



Policy Change Index

AI-Assisted Propaganda Analysis

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GEC Tech Demo

policychangeindex.org

Policy Change Index (PCI) project

- Predict authoritarian policies based on propaganda;
- First use cases: China;
- Future: North Korea, Iran, Cuba, Venezuela, Russia,...
- Open-source and free!

PCI has been demonstrated to

- White House OSTP, USTR;
- DoD Project Maven, Naval Research Lab, In-Q-Tel;
- Bipartisan members of Congress, including House Ways & Means, House Foreign Affairs, and House Armed Services;
- Federal Reserve Board.

The problem PCI solves

“Value” of closed regimes’ propaganda

High

“Value” of closed regimes’ propaganda

High, because



Lessons from history

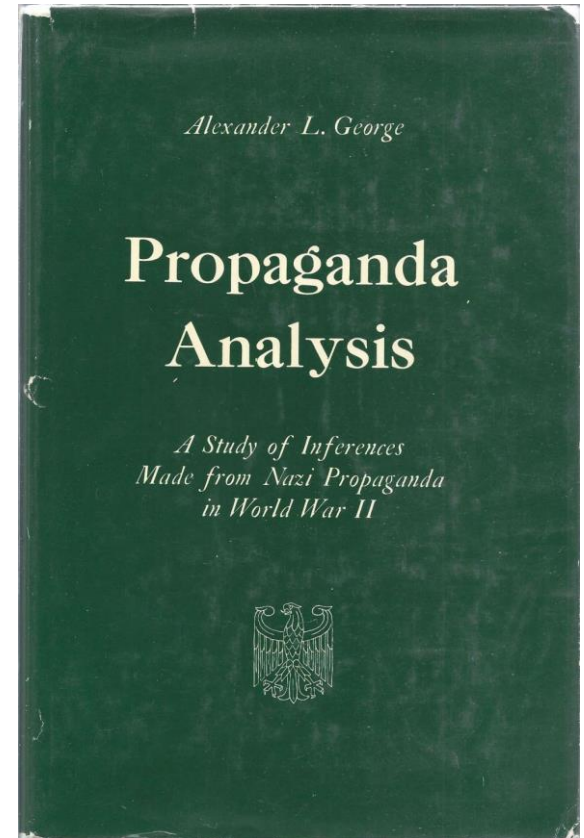
- The Soviets;



(Lenin and Stalin, 1922)

Lessons from history

- The Soviets;
- The Nazis;



(Alexander George, 1959)

Lessons from history

- The Soviets;
- The Nazis;
- The Chinese;



(Xi Jinping at CCTV, 2016)

Lessons from history

- The Soviets;
- The Nazis;
- The Chinese;
- And many more.

Analyzing closed regimes' propaganda

Easier said than done!

- Unstructured data;
- Labor-intensive;
- Objective mixed with subjective.

Dr. Watson's headache

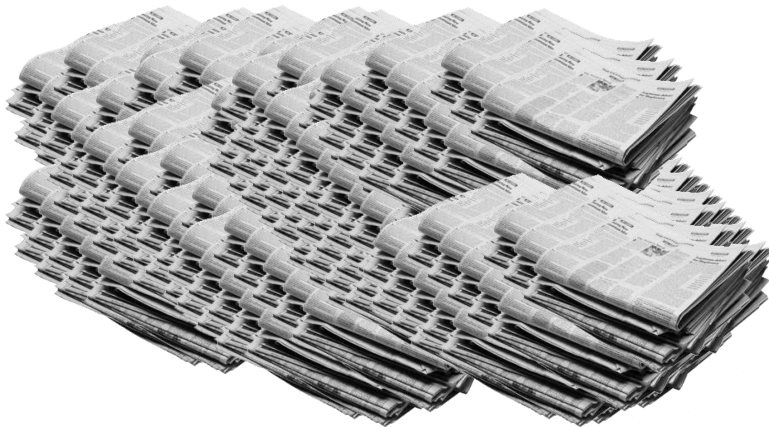
- “Dr. Watson” is monitoring “unusual” content in the *People's Daily*,
- and spots an “unusual” article on the front page.



Dr. Watson's headache

- “Dr. Watson” is monitoring “unusual” content in the *People's Daily*,
- and spots an “unusual” article on the front page.
- Is it really unusual?

5 years' worth



3 months' worth



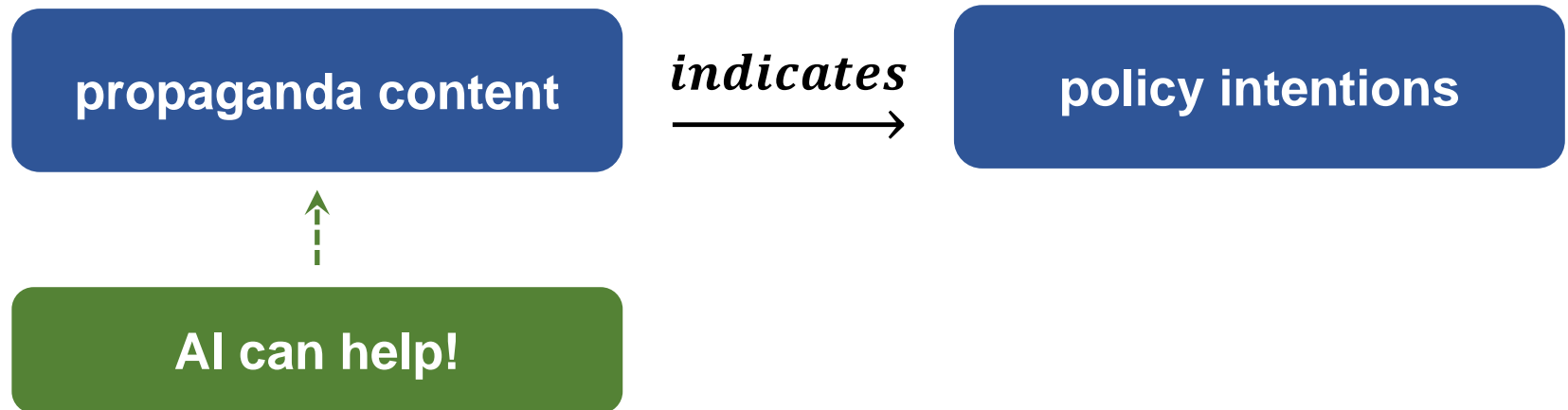
Dr. Watson's headache

- “Dr. Watson” is monitoring “unusual” content in the *People's Daily*,
- and spots an “unusual” article on the front page;
- Is it really unusual?
- A question for every day!
- How to evaluate Dr. Watson?



PCI's solution

Core idea



Key features

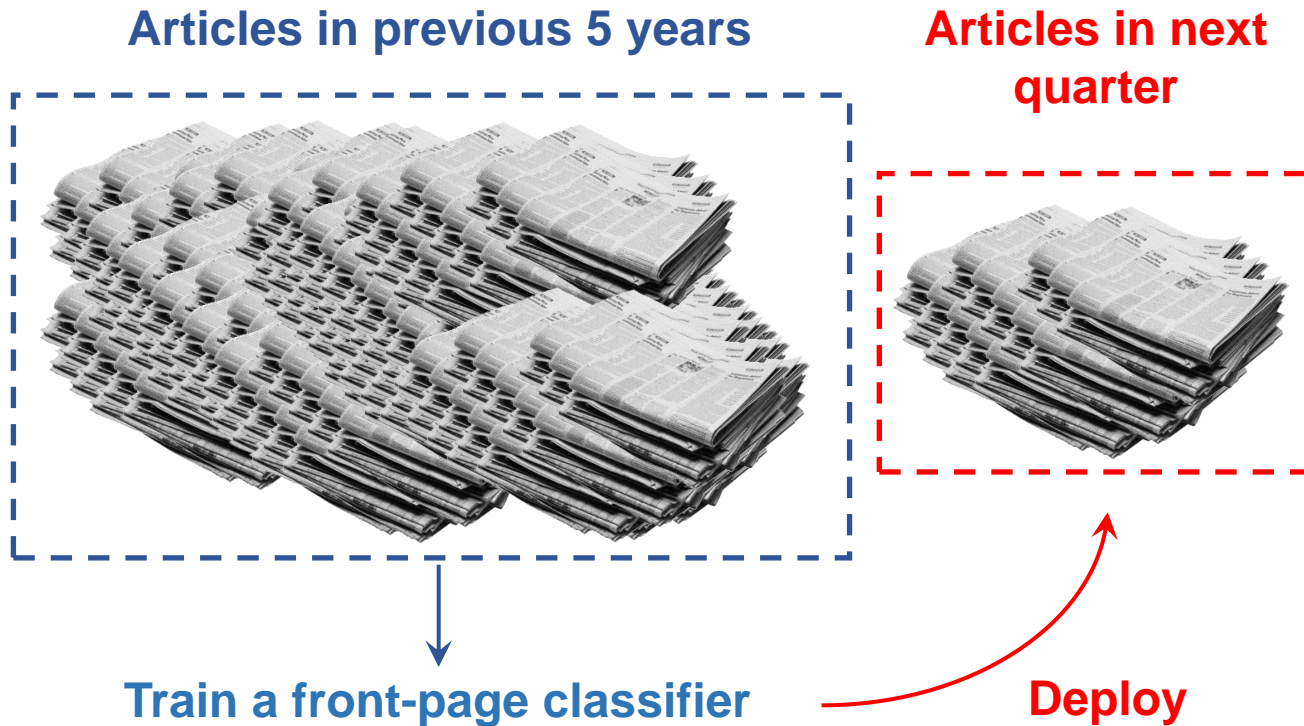
- Automate content analysis of propaganda;
- Delineate boundaries between objective and subjective components.

1. PCI-China

PCI-China

- Input: *People's Daily* full text, 1946-present;
- Output: quarterly index of major policy changes.

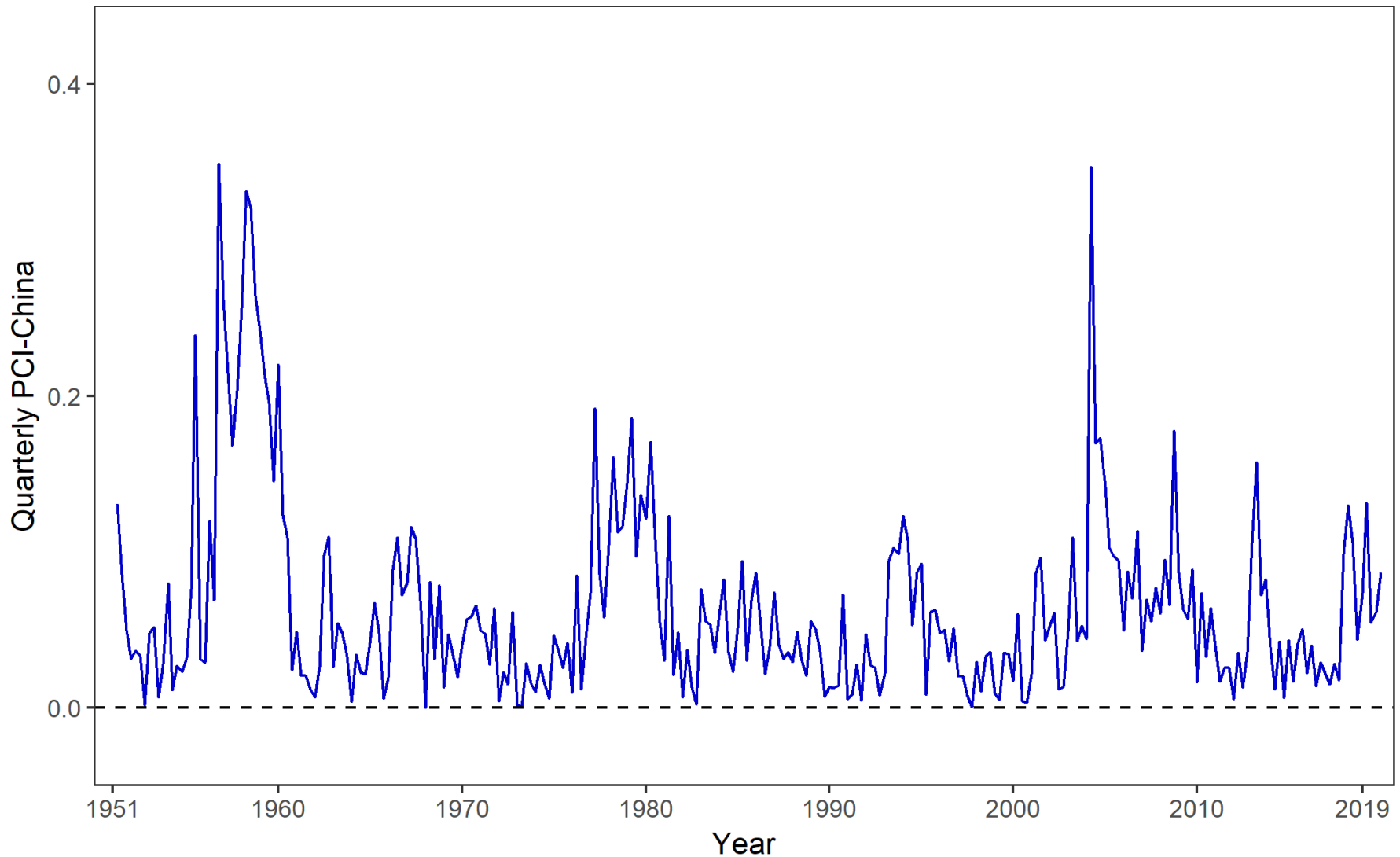
PCI-China: algorithm



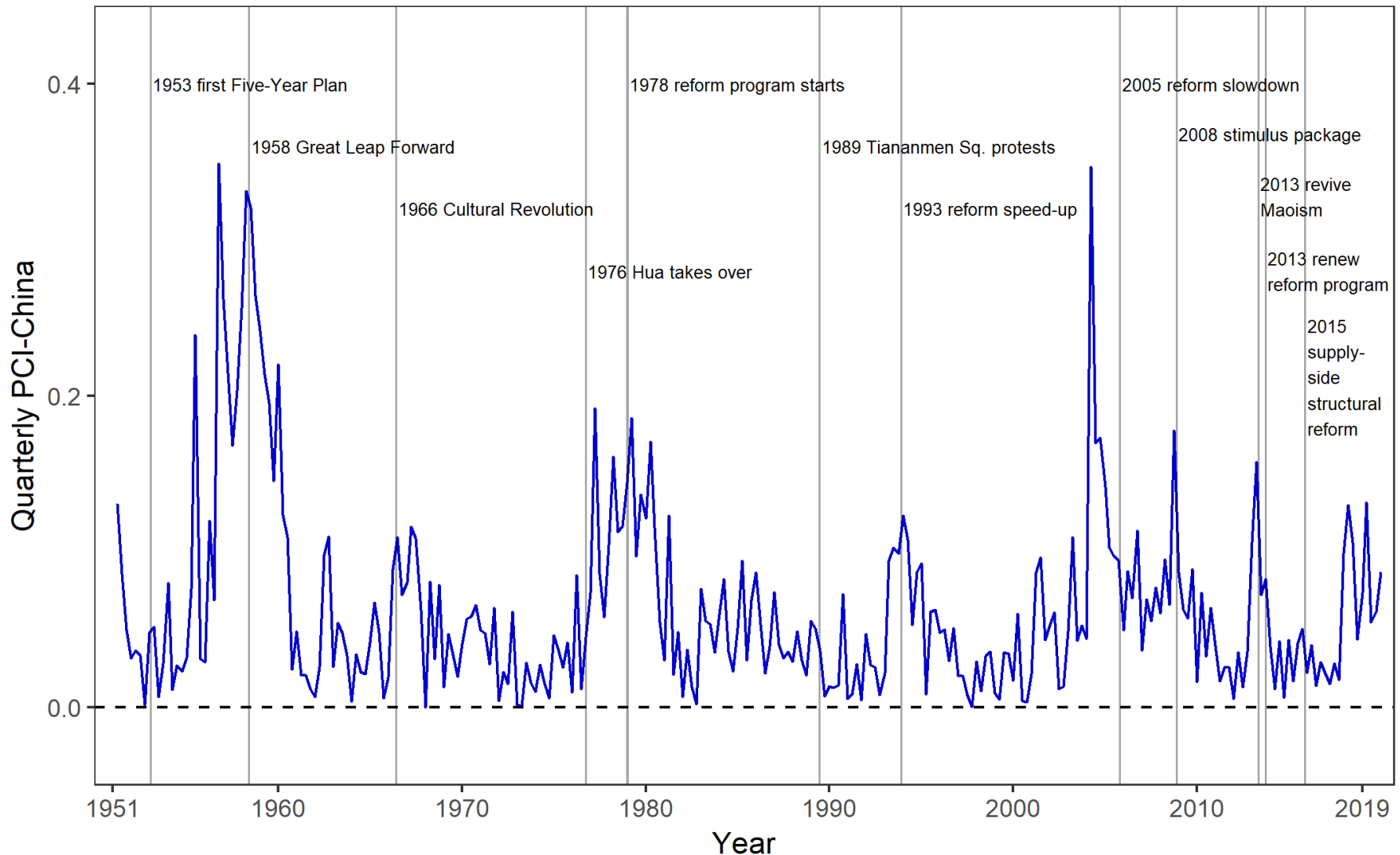
PCI-China: difference in performance

PCI-China: result

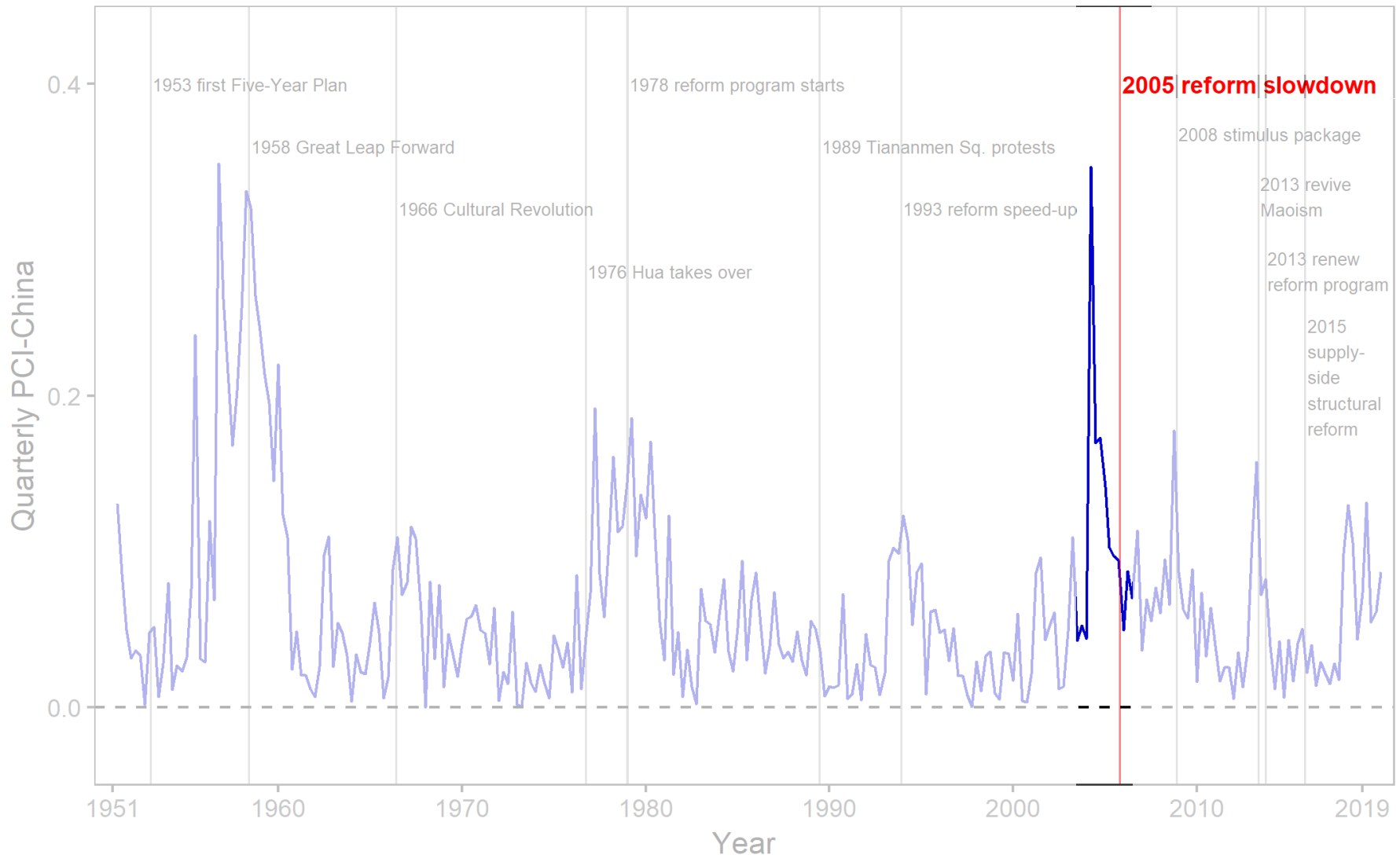
(1951 Q1 to 2019 Q4)



PCI-China predicts major changes (1951 Q1 to 2019 Q4)



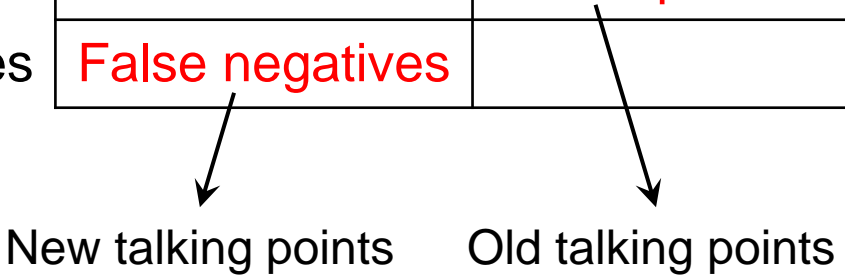
PCI-China predicts major changes (1951 Q1 to 2019 Q4)



Machine's mistakes are meaningful

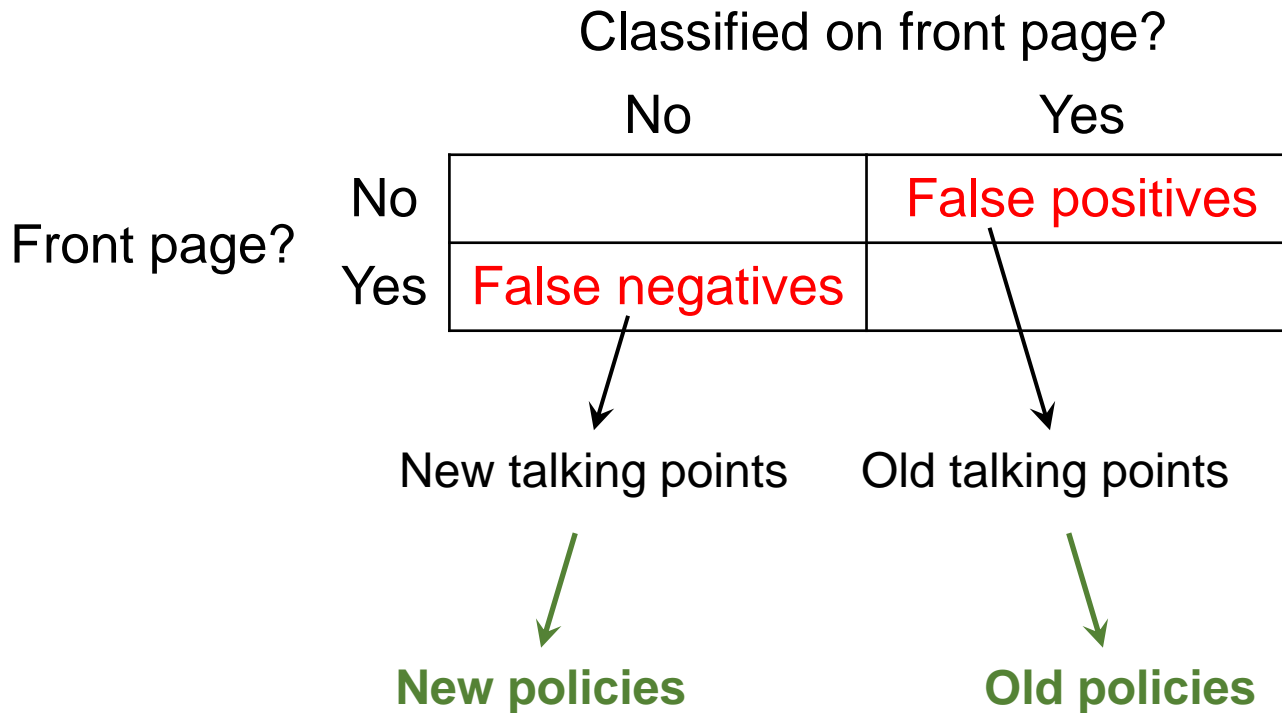
		Classified on front page?	
		No	Yes
Front page?	No		False positives
	Yes	False negatives	

New talking points Old talking points



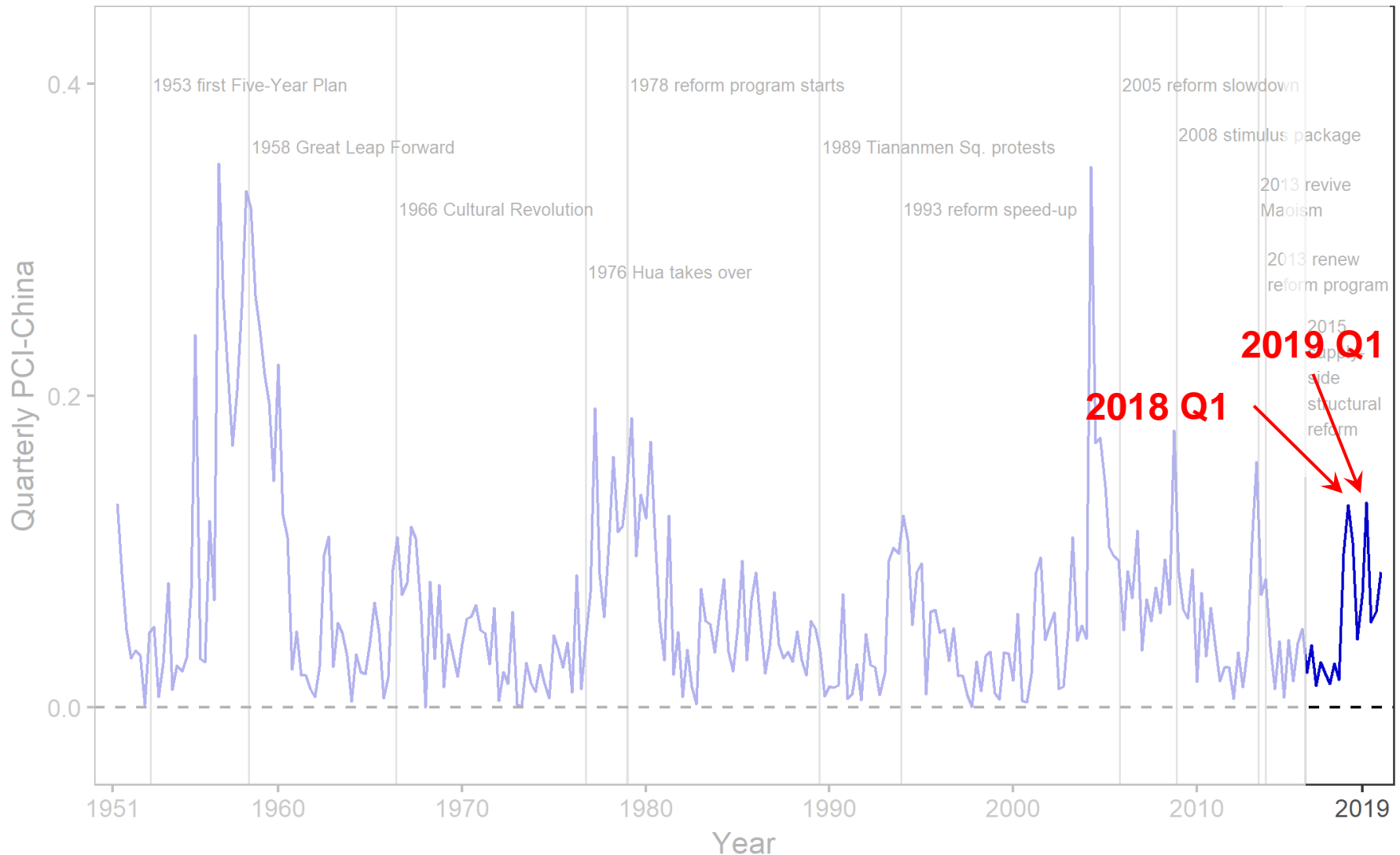
From propaganda to policy

Contains
judgment



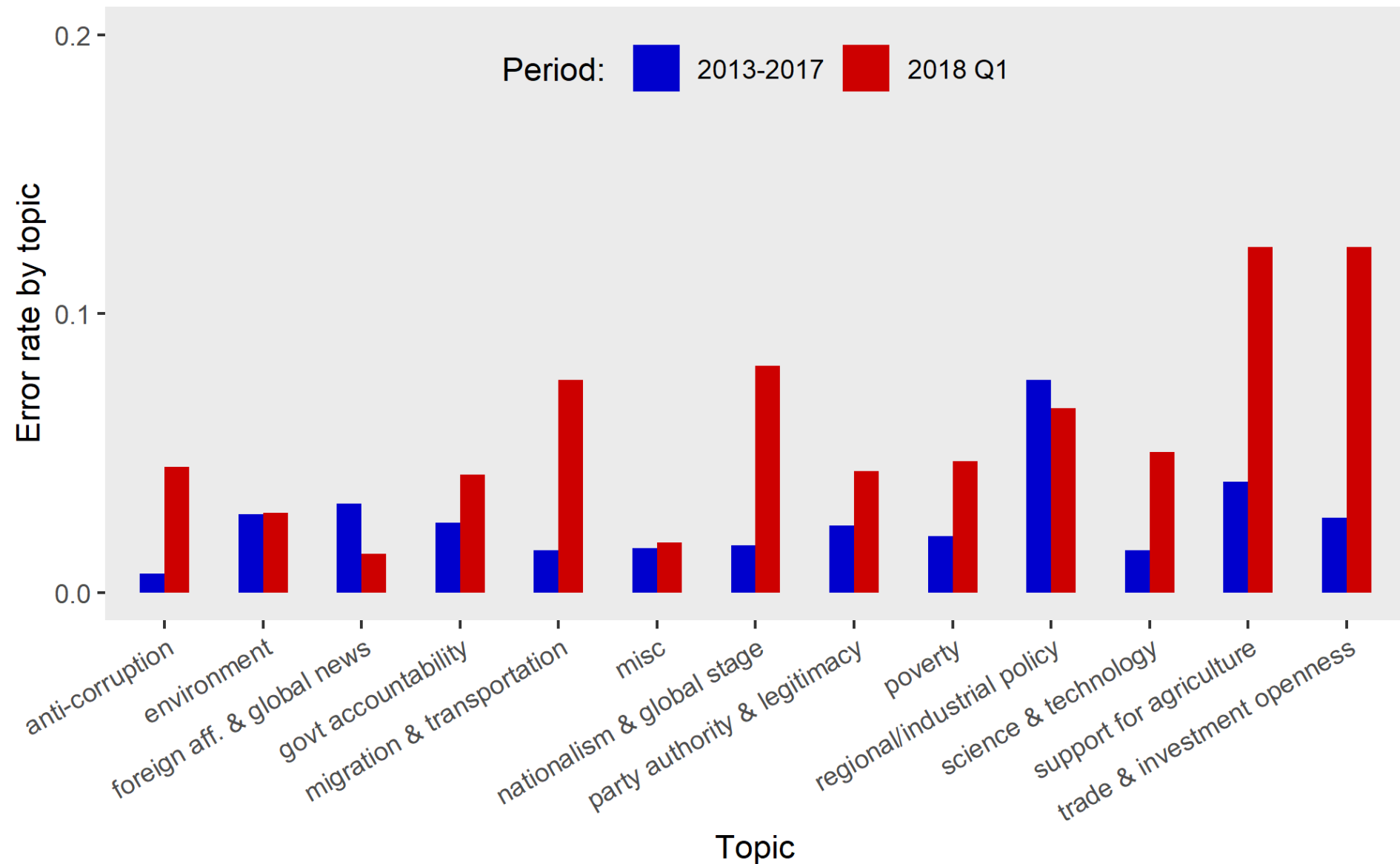
PCI-China: what's the latest?

(1951 Q1 to 2019 Q4)



E.g., 2018 Q1 spike

Contains
judgment



US-China trade implications



Contains
judgment

- Two spikes in 2018 Q1 and 2019 Q1:
 - Internal: strengthening party authority;
 - External: nationalism and global leadership.
- Our prediction since 2019 Q1: curb your enthusiasm.
- 2019 Q4: still no signs of serious changes.

Dr. Watson would say

Contains
judgment

Hard-line

propaganda content

~~*indicates*~~
→

Pro-market

policy intentions

What PCI did for Dr. Watson

- Automate the detection of “unusual” content;
- Delineate boundaries between the “unusual” and how Dr. Watson interprets it.

Other closed regimes?

- PCI-NK;
- PCI-Iran;
- PCI-Cuba;
- PCI-Venezuela;
- PCI-Russia (and PCI-USSR);...

Can't wait a quarter?

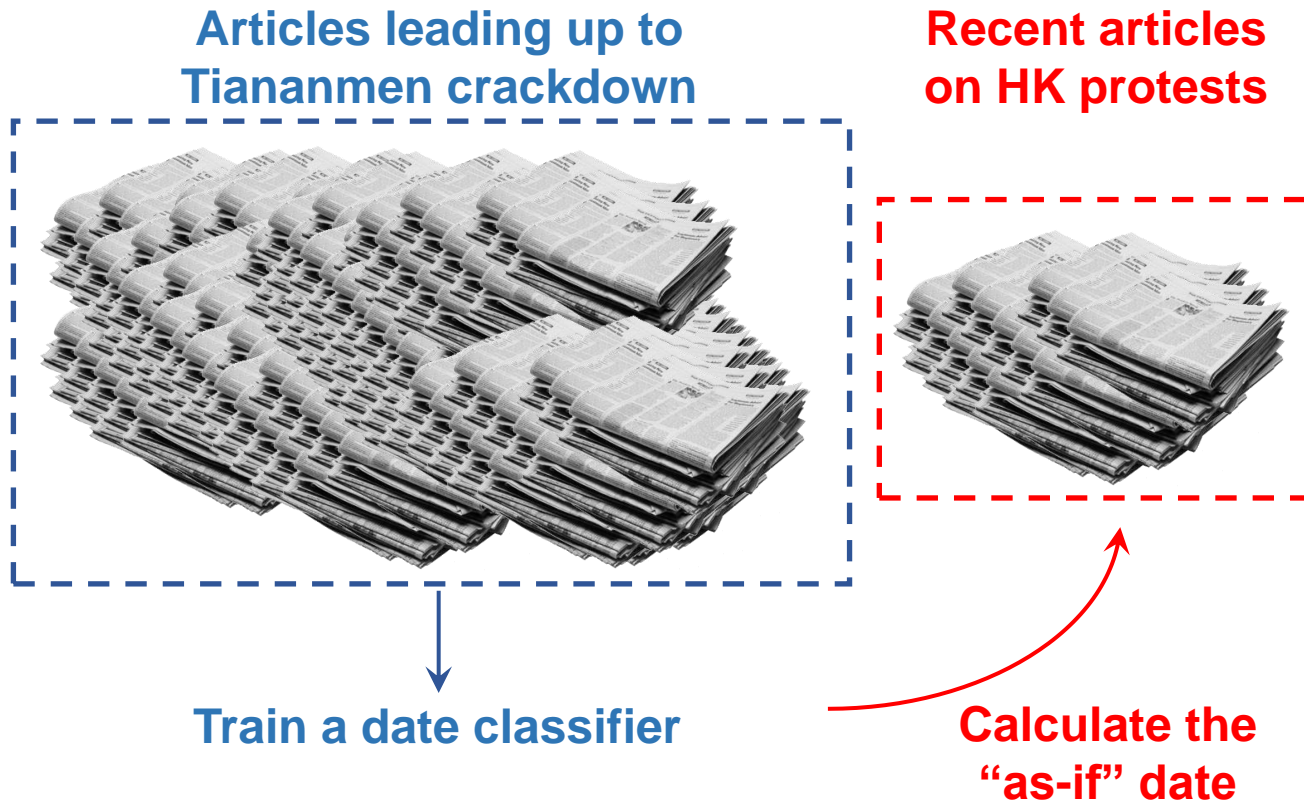
E.g., will the Hong Kong protests be met with a Tiananmen-like crackdown? If so, when??

2. PCI-Crackdown

PCI-Crackdown

- Input: *People's Daily* articles on Tiananmen and Hong Kong protests;
- Output: daily index of crackdown possibility.

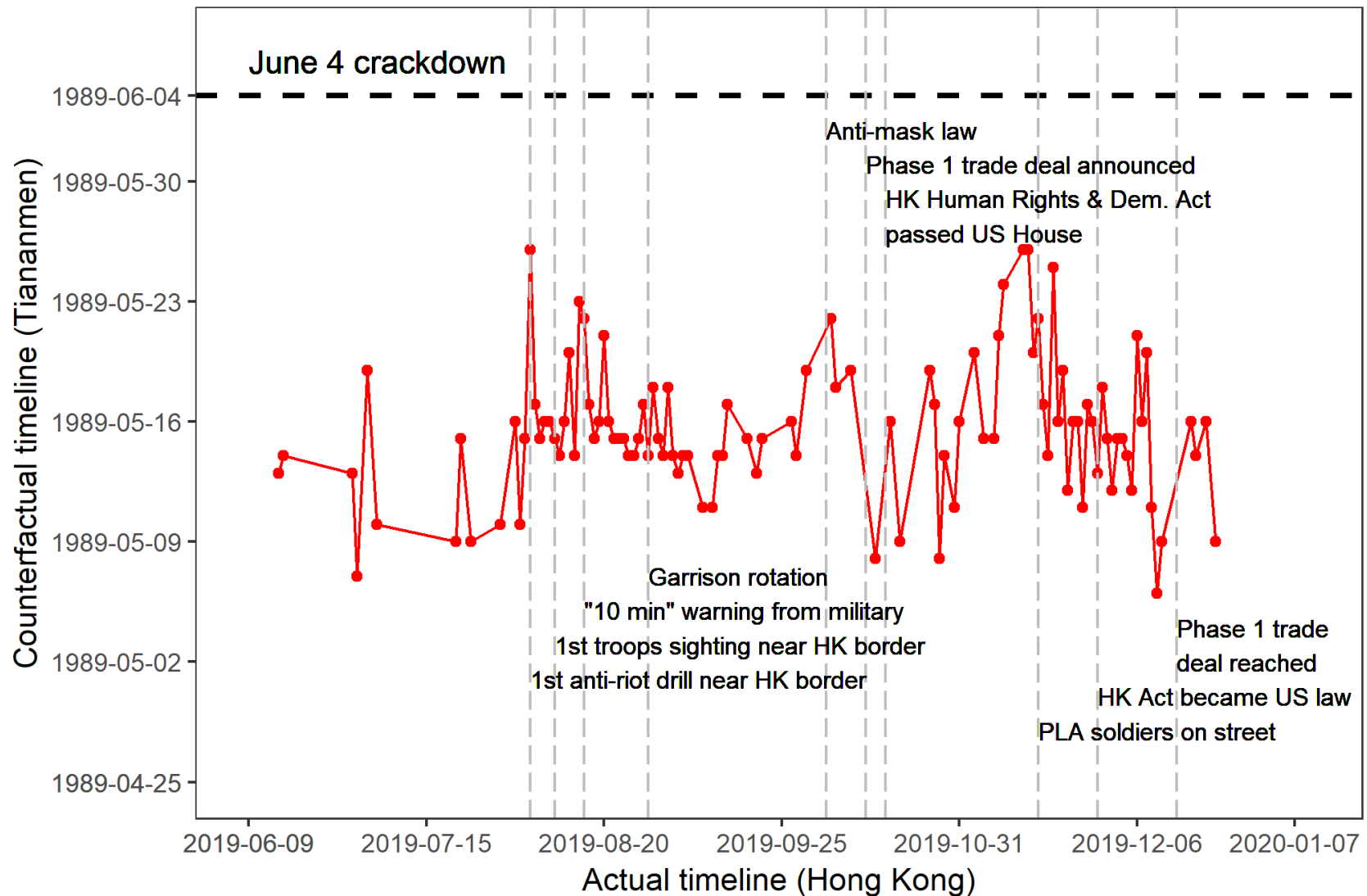
PCI-Crackdown: algorithm



PCI-Crackdown: "as-if" date for the actual date

PCI-Crackdown monitors HK protests

(Jun 9, 2019 to Jan 7, 2020)



Dr. Watson would say

Contains
judgment

Fluctuations in

propaganda content

indicates
→

Fluctuations in

policy intentions

Where's the judgment call?

A green starburst graphic with multiple points, containing the text "Contains judgment".

Contains
judgment

- There is a well-formed precedent;
- The same “playbook” is being followed now.

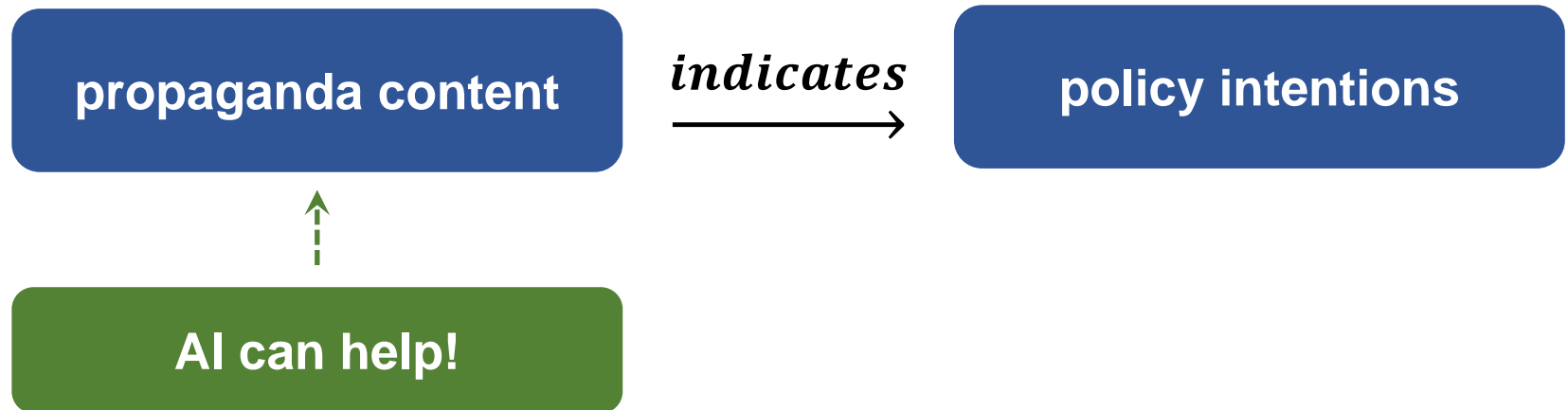
Other timeline mappings?

- Wuhan coronavirus (vis-a-vis SARS)?
- China's Taiwan policy?
- NK missile tests?
- Other rare events?



Resources

Core idea



How can PCI be useful to you?

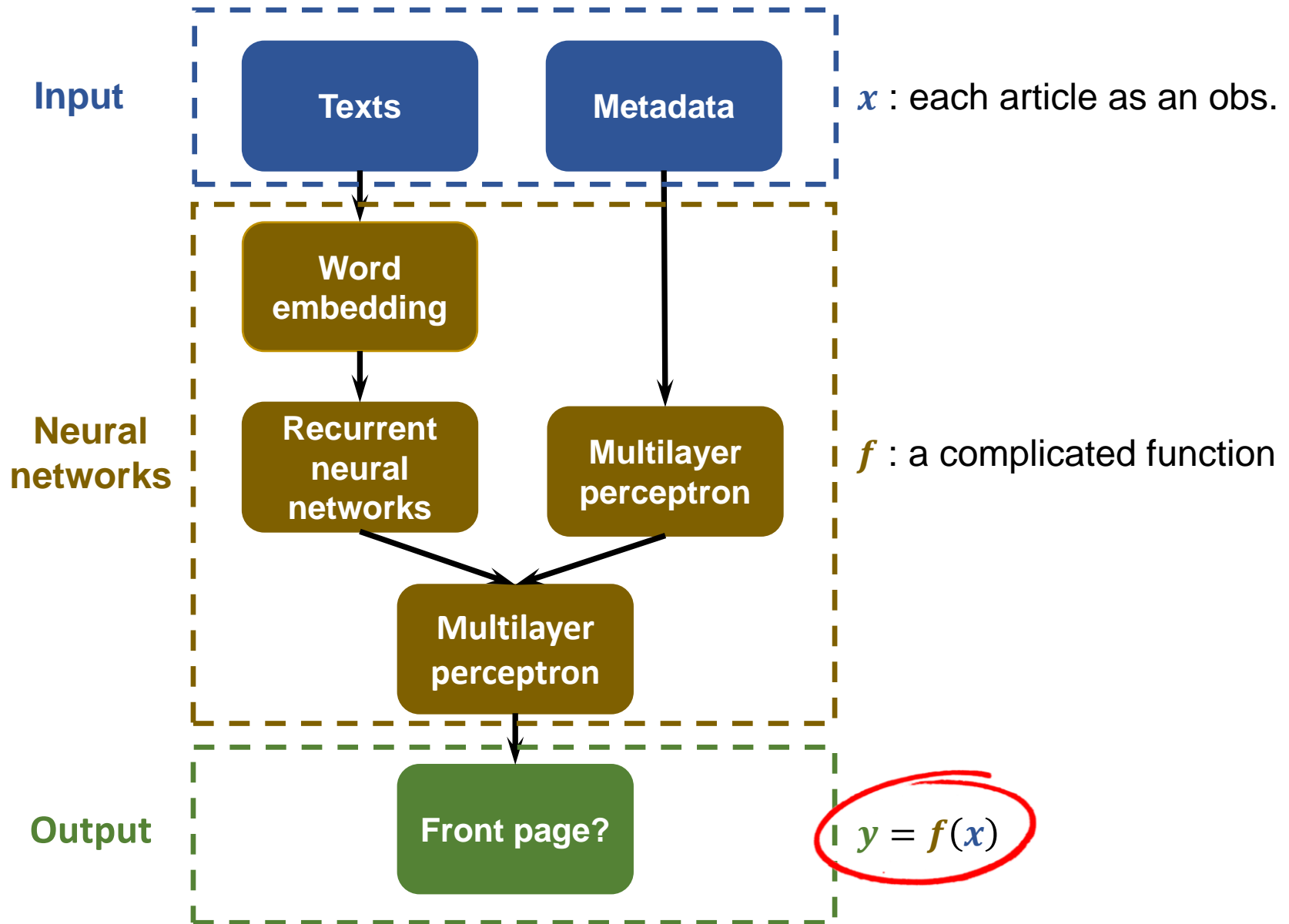
- First step toward policymaking is to better understand the problem.
- PCI's mission: crack a window to otherwise closed systems with new techniques.
- You should start peeking inside — for free!

Thank you!

- Website: policychangeindex.org
- Newsletter: mercatus.org/PCInewsletter
- Code: github.com/PSLmodels/PCI-China
github.com/PSLmodels/PCI-Crackdown
- Developers:
 - Julian Chan (Bates White), julian.chan@policychangeindex.org
 - Weifeng Zhong (Mercatus), wzhong@mercatus.gmu.edu

Appendix

PCI-China: model



PCI-Crackdown: model

