof equilibria

We may say that a force size m is globally feasible for leaders of some kind (absolute, or with weak courts, or with strong courts) iff m is feasible against m for such leaders.

Proposition 3. Suppose that $s \geq 2/3$.
If n is feasible against m for a weak-court leader and $0 < n \leq m$, then $w'(n|m) > 0$.
So if m is globally feasible for weak-court leaders then $\text{argmax}_{k\geq 0}\, w(k|m) > m$.

Proof. $p'(n|m) = (1-p)ps/n$, and $w(n|m) = [Rp-nc(\delta+\lambda)]/[\delta+\lambda-\lambda p]$.

So $w'(n|m) = [(p'R-c(\delta+\lambda))(\delta+\lambda-\lambda p) - (pR-nc(\delta+\lambda))(-\lambda p')]/(\delta+\lambda-\lambda p)^2$

$\geq \{R(1-p)ps - [R\lambda p^2/(\delta+\lambda)^2][\delta+\lambda(1-p)(1+ps)]\}(\delta+\lambda)/[n(\delta+\lambda-\lambda p)^2]$ (weak-ct feas)

$\geq [s(\delta+1.5\lambda) - \lambda](\delta+0.5\lambda)\, Rp(1-p)/[n(\delta+\lambda)(\delta+\lambda-\lambda p)^2]$ ($n\leq m$, $p\leq 1/2$)

> 0 ($s\geq 2/3$).

We may say that m is a negotiation-proof equilibrium iff $w(m|m) = \max_{n\geq 0} w(n|m)$, so that any new leader before first battle would want to negotiate the same force size.
By Prop 3, such a negotiation-proof eqm cannot be globally feasible with weak courts.

Proposition 4. When $s\leq 2$, the negotiation-proof equilibrium is $m_1 = Rs/[c(4\delta+2\lambda+s\lambda)]$.
In this eqm, supporters get the fraction $m_1 Y(m_1|m_1)/R = 2s(\delta+\lambda)/(4\delta+2\lambda+s\lambda)$ [$\rightarrow 1$ as $s\rightarrow 2$].
When $s\geq 0.763$, this equilibrium m_1 is greater than the bound M_0 from Proposition 2, and so an absolutist or a leader with a weak court could not get any support against this eqm.

Oligarchic equilibria

What prevents courtiers from extracting more than the promised income $y = Y(n|m)$?
The courtiers are in a game with multiple equilibria. Each wants to support the leader as long as he trusts the leader and all others are expected to support the leader.
Before the first battle for power, the leader's speech could make the w-max'ing eqm focal.

But other cultural expectations might favor an eqm that is better for the captains.
The best alternative for the n supporters is to get $y = R/n$, leaving 0 for leader.
Then the n captains would be oligarchs, and their expected payoff against m would be
$\Omega(n|m) = -c + p(n|m)U(n,R/n|m) = -c + p(n|m)(R/n-\lambda c)/[\delta+\lambda-\lambda p(n|m)] = w(n|m)/n$.
We say that $m>0$ is an <u>oligarchic equilibrium</u> iff $\Omega(m|m) = \max_{n\geq 0} \Omega(n|m)$.
There is an <u>oligarchic equilibrium at 0</u> if $\Omega'(n|m) < 0$ $\forall(n,m)$ such that $n \geq m > 0$.

<u>Proposition 5.</u> When $1 < s \leq 2$ and $\lambda \geq \delta(2-s)/(s-1)$,
the oligarchic equilibrium is $m_2 = R[(s-1)\lambda-(2-s)\delta]/[c(\delta+\lambda)s\lambda]$.
Recall from Prop 4, m_1 is the negotiation-proof equilibrium for monarchs.
If $s < 2$ then $m_2 < m_1$, but m_2/m_1 is increasing in λ/δ and s. If $s=2$ then $m_2=m_1$.
If $s \leq 1$ or $\lambda < \delta(2-s)/(s-1)$ then there is an oligarchic equilibrium at 0.

<u>Proof.</u> $\Omega'(n|m) = \{(\delta+\lambda-\lambda p)[(R/n-\lambda c)p'-pR/n^2] + (R/n-\lambda c)p\lambda p'\}/(\delta+\lambda-\lambda p)^2$
$= \{R[\delta s-\delta/(1-p)+\lambda s-\lambda]-n(\delta+\lambda)s\lambda c\}(1-p)p/[n(\delta+\lambda-\lambda p)]^2$.
At an oligarchic eqm, we need $\Omega' = 0$ at $n=m$ with $p=0.5$, which yields the formula for m_2.

Figures for an example

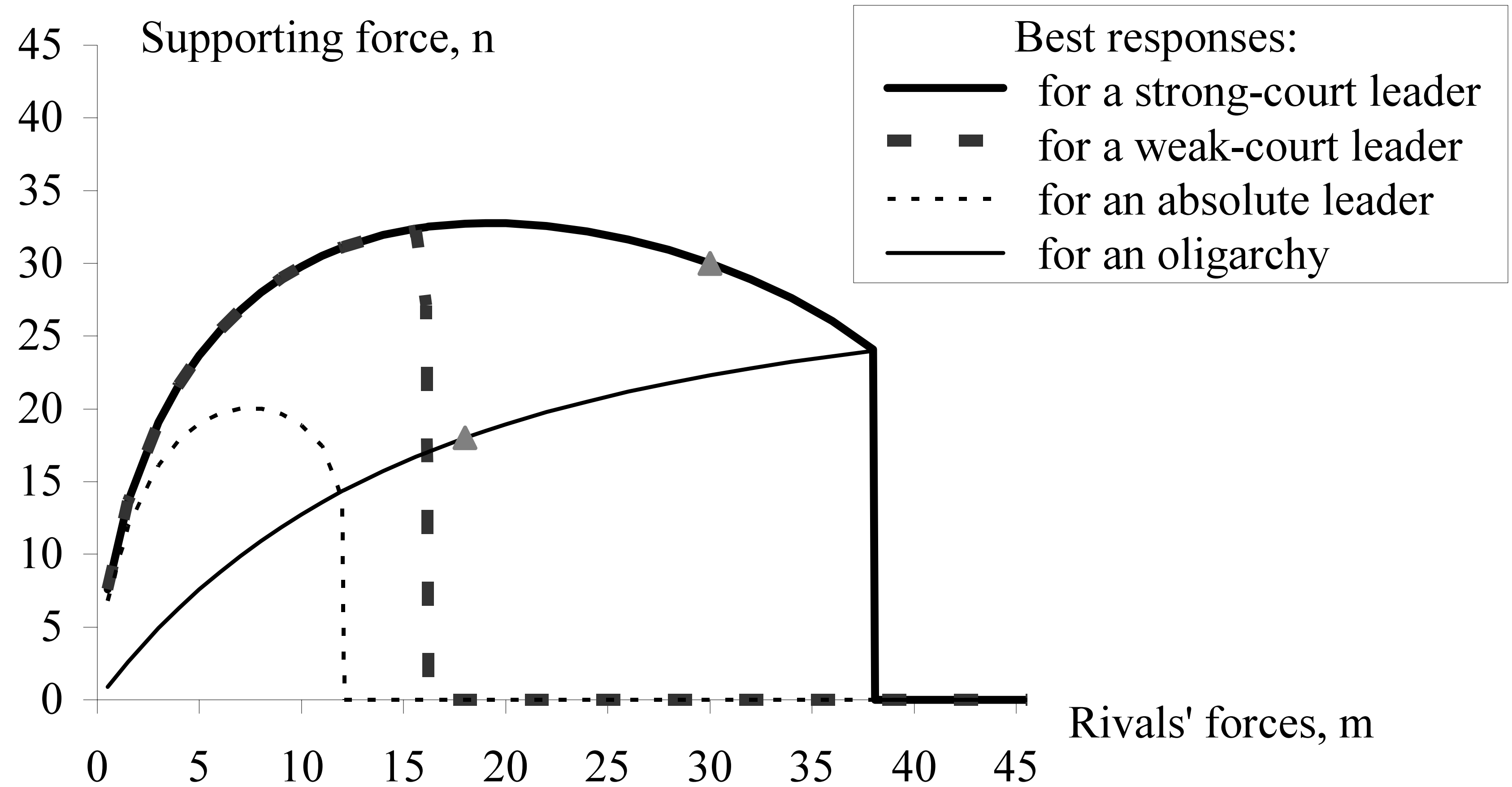

Figure 1. Optimal sizes of supporting forces for different kinds of regimes, depending on the anticipated rival forces, for an example with R=90, δ=0.05, λ=0.2, c=5, and s=1.5.

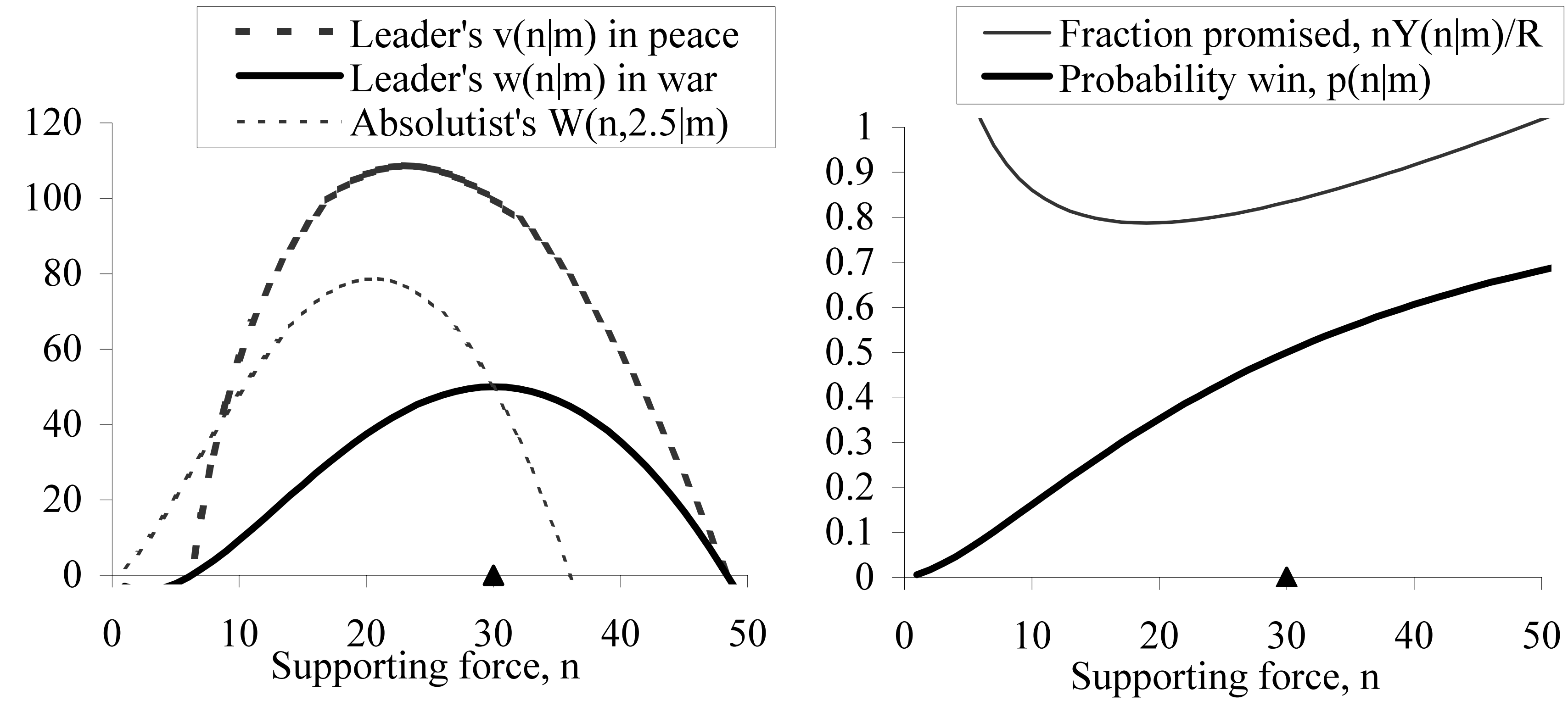

Figure 2. Results of changing the size of the supporting force, against m=30, with R=90, δ=0.05, λ=0.2, c=5, and s=1.5.

When $n < 6.24$ (or $n > 48.4$), we get $nY(n|m) = nc(\delta+\lambda)/p(n|m) > R$.
So nobody would support a leader whom nobody else was expected to support.
Captains are in a coordination game with multiple equilibria.

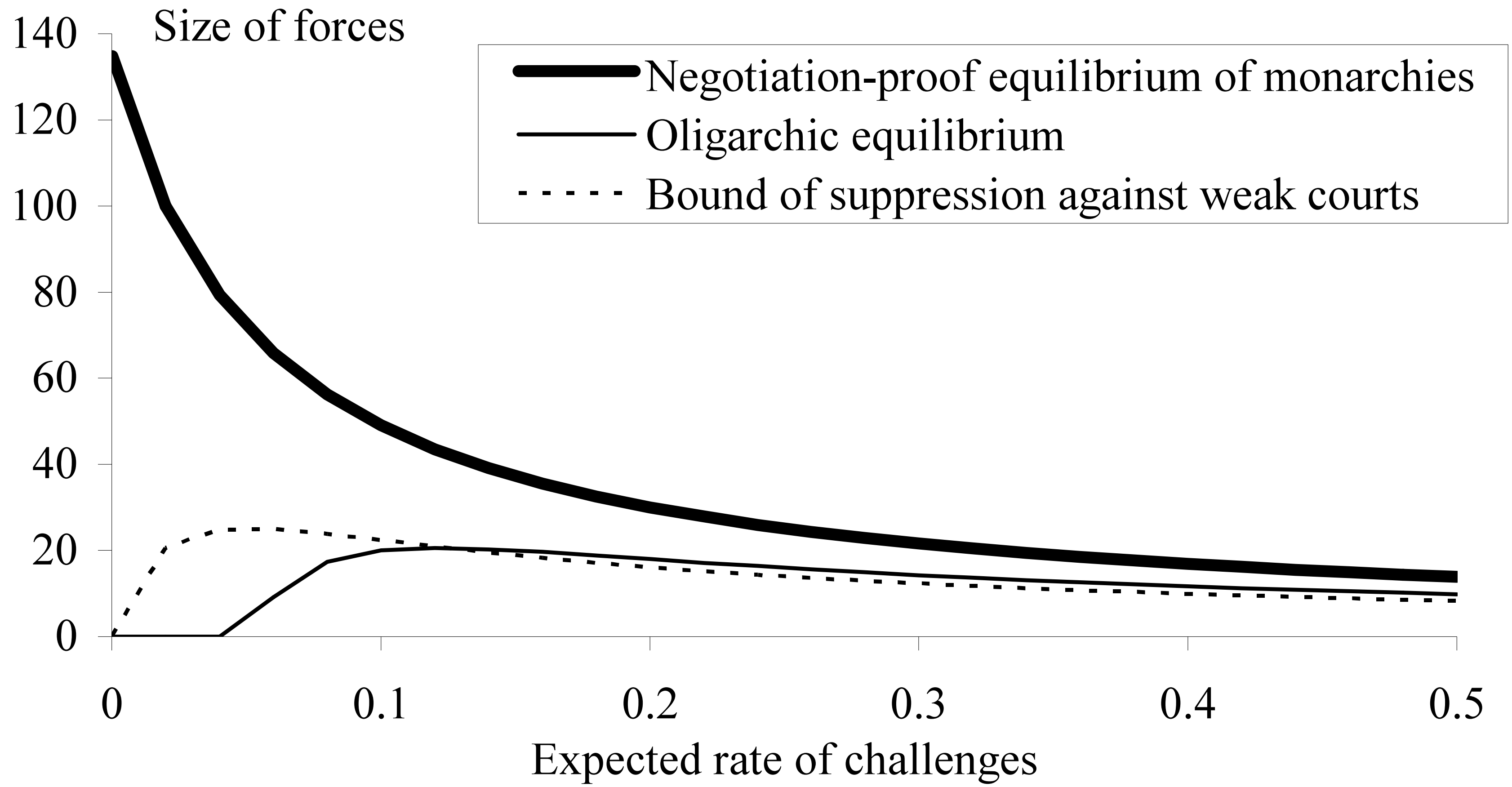

Figure 3. Changes in equilibrium for different values of λ, the expected rate of challenges, with R=90, δ=0.05, c=5, and s=1.5.

Notice the implosion of oligarchies when λ is small (when challenges are rare).

When s>2, negotiation-proof equilibria are randomized, have $\max_{n\geq 0} E[w(n|\tilde{m})] = 0$.
So leaders with weak courts cannot raise any positive force against such $\tilde{m}$.
$\tilde{m}$ is randomized over a subset of $[0, R/(c(\delta+\lambda))]$. (s=2: at midpoint. s=∞: uniform.)

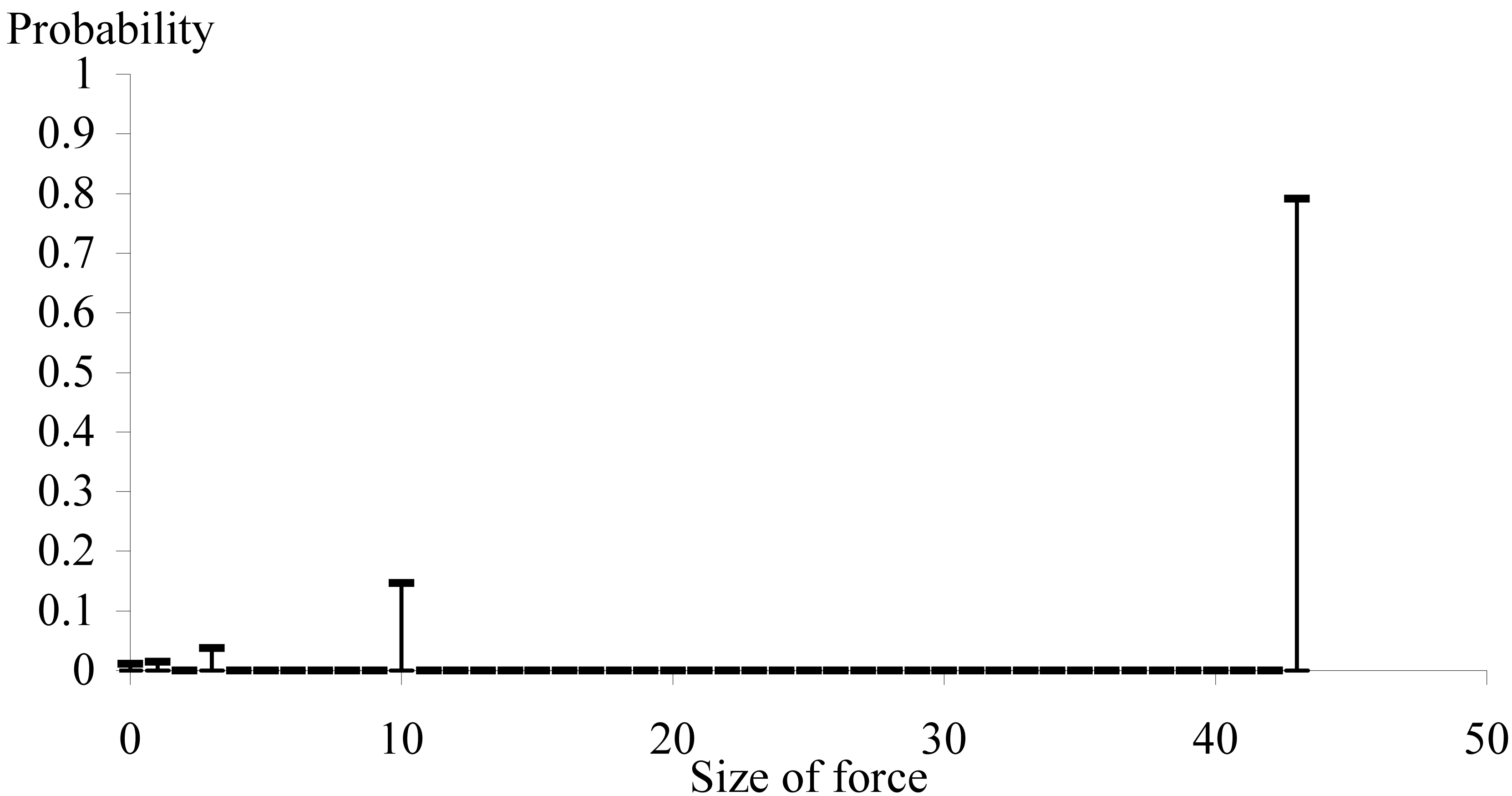

Figure 4. Discrete (integer) approximation of the randomized negotiation-proof equilibrium, with R=90, δ=0.05, λ=0.2, c=5, and s=3. (s=2: [36].) (s=∞: Unif[0,72].)

A related model of institutions, based on games with multiple equilibria.

How can the incumbent leader rule even without support of his captains between battles?
Imagine that the island principality is inhabited by peasants who are randomly matched each day to play rival-claimants games with $r>0,\kappa>0$:

	Player 2 claims	Player 2 defers
Player 1 claims	$-\kappa, -\kappa$	r, 0
Player 1 defers	0, r	0, 0

There are three eqms: (1 claims, 2 defers) yielding payoffs (r,0),
(1 defers, 2 claims) yielding (0,r), (both randomize) yielding (0,0).
Suppose that the established ruler can designate either peasant, and
then they will focus on the equilibrium in which the designated player claims.
Common recognition of the ruler's focal authority can give force to such rulings.
No outside force is needed. The ruler may charge up to $r for such claiming rights.
The only role of captains is to win battles when challengers arrive, because it's assumed that peasants always recognize as ruler the leader whose army has won the most recent battle.
We only need that everybody recognizes what is a battle and who is its winner.

(This model, with its multiplicity of equilibria, can also sustain other political institutions, as I argued in "Justice, institutions, and multiple equilibria," Chicago J. Internatl Law 2004.)

A leader's personal constitution We've seen how competition can create environments where no leader can credibly recruit any supporters without a strong court to constrain him. The supporters need a forum for communicating grievances against their leader, and they need a sense of group identity so that they'd all react if any one of them were cheated. Participation in court may be required as well as support in battle (feudal "aid & counsel").

A multiplicity of equilibria is essential here, because the leader's motivation to pay costly rewards depends on the threat of switching to a distrustful equilibrium if he doesn't.
So the leader and supporters' mutual trust of future support and rewards can be influenced by arbitrary cultural factors, according to Schelling's focal-point effect.
Any set of individuals can distrust any given leader in an equilibrium.
The arrival of new challengers with the legitimacy to gather a confident army of m captains may indeed depend on random (Poisson λ) events.

The patterns of behavior that a leader must maintain to keep his supporters' trust may be regarded as a <u>personal constitution</u> for the leader. This personal constitution requires the leader to appropriately reward supporters, but other forms of behavior may be required.
For example, a political leader may fear to violate an formal constitution when his relationships with supporters were developed in the context of it, so that violating the formal constitution would seem to his supporters like cheating one of them.
Thus constitutional democracy may be based on supporters' fragile trust of their leader.

Historical applications

Our results should call into question simplistic notions about absolutism in history.
"Absolute" monarchs like Louis XIV were actually highly constrained by traditional concepts of aristocratic rights and courtly privileges.
But compared to a monarch, oligarchs have a greater incentive to restrict the size of their politically privileged class, even at the cost of weakening their state.
So to Enlightenment philosophers, broader legal equality could seem more compatible with monarchies than with systems that distributed power across aristocratic institutions

Tyrants like Ivan the Terrible and Stalin who systematically abused their own courtiers look like exceptional failures of rational expectations by their early supporters.
Securing elite privileges after Stalin's death looks closer to our model and normal history.

To build bonds of trust that can motivate costly efforts, even clandestine organizations like Al-Qaeda need a meeting-place for supporters and a system for paying them regularly.

Many great institutions of civilization were initially developed to unite rival princely courts, such as the English common law under Henry II (c1160),
and the Chinese civil-service system under the Song (c980).
Rights and privileges of these institutions were later extended to broader groups of people, but their enforcement relied on an understanding that a ruler who violated them could lose elite supporters' trust.

Foundations of democracy

In democracy, leaders are supposed to extend bases of support to include voting masses.
Campaigns and elections are the court where leaders are constrained and judged by voters.
But a core of active supporters, small enough to monitor, is essential for any political leader.
Voters' evaluation of a leader should take account of his inner circle of active supporters, whose trust is his primary political commitment.
A democratic constitution would be imperiled if its high offices were won by leaders who could be confident of active supporters' trust after openly violating democratic norms.

The first officials under a new constitution need support to win their high offices, and so they cannot be expected to abandon their past supporters at the start of the new regime.
Provisions of the new constitution would be unenforceable if they asked these leaders to violate the terms of their longstanding relationships with supporters.
If leaders have developed bases of support with regular use of private violence or corrupt diversion of public funds, then it is hard to expect that such leaders would suddenly begin to fear that such practices might jeopardize their relationships with active supporters.
Then chances of success for a new democracy may depend on allowing more independent opportunities for different leaders to begin cultivating new democratic reputations.
So the fate of a new constitution may depend critically on the pre-existing personal constitutions that bind its first political leaders with their primary supporters.
The rules of a new regime are not written on a blank slate.