How Should We Think About Nuclear Crises?

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University of Denver

STRATCOM Academic Alliance
April 3, 2019

Nuclear crises are in the news…

Politics

Trump threatens ‘fire and fury’ in response to North Korean threats

How should we think about them?

Why Trump's Threat of 'Fire and Fury' Against North Korea Is So Dangerous

Trump's empty threats are not only dangerous; they serve to undermine allied commitments and the credibility of U.S. threats.

By Vipin Narang and Ankit Panda
August 11, 2017

Trump's Threat of War With North Korea May Sound Scarier Than It Is

查看简体中文版

The Interpreter
By MAX FISHER AUG. 9, 2017

How should we think about them?

- What is the risk of nuclear use?
- Is the nuclear or conventional military balance more important in determining outcomes?
- Is nuclear superiority valuable?
- How feasible is communication – or "signaling" – within nuclear crises?
- Ultimately how scared should we be?

Different scholars and analysts have different answers to these questions

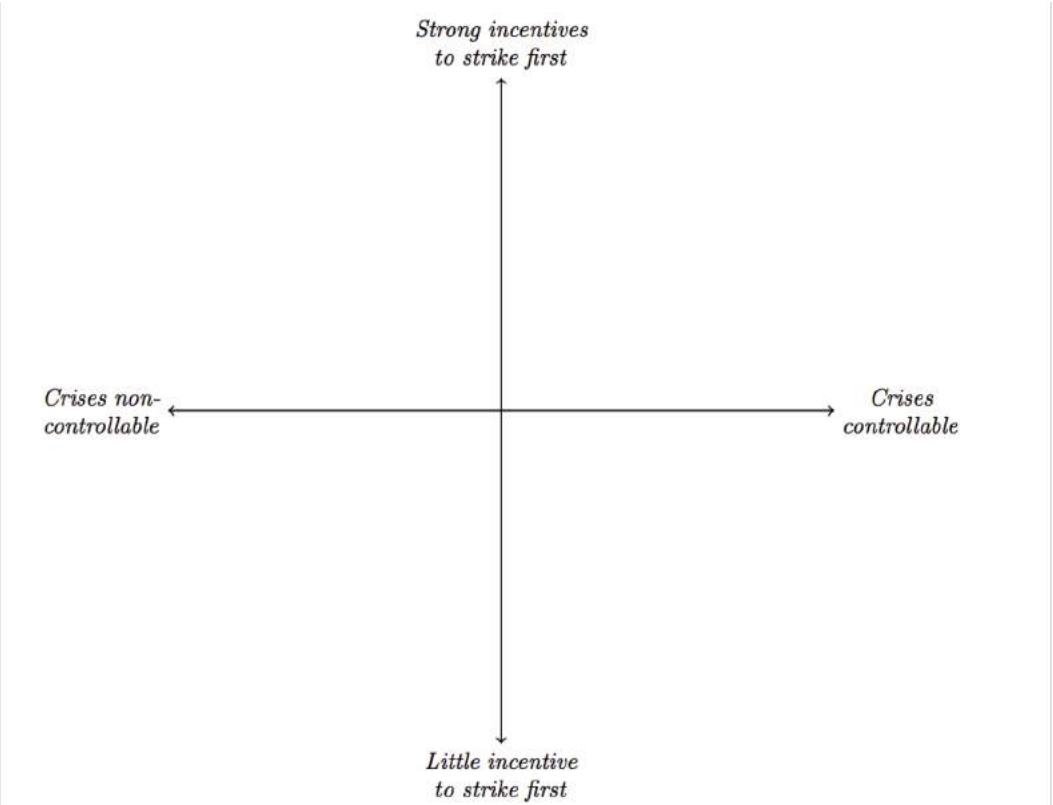
Categorizing nuclear crises

- Nuclear crises vary on (at least) two dimensions:
  1. Incentives for nuclear first use
     - Significant nuclear asymmetry
     - Asymmetric escalation posture

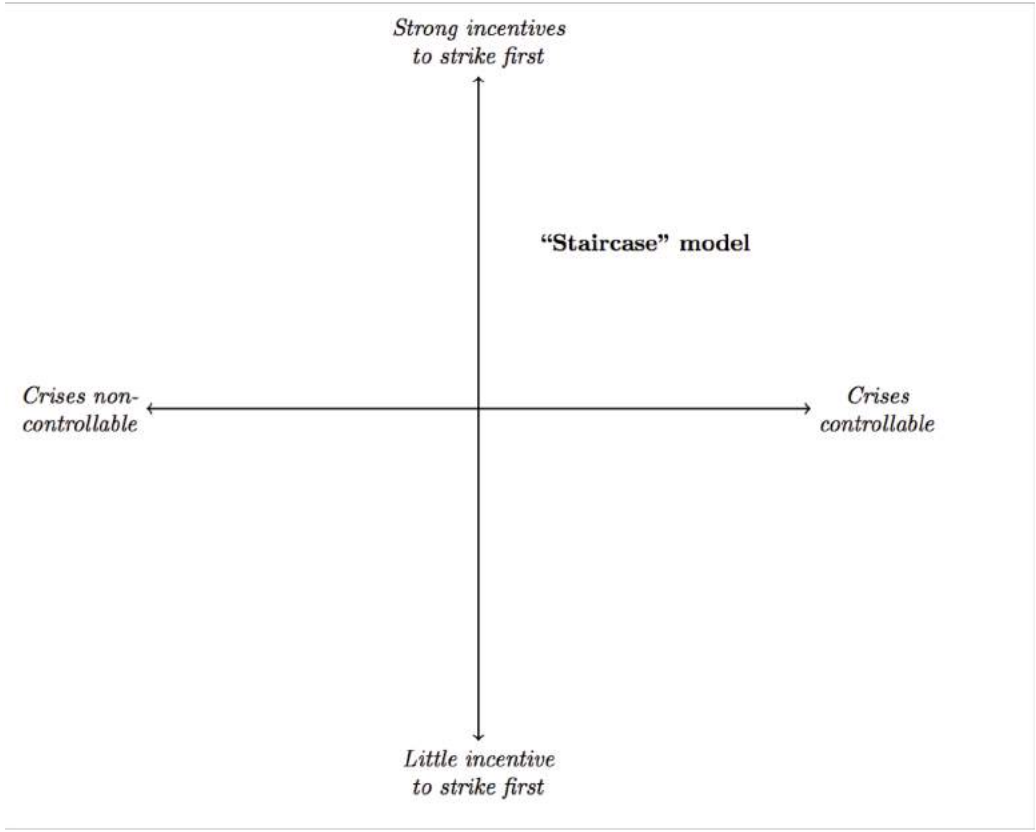
Categorizing nuclear crises

- Nuclear crises vary on (at least) two dimensions:
  2. Degree to which escalation controlled by participants
     - Robust command and control
     - Clear and mutually understood red lines
     - Interaction of nuclear and conventional forces
     - Avenues for crisis communication

Categorizing nuclear crises



Categorizing nuclear crises



Model 1: The Staircase Model

- Escalation is carefully calibrated but risk of nuclear use is significant (and likely to be deliberately chosen)
- Nuclear weapons will loom more heavily in crises the closer participants get to the nuclear threshold
- Nuclear crises will be highly variable
  - Conventional balance may determine outcomes that do not escalate to a high level
  - Nuclear balance may matter in crises that do escalate (nuclear superiority may therefore be of value)
- Signaling through escalation is possible

Kargil War: The Staircase Model

Kargil War: The Staircase Model

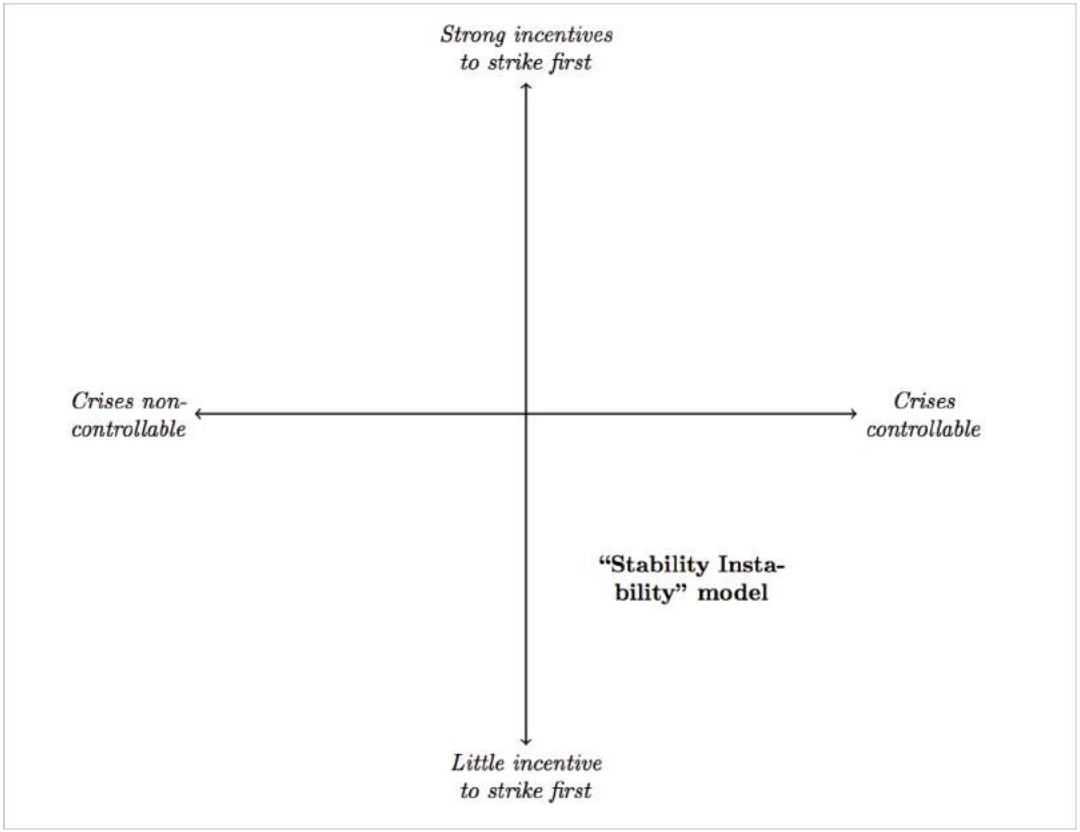
1. First strike advantages:
   - Pakistani asymmetric escalation posture
   - Both sides understand Pakistan's incentive
2. Reasonable controllability:
   - Unreliable command and control on Pakistani side, more reliable on Indian side
   - Reasonably clear red lines
   - No interaction of conventional and nuclear forces
   - Plentiful avenues for crisis communication

Kargil War: The Staircase Model

Explains crisis dynamics:

- Makes sense of why conventional balance best explains the outcome
- Explains the ability of both sides to signal limited intentions
- Shows why both sides believed that the crisis was unlikely to cross the nuclear threshold *and* that Pakistani first use was credible

Categorizing nuclear crises



Model 2: The Stability-Instability Model

- Crises are relatively controllable, incentives for first use are low
- Risk of nuclear use low
- Nuclear balance/superiority should not affect crisis outcomes
- Conventional balance of power more important
- Signaling is possible but only with conventional forces

Doklam Crisis: The Stability-Instability Model

OPINION / DOKLAM

India vs China: Clash of the titans

A border dispute high in the Himalayas puts the decades long "cold peace" between India and China under severe strain.

by **Richard Javad Heydarian**
21 Aug 2017

Doklam Crisis: The Stability-Instability Model

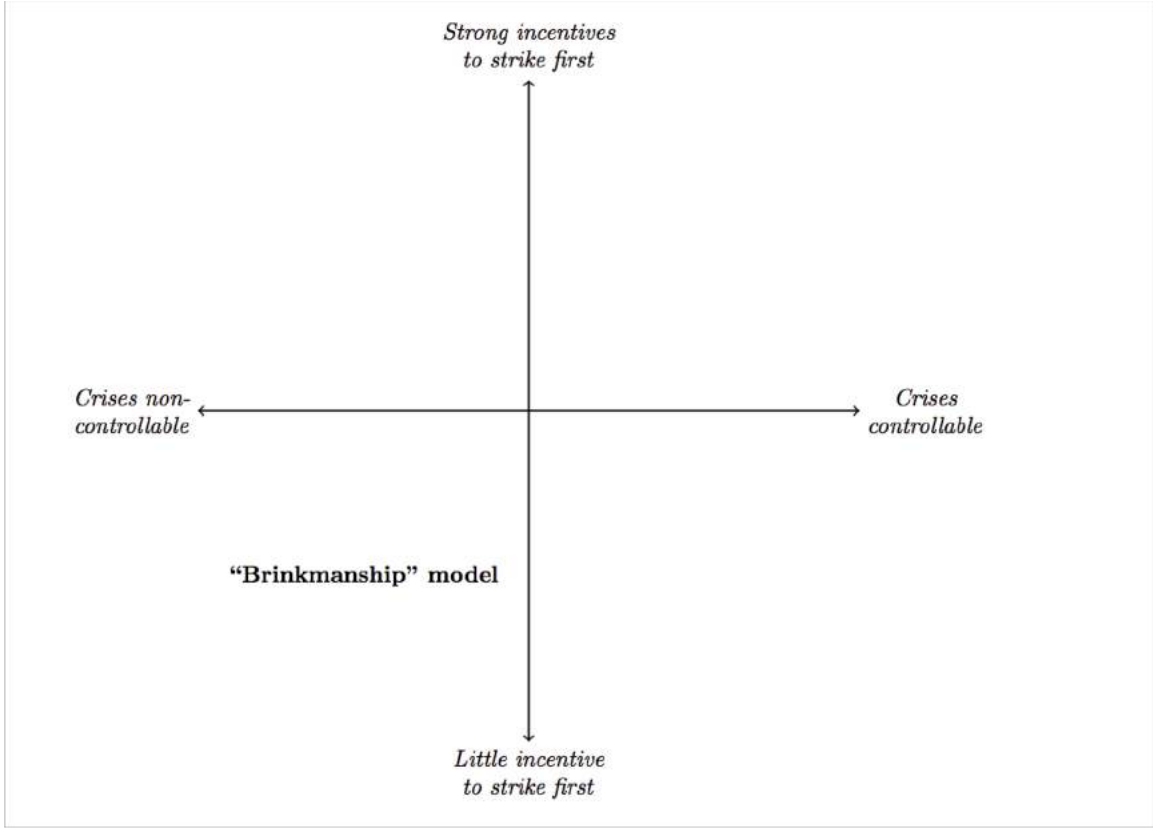
1. Low incentive for nuclear first use:
   - Relatively small nuclear arsenals
   - Geographically large territories and dispersed populations
   - Nuclear posture designed for assured retaliation
2. Reasonable controllability:
   - Nuclear weapons not located close to the conflict zone
   - Nuclear postures make accidents unlikely
   - No first-use policies make red lines clear
   - High levels of communication throughout the crisis

Doklam Crisis: The Stability-Instability Model

Explains crisis dynamics:

- Despite high levels of military escalation, little concern about nuclear use
- Signaling through conventional troop deployments, not with nuclear threats
- Outcome appears consistent with India's conventional advantage in the Himalayan region
- Explains why China was willing to provoke a crisis with a nuclear-armed state over relatively low stakes – the crisis was "safe" from the risk of nuclear escalation

Categorizing nuclear crises



Model 3: The Brinkmanship Model

- Few incentives for first use but escalation can spiral out of control
- Escalation to the nuclear level is always possible; nuclear weapons loom more heavily in crises the closer to the nuclear threshold participants get
- Uncontrolled escalation means outcomes determined more by balance of nerves than conventional or nuclear forces
- Signaling is possible through actions that raise the risk of uncontrolled escalation

Cuban Missile Crisis: The Brinkmanship Model

"All the News That's Fit to Print"

The New York Times.

LATE CITY EDITION

VOL. CXII...No. 38,258. NEW YORK, TUESDAY, OCTOBER 23, 1962. FIVE CENTS

U.S. IMPOSES ARMS BLOCKADE ON CUBA
ON FINDING OFFENSIVE-MISSILE SITES;
KENNEDY READY FOR SOVIET SHOWDOWN

S. JUDGES GIVEN
OWER TO REQUIRE
OTE FOR NEGROES

Chinese Open New Front; Use Tanks Against Indians

Nehru Warns of Peril to Independence
—Reds Attack Near Burmese Border and Press Two Other Drives

SHIPS MUST STOP

Other Action Planned If Big Rockets Are Not Dismantled

By ANTHONY LEWIS

PRESIDENT GRAV

Asserts Russians Lie and Put Hemisphere in Great Danger

By ANTHONY LEWIS

ANNOUNCES HIS ACTION: President Kennedy speaking to the nation last night on radio and television. He told of moves to keep offensive equipment away from Cuba.

Cuban Missile Crisis: The Brinkmanship Model

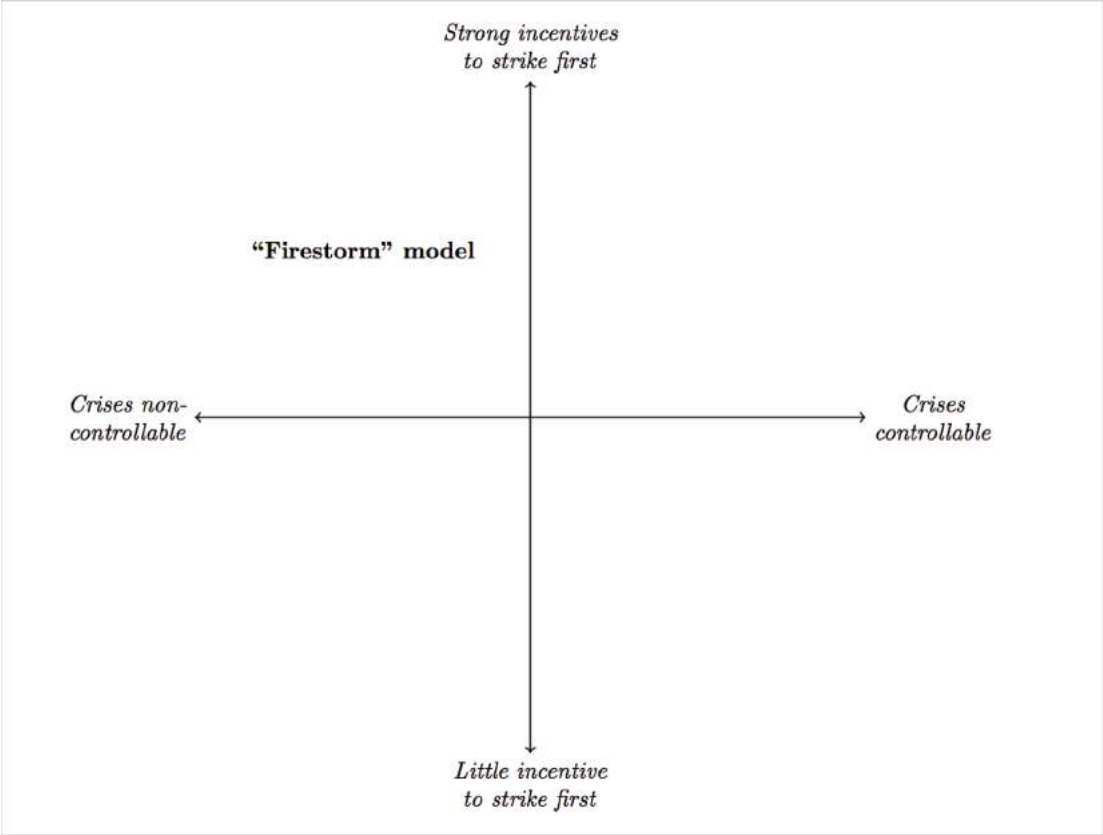
1. No first strike advantages:
   - US superiority but splendid first strike impossible; US would not emerge unscathed from nuclear war
   - Both sides have arsenals set up for massive retaliation
2. Lack of controllability:
   - Unreliable command and control
   - Unclear red lines
   - Interaction of conventional and nuclear forces
   - Limited avenues for crisis communication

Cuban Missile Crisis: The Brinkmanship Model

Explains crisis dynamics:

- Explains why most historians think the crisis depended on balance of resolve rather than conventional or nuclear balance
- Shows why the greatest threat was inadvertent rather than deliberate escalation
- Shows why luck was important to a peaceful outcome
- Explains why signaling generally took the form of actions not directly connected to military outcomes; instead signals of risk tolerance

Model 4: Firestorm Model



Model 4: The Firestorm Model

- Nuclear first use may be rational and crises of this sort hard to control
- Nuclear escalation may happen quickly and with little prior conventional escalation
- Conflict likely to end with nuclear use, so nuclear balance (and superiority) may matter a lot
- Signaling very difficult within a crisis

US-DPRK: The Firestorm Model?

1. First strike advantages for both sides

Outlook • Perspective

Why Kim Jong Un wouldn't be irrational to use a nuclear bomb first

The nuclear strategy of weaker powers

WAR ON ROCKS TEXAS

THE GROWING DANGER OF A U.S. NUCLEAR FIRST STRIKE ON NORTH KOREA

DAVID BARNO AND NORA BENSAHEL
OCTOBER 10, 2017

US-DPRK: The Firestorm Model?

1. First strike advantages for both sides:
   - For North Korea:
     - Nuclear first use consistent with nuclear strategies of conventionally weak powers: Pakistan, NATO Cold War etc.
     - How else to deter the US?
     - Use nuclear weapons against invading military forces while keeping long-range missiles to deter nuclear retaliation
     - Any US counterforce efforts will trigger "use it or lose it" dilemma

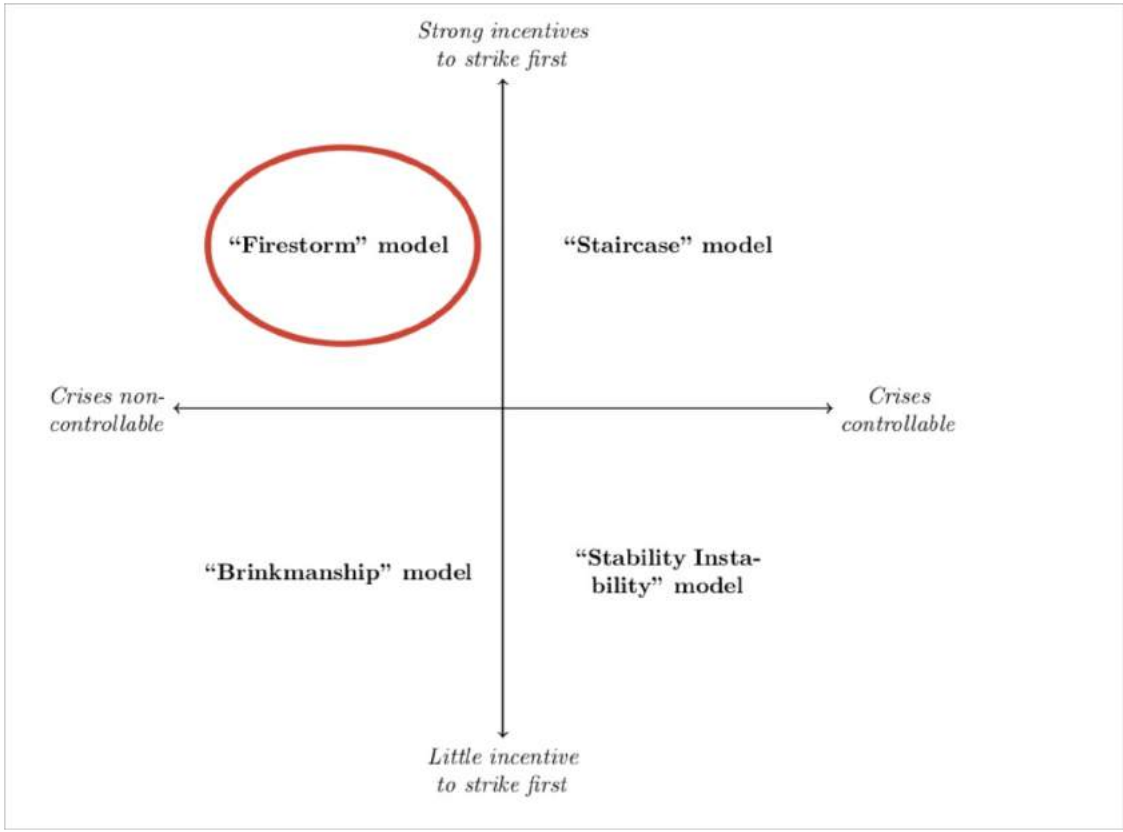
US-DPRK: The Firestorm Model?

1. First strike advantages for both sides:
   - For the US:
     - Nuclear first use might be the only way to reliably engage in counterforce and remove ability to retaliate against allies or US
     - Conventional first strike requires observable buildup that could trigger DPRK preemption
     - Would want to knock out DPRK command and control in as short a time frame as possible
     - Given DPRK capacity to retaliate, first blow has to be decisive

US-DPRK: The Firestorm Model?

2. Crisis would be highly uncontrollable:
   - Robust command and control on the US side, North Korean command and control hard to assess
   - Red lines for nuclear use very unclear
   - Conventional and nuclear forces would interact
   - Limited avenues for crisis communication

US-DPRK: The Firestorm Model?



US-DPRK: The Firestorm Model?

Implications:

- Any war with North Korea would be a nuclear war
- Signaling intentions during a crisis would be difficult
  - Particularly hard to signal limited US intentions
- Crisis may be sudden, volatile, and escalation may occur quickly
- Drawing inferences from the CMC or Kargil War underestimates the danger of a crisis with North Korea

Conclusions

- There is not a single logic of nuclear crises: different crises have different underlying dynamics
- This helps make sense of contradictory findings and views of nuclear crises among analysts
- Drawing conclusions without taking this variety into account will generate misleading inferences

Thank You

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