

# Why Not Proliferate?

William Spaniel

[williamspaniel@gmail.com](mailto:williamspaniel@gmail.com)

[wjspaniel.wordpress.com](http://wjspaniel.wordpress.com)

# Admin Stuff

- Final: Tuesday, May 8, 8:30 am.
- The final is cumulative, with an emphasis on the second half.

# Two Topics

1. “Nothing to Fear But Fear Itself?”
2. Proliferation with repeated interaction and perfect monitoring.

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# Nothing to Fear

- The name of the working paper is now “Nothing to Fear But Fear Itself?”
  - Google it with “Debs” and you will find it.

# Some (Sad) Truths of Research

- What does game theory do anyway?
  - Answer: Maps assumptions to logically valid conclusions.

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    - Still unclear? Let's consult South Park.



PHASE 1

PHASE 2

PHASE 3

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Collect  
Assumptions

Game  
Theory

Conclusions



# Some (Sad) Truths of Research

- What does game theory do anyway?
  - Answer: Maps assumptions to logically valid conclusions.
    - Still unclear? Let's consult South Park.
- Assumptions do all the dirty work. Game theory is just math.
  - Thus, changing assumptions often changes conclusions.

# Some (Sad) Truths of Research

- When a researcher finds an interesting result, others try to “break” the result.
  - What critical assumptions are necessary to maintain the outcome?

# Fearon's Assumptions

- Rising states magically grow more powerful.
  - Umm.
- Shifting power is not costly.
  - Definitely *not* true.
- Declining state can perfectly monitor the rising state.
  - Definitely not always true.

# Fearon's Assumptions

- Disclaimer: making these assumptions does not make James Fearon a bad researcher. Relaxing assumptions usually requires a lot more dirty work (math). It makes sense to start small and work our way up.

# Fearon's Assumptions

- Will preventive war still hold after relaxing these assumptions?
  - Goes away if the rising state chooses whether to grow.
  - If shifting power is costly and monitoring is imperfect, Debs and Monteiro show that war returns.

# Nothing to Fear?

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  1. Would the rising state ever not want to proliferate?

# Nothing to Fear?

- Imagine that the declining state was completely blind to the rising state's actions.
  1. Would the rising state ever not want to proliferate?
    - Only if proliferating is ridiculously expensive. Otherwise, regardless of how much the declining state offered, the rising state could proliferate and demand more later.

# Nothing to Fear?

- Imagine that the declining state was completely blind to the rising state's actions.
  2. Can the declining state successfully bribe the rising state not to proliferate?

# Nothing to Fear?

- Imagine that the declining state was completely blind to the rising state's actions.
2. Can the declining state successfully bribe the rising state not to proliferate?
    - No. The rising state is going to build anyway. So the rising state will take the declining state's concessions and screw them over anyway.

# Nothing to Fear?

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3. Should the declining state launch preventive war?

# Nothing to Fear?

- Imagine that the declining state was completely blind to the rising state's actions.
3. Should the declining state launch preventive war?
- Yes—if war is a relatively cheap option. If the declining state does not prevent, it knows the rising state will proliferate. So if the declining state would rather fight a war than suffer the consequences of a nuclear rival later, it fights.

# Nothing to Fear?

- In the actual paper, Debs and Monteiro consider a scenario where monitoring is “noisy.”
  - Sometimes the rising state gets caught proliferating, sometimes not.
  - This leads to a bluffing outcome.
    - The rising state sometimes proliferates and sometimes doesn't. The declining state sometimes launches preventive war and sometimes does not.

# Nothing to Fear?

- This leads to a bluffing outcome.
  - The rising state sometimes proliferates and sometimes doesn't. The declining state sometimes launches preventive war and sometimes does not.
- Thus, sometimes we fight preventive wars for no good reason (Iraq 2003).

# Two Topics

1. “Nothing to Fear But Fear Itself?”
2. Proliferation with repeated interaction and perfect monitoring.

# Motivation

- The Debs and Monteiro paper assume that proliferation is a now-or-never proposition.
- But if Iran does not proliferate today, nothing will stop it from proliferating tomorrow.

# Motivation

- History has many instances of “butter-for-bombs” negotiations.
  - Soviet Successor States, Libya, Iran and North Korea (ongoing).
  - How can we explain this? Doesn't power bring concessions?

# Common Features

- Strong actor (United States) gives money to weaker state over the long term.
- Weaker state accepts the money and gives up weapons programs and do not restart their programs even after receiving those concessions.

# Two Problems

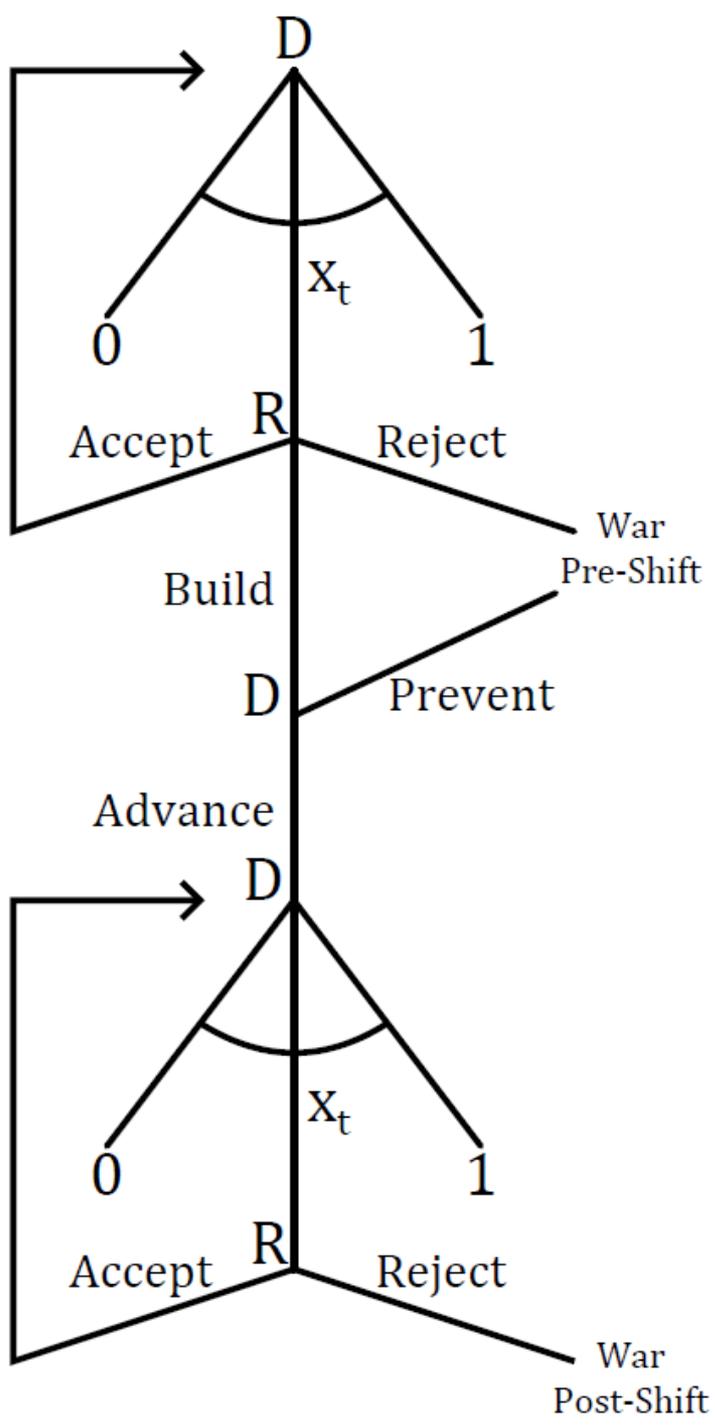
- Theoretical problem
  - In models of shifting power and preventive war, declining states only make concessions *after* power has shifted.
- Applied problem
  - Will North Korea and Iran follow through with the agreements?
  - Why not take the concessions and build power anyway?

# Critical Insight: Cost of Power

- Power does not magically grow on trees.
- States must pay costs to increase the size of their military and have more bargaining power.

# Critical Insight: Cost of Power

- Incorporating these costs of power, there exist peaceful equilibria in which the rising state never shifts power.
  - The declining state makes immediate concessions.
  - The rising state could shift power and force the declining state to make additional concessions. But those additional concessions do not cover the costs of the weapons.



# Outcome 1: “Too Cold”

- Suppose the cost of proliferation is extremely great.
- Declining state can offer no concessions and still induce the rising state to accept and not build.
  - It’s just not profitable to proliferate.

# Outcome 2: “Too Hot”

- Suppose the proliferating causes a gigantic shift in power.
  - The declining state would want to prevent in this case. (Remember: perfect monitoring here.)
- The declining state can offer no concessions and still induce the rising state to accept.
  - The rising state’s alternative is to induce the declining state to launch preventive war.

# Outcome 3a: Butter-for-Bombs

- Suppose outcome 1 and 2 are not the case and proliferating is still relatively expensive.
- The declining state makes immediate concessions to the rising state. The rising state accepts and does not proliferate.

# Outcome 3a: Butter-for-Bombs

- Why?
  - Remember, proliferating is costly.
  - The benefit from proliferating is extracting more concessions out of the declining state.
  - But the declining state is already offering some concessions.
  - If the rising state builds, it will get more concessions. But those additional concessions don't make up for the cost of proliferation.

# Outcome 3b: Hardball

- Suppose outcome 1 and 2 are not the case and proliferating is relatively cheap.
- Declining state offers no concessions at first. Rising state proliferates. Declining state offers great concessions afterward.

# Outcome 3b: Hardball

- Why?
  - It's just too easy for the rising state to proliferate.
  - Butter-for-bombs won't work because the rising state is too tempted to renege.
  - Thus, the declining state takes as much as it can at first and accepts the consequences of proliferation later on.

Fin.

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