Collusion among Adversaries

Matt Malis

Texas Triangle IR Conference, UT Dallas 25 January 2025

Slides: mattmalis.github.io/slides

Overview

Intuitive logic of provocation:

- A wants conflict, but wants B to attack first
- ► A says or does something (essentially costless) to "provoke" B
- B attacks, fighting ensues

Intuitive logic of provocation:

- A wants conflict, but wants B to attack first
- ► A says or does something (essentially costless) to "provoke" B
- B attacks, fighting ensues

Historical examples:

- Franco-Prussian War, 1870
 - Ems Dispatch: "effect of a red rag upon the Gallic bull"

2/20

Intuitive logic of provocation:

- A wants conflict, but wants B to attack first
- ► A says or does something (essentially costless) to "provoke" B
- B attacks, fighting ensues

Historical examples:

- Franco-Prussian War, 1870
 - Ems Dispatch: "effect of a red rag upon the Gallic bull"
- South Korean martial law episode, 2024
 - "provoke the North's attack at the NLL [Northern Limit Line]"

Intuitive logic of provocation:

- A wants conflict, but wants B to attack first
- ► A says or does something (essentially costless) to "provoke" B
- B attacks, fighting ensues

Historical examples:

- Franco-Prussian War, 1870
 - Ems Dispatch: "effect of a red rag upon the Gallic bull"
- South Korean martial law episode, 2024
 - "provoke the North's attack at the NLL [Northern Limit Line]"
- US entry into WWII; Gulf of Tonkin; Iraq invasion

Puzzle:

- How can it be both in A's interest to provoke B...
 - ...and in B's interest to be provoked?

Puzzle:

- How can it be both in A's interest to provoke B...
 - ...and in B's interest to be provoked?
- How can costless communication between adversaries be informative and influential?

This paper:

Formal model of diplomacy and domestic politics

- Formal model of diplomacy and domestic politics
- Demonstrates how provocation can be:
 - in the interest of both leaders
 - achieved through cheap-talk communication (private or public)

- Formal model of diplomacy and domestic politics
- Demonstrates how provocation can be:
 - in the interest of both leaders
 - achieved through cheap-talk communication (private or public)
- Intuition:
 - A and B collude against A's domestic opposition, to extract a divisible benefit

- Formal model of diplomacy and domestic politics
- Demonstrates how provocation can be:
 - in the interest of both leaders
 - achieved through cheap-talk communication (private or public)
- Intuition:
 - A and B collude against A's domestic opposition, to extract a divisible benefit
 - *B* attacking first can be (under certain conditions):
 - advantageous to B, for security reasons
 - advantageous to A, for domestic political reasons

- Formal model of diplomacy and domestic politics
- Demonstrates how provocation can be:
 - in the interest of both leaders
 - achieved through cheap-talk communication (private or public)
- Intuition:
 - A and B collude against A's domestic opposition, to extract a divisible benefit
 - *B* attacking first can be (under certain conditions):
 - advantageous to B, for security reasons
 - advantageous to A, for domestic political reasons
 - communication allows them to coordinate their actions to realize these benefits

Three players:

- ▶ leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

Three players:

- leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

Sequence:

1. A and B types drawn by nature, observed privately

Three players:

- ▶ leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

- 1. A and B types drawn by nature, observed privately
- 2. *B*: mobilize for conflict (z = 1) or not (z = 0)

Three players:

- leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

- 1. A and B types drawn by nature, observed privately
- 2. *B*: mobilize for conflict (z = 1) or not (z = 0)
- 3. D observes: B's action z, and signal x of A's type

Three players:

- leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

- 1. A and B types drawn by nature, observed privately
- 2. *B*: mobilize for conflict (z = 1) or not (z = 0)
- 3. D observes: B's action z, and signal x of A's type
 - D: retain the incumbent leader (r = 1) or replace her (r = 0)

Three players:

- leader A
- domestic audience D (in A's country)
- leader/state B (unitary actor)

- 1. A and B types drawn by nature, observed privately
- 2. *B*: mobilize for conflict (z = 1) or not (z = 0)
- 3. D observes: B's action z, and signal x of A's type
 - D: retain the incumbent leader (r = 1) or replace her (r = 0)
- 4. War occurs (or not), payoffs realized

Types:

- A types: $\theta \in \{L, H\}$, prior $Pr(\theta = H) = \frac{1}{2}$
- *B* types: $t \in \{\ell, m, \hbar\} = \{$ low, moderate, high $\}$ (any prior)

Types:

- A types: $\theta \in \{L, H\}$, prior $Pr(\theta = H) = \frac{1}{2}$
- *B* types: $t \in \{\ell, m, \hbar\} = \{$ low, moderate, high $\}$ (any prior)

Interpretation:

- Iow type: dovish, low-resolve, risk-averse
- high type: hawkish, high-resolve, risk-accepting
 - or: low vs. high competence in managing conflict
- higher types make war more likely, but less costly (for themselves)

Types:

- A types: $\theta \in \{L, H\}$, prior $Pr(\theta = H) = \frac{1}{2}$
- *B* types: $t \in \{\ell, m, \hbar\} = \{$ low, moderate, high $\}$ (any prior)

Interpretation:

- Iow type: dovish, low-resolve, risk-averse
- high type: hawkish, high-resolve, risk-accepting
 - or: low vs. high competence in managing conflict
- higher types make war more likely, but less costly (for themselves)

D's signal:

►
$$x \in {\tilde{L}, \tilde{H}}, Pr(x = \tilde{H}|\theta = H) = Pr(x = \tilde{L}|\theta = L) = \tau \in (\frac{1}{2}, 1)$$

Conflict payoffs, with no mobilization (z = 0):

Conflict payoffs, with no mobilization (z = 0):

•
$$Pr(war|\theta, t, z = 0) = p_{\theta}^t$$
, increasing in θ and t

Conflict payoffs, with no mobilization (z = 0):

• $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t

•
$$U_i(peace) = 0$$
, $i = A, D, B$

Conflict payoffs, with no mobilization (z = 0):

• $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t

•
$$U_i(peace) = 0$$
, $i = A, D, B$

• $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$

Conflict payoffs, with no mobilization (z = 0):

- $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t
- $U_i(peace) = 0$, i = A, D, B
- $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$
- $U_B(war; t, z = 0) = \beta^t$, $\beta^\ell < \beta^m < \beta^\hbar$, $\beta^m < 0$

Conflict payoffs, with no mobilization (z = 0):

- $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t
- $U_i(peace) = 0$, i = A, D, B
- $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$
- $U_B(war; t, z = 0) = \beta^t$, $\beta^\ell < \beta^m < \beta^h$, $\beta^m < 0$

$$W_A(\theta, t, z = 0) = p_{\theta}^t \alpha_{\theta} \qquad W_B(\theta, t, z = 0) = p_{\theta}^t \beta^t$$

higher types make war more likely, but less costly (for themselves)

Conflict payoffs, with no mobilization (z = 0):

- $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t
- $U_i(peace) = 0$, i = A, D, B
- $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$
- $U_B(war; t, z = 0) = \beta^t$, $\beta^\ell < \beta^m < \beta^h$, $\beta^m < 0$

$$W_A(\theta, t, z = 0) = p_{\theta}^t \alpha_{\theta} \qquad W_B(\theta, t, z = 0) = p_{\theta}^t \beta^t$$

higher types make war more likely, but less costly (for themselves)

With mobilization:

•
$$Pr(war|\theta, t, z) = p_{\theta}^{t} + z\varepsilon, \quad \varepsilon \ge 0$$

Conflict payoffs, with no mobilization (z = 0):

- $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t
- $U_i(peace) = 0$, i = A, D, B
- $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$
- $U_B(war; t, z = 0) = \beta^t$, $\beta^\ell < \beta^m < \beta^\hbar$, $\beta^m < 0$

$$W_A(\theta, t, z = 0) = p_{\theta}^t \alpha_{\theta} \qquad W_B(\theta, t, z = 0) = p_{\theta}^t \beta^t$$

higher types make war more likely, but less costly (for themselves)

With mobilization:

- $Pr(war|\theta, t, z) = p_{\theta}^{t} + z\varepsilon, \quad \varepsilon \ge 0$
- $U_A(war; \theta, z) = \alpha_{\theta} z\gamma_A, \quad \gamma_A \ge 0$

Conclusion 7 / 20

Conflict payoffs, with no mobilization (z = 0):

- $Pr(war|\theta, t, z = 0) = p_{\theta}^{t}$, increasing in θ and t
- $U_i(peace) = 0$, i = A, D, B
- $U_A(war; \theta, z = 0) = U_D(war) = \alpha_{\theta}, \quad \alpha_L < \alpha_H < 0$
- $U_B(war; t, z = 0) = \beta^t$, $\beta^\ell < \beta^m < \beta^\hbar$, $\beta^m < 0$

$$W_A(\theta, t, z = 0) = p_{\theta}^t \alpha_{\theta} \qquad W_B(\theta, t, z = 0) = p_{\theta}^t \beta^t$$

higher types make war more likely, but less costly (for themselves)

With mobilization:

- $Pr(war|\theta, t, z) = p_{\theta}^{t} + z\varepsilon, \quad \varepsilon \ge 0$
- $U_A(war; \theta, z) = \alpha_{\theta} z\gamma_A, \quad \gamma_A \ge 0$
- $U_B(war; t, z) = \beta^t + z\gamma_B, \quad \gamma_B > 0$

D preferences over types:

 $W_A(H, \ell, z) < W_A(L, \ell, z)$ and $W_A(L, \hbar, z) < W_A(H, \hbar, z)$

- given $t = \ell$, D prefers $\theta = L$
- given t = h, D prefers $\theta = H$
- (preference not too strong either way given t = m)

D preferences over types:

 $W_A(H, \ell, z) < W_A(L, \ell, z)$ and $W_A(L, \hbar, z) < W_A(H, \hbar, z)$

- given $t = \ell$, D prefers $\theta = L$
- given t = h, D prefers $\theta = H$
- (preference not too strong either way given t = m)

Interpretation:

- not just crisis bargaining
- spiral model, with first-strike advantage
- Iong-term relationship trajectory, opportunities for cooperation

Total payoffs:

Overview

Total payoffs:

•
$$U_A = r(\psi + W_A(\theta, t, z))$$

• officeholding value ψ large

Total payoffs:

- $U_A = r(\psi + W_A(\theta, t, z))$
 - \blacktriangleright officeholding value ψ large

•
$$U_D = W_A(\theta, t, z)$$

• θ is either original incumbent, or replacement

Total payoffs:

- $U_A = r(\psi + W_A(\theta, t, z))$
 - \blacktriangleright officeholding value ψ large

•
$$U_D = W_A(\theta, t, z)$$

• θ is either original incumbent, or replacement

•
$$U_B = W_B(\theta, t, z) - z\kappa$$

• direct cost of mobilizing $\kappa \ge 0$

Non-communication equilibrium

- B^{\hbar} mobilizes (z = 1)
- B^{ℓ} and B^m do not mobilize (z = 0)
- D retains if signal of A's type matches B's action, i.e.:

r = 1 if
$$(x = \tilde{H}, z = 1)$$
 or $(x = \tilde{L}, z = 0)$

Non-communication equilibrium

- B^{\hbar} mobilizes (z = 1)
- B^{ℓ} and B^m do not mobilize (z = 0)
- D retains if signal of A's type matches B's action, i.e.:
 r = 1 if (x = H̃, z = 1) or (x = L̃, z = 0)

Intuition:

• D: if B mobilizes, must be B^h , so war is likely \implies want A_H

Non-communication equilibrium

- B^{\hbar} mobilizes (z = 1)
- B^{ℓ} and B^m do not mobilize (z = 0)
- D retains if signal of A's type matches B's action, i.e.:
 r = 1 if (x = H̃, z = 1) or (x = L̃, z = 0)

Intuition:

- D: if B mobilizes, must be B^h , so war is likely \implies want A_H
- B^{\hbar} : war is likely, better to prepare

Non-communication equilibrium

- B^{\hbar} mobilizes (z = 1)
- B^{ℓ} and B^m do not mobilize (z=0)
- D retains if signal of A's type matches B's action, i.e.:
 r = 1 if (x = H, z = 1) or (x = L, z = 0)

Intuition:

- D: if B mobilizes, must be B^h , so war is likely \implies want A_H
- B^{\hbar} : war is likely, better to prepare
- B^m and B^{ℓ} : mobilizing increases prob. of facing A_H

- B^m would want to mobilize if he knew A was A_H
 - doesn't know A's type, so defaults to z = 0

- B^m would want to mobilize if he knew A was A_H
 - doesn't know A's type, so defaults to z = 0
- A_H wants her audience to believe B is a threat
 - argument is undermined by B^m not mobilizing

- B^m would want to mobilize if he knew A was A_H
 - doesn't know A's type, so defaults to z = 0
- ► A_H wants her audience to believe B is a threat
 - argument is undermined by B^m not mobilizing
- \rightarrow mitigated by communication between A and B

Sequence:

- 1. A and B types drawn by nature, observed privately
- 2. A: send private, costless message to B

• conciliatory (s = 0) or hostile (s = 1)

- 3. *B*: mobilize for conflict (z = 1) or not (z = 0)
- 4. D observes: B's action z, and signal x of A's type
 - D: retain the incumbent leader (r = 1) or replace her (r = 0)
- 5. War occurs (or not), payoffs realized

All other game features same as before

Sequence:

- 1. A and B types drawn by nature, observed privately
- 2. A: send private, costless message to B
 - conciliatory (s = 0) or hostile (s = 1)
- 3. *B*: mobilize for conflict (z = 1) or not (z = 0)
- 4. D observes: B's action z, and signal x of A's type
 - D: retain the incumbent leader (r = 1) or replace her (r = 0)
- 5. War occurs (or not), payoffs realized

All other game features same as before

Communication equilibrium

- A strategy:
 - A_H sends hostile message (s = 1)
 - A_L sends conciliatory message (s = 0)
- B strategy:
 - B^{\hbar} always mobilizes (z = 1)
 - B^{ℓ} never mobilizes (z = 0)
 - B^m mobilizes iff receives hostile message (z = s)
- D strategy (same as before):
 - retain if signal of A's type matches B's action, i.e.:
 - r = 1 if $(x = \tilde{H}, z = 1)$ or $(x = \tilde{L}, z = 0)$
 - r = 0 otherwise

- provoking B into mobilizing:
 - strictly harmful, for conflict payoffs
 - but demonstrates to audience that B is a threat, so they need a leader like A
- beneficial for A_H if office-holding value ψ large

- provoking B into mobilizing:
 - strictly harmful, for conflict payoffs
 - but demonstrates to audience that B is a threat, so they need a leader like A
- beneficial for A_H if office-holding value ψ large
- B^m incentive-compatibility:

- provoking B into mobilizing:
 - strictly harmful, for conflict payoffs
 - but demonstrates to audience that B is a threat, so they need a leader like A
- beneficial for A_H if office-holding value ψ large
- B^m incentive-compatibility:
 - if he learns that A is type A_L (given message s = 0):
 - war is unlikely, preparation is unnecessary
 - by not mobilizing (z = 0), also helps A_L survive politically

- provoking B into mobilizing:
 - strictly harmful, for conflict payoffs
 - but demonstrates to audience that B is a threat, so they need a leader like A
- beneficial for A_H if office-holding value ψ large
- B^m incentive-compatibility:
 - if he learns that A is type A_L (given message s = 0):
 - war is unlikely, preparation is unnecessary
 - by not mobilizing (z = 0), also helps A_L survive politically
 - if he learns that A is type A_H (given message s = 1):
 - war is likely, so better to be prepared (z = 1)
 - weighed against cost of helping A_H stay in office

- provoking B into mobilizing:
 - strictly harmful, for conflict payoffs
 - but demonstrates to audience that B is a threat, so they need a leader like A
- beneficial for A_H if office-holding value ψ large
- B^m incentive-compatibility:
 - if he learns that A is type A_L (given message s = 0):
 - war is unlikely, preparation is unnecessary
 - by not mobilizing (z = 0), also helps A_L survive politically
 - if he learns that A is type A_H (given message s = 1):
 - war is likely, so better to be prepared (z = 1)
 - weighed against cost of helping A_H stay in office
 - if both conditions satisfied: message is influential, z = s

To summarize:

• A and B collude against A's domestic opposition, to extract a divisible benefit

To summarize:

- A and B collude against A's domestic opposition, to extract a divisible benefit
 - A gives B a security benefit:
 - lets B know whether he should or shouldn't mobilize

To summarize:

- A and B collude against A's domestic opposition, to extract a divisible benefit
 - A gives B a security benefit:
 - lets B know whether he should or shouldn't mobilize
 - *B* gives *A* a political benefit:
 - helps convince A's audience that A is the right type of leader for the moment

To summarize:

- A and B collude against A's domestic opposition, to extract a divisible benefit
 - A gives B a security benefit:
 - lets B know whether he should or shouldn't mobilize
 - B gives A a political benefit:
 - helps convince A's audience that A is the right type of leader for the moment
- communication allows them to coordinate their actions to realize these benefits

What if A's message to D is public (observable by D)?

Overview

What if A's message to D is public (observable by D)?

- Qualitatively similar equilibrium supported
 - (semi-separating messages, rather rather than fully separating)

What if A's message to D is public (observable by D)?

- Qualitatively similar equilibrium supported
 - (semi-separating messages, rather rather than fully separating)
- ► A_H does not have to "deceive" her audience
 - can provoke openly and still be politically rewarded

What if A's message to D is public (observable by D)?

- Qualitatively similar equilibrium supported
 - (semi-separating messages, rather rather than fully separating)
- ► A_H does not have to "deceive" her audience
 - can provoke openly and still be politically rewarded
- Why? Because audience is *prospective*
 - doesn't matter who "started" the conflict
 - ▶ B's action reveals (probable) hostile intent, even if provoked

Franco-Prussian War, 1870:

- Bismarck (A) wanted smaller German states (D) to support unification under Prussia
 - needed to demonstrate that Napoleon (B) had hostile intent

Conclusion 17 / 20

Franco-Prussian War, 1870:

- Bismarck (A) wanted smaller German states (D) to support unification under Prussia
 - needed to demonstrate that Napoleon (B) had hostile intent
- France initiated the war (z = 1) on its own timeline
 - advantageous for France—power shifting towards Prussia

Franco-Prussian War, 1870:

- Bismarck (A) wanted smaller German states (D) to support unification under Prussia
 - needed to demonstrate that Napoleon (B) had hostile intent
- France initiated the war (z = 1) on its own timeline
 - advantageous for France—power shifting towards Prussia
- (Complication: domestic politics on both sides—Napoleon also wanted to provoke Bismarck into initiating)



South Korean martial law episode, 2024:

- ▶ Yoon government (A) wanted to overcome domestic gridlock
 - tried to demonstrate to public that NK (B) was a threat



South Korean martial law episode, 2024:

- Yoon government (A) wanted to overcome domestic gridlock
 - tried to demonstrate to public that NK (B) was a threat
- "provoke the North's attack at the NLL"
 - drone flights dropping propaganda leaflets
 - shooting down trash balloons



South Korean martial law episode, 2024:

- > Yoon government (A) wanted to overcome domestic gridlock
 - tried to demonstrate to public that NK (B) was a threat
- "provoke the North's attack at the NLL"
 - drone flights dropping propaganda leaflets
 - shooting down trash balloons
- unsuccessful; Kim Jong Un not actually a high type?
- (details still coming to light)

Contribution

Distinction from audience costs:

- message is intended to provoke, rather than deter as in AC
- message can be private or public (but must be public for AC)

Contribution

Distinction from audience costs:

- message is intended to provoke, rather than deter as in AC
- message can be private or public (but must be public for AC)

Distinction from diversionary war:

- insufficient for A to show she is aggressive, hawkish, competent at managing conflict, etc.
- must also show that the international environment (i.e. B's type) makes these attributes valuable

Contribution

Distinction from audience costs:

- message is intended to provoke, rather than deter as in AC
- message can be private or public (but must be public for AC)

Distinction from diversionary war:

- insufficient for A to show she is aggressive, hawkish, competent at managing conflict, etc.
- must also show that the international environment (i.e. B's type) makes these attributes valuable

Novel mechanism of cheap-talk diplomacy between adversaries:

coordinating action to collude against a third party

Thank you!

- Matt Malis, Texas A&M University
- Slides: mattmalis.github.io/slides
- Comments welcome and appreciated: malis@tamu.edu