

# MUTUALLY ASSURED PWNAGE

(Yes, this slide is meant to be ironic)





"We believe we're seeing something a little like a cyber Cold War."

-- Dmitri Alperovitch,  
VP Threat Research, McAfee

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# How Cyberwar is like the Cold War

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It's not a war.






A photograph of a war-torn street. In the foreground, several soldiers in camouflage uniforms and helmets are running towards the camera. They are carrying rifles. In the background, there is a concrete wall and some greenery. The ground is littered with debris, including a helmet and a rifle. The overall scene depicts a conflict zone.

# War?

"... a hostile interaction between two or more **States**, either in a technical or in a material sense. War in the technical sense is a formal status produced by a declaration of war. War in the material sense is generated by **actual use of armed force**, which must be **comprehensive** on the part of at least one party to the conflict."



A black and white photograph showing three large intercontinental ballistic missiles (ICBMs) mounted on mobile launchers. The missiles are angled upwards, pointing towards the sky. The launchers are complex mechanical structures with tracks. The background is a clear sky. The overall scene conveys a sense of military readiness and the scale of nuclear deterrence during the Cold War.

"a state of conflict between nations that does not involve direct military action but is pursued primarily through economic and political actions, propaganda, acts of espionage or proxy wars waged by surrogates"

## The Cold War?

# Cyber War?

"Rarely has something been so important and so talked about with less clarity and less apparent understanding than this phenomenon"

Michael Hayden  
(frm DIRNSA, frm DCI)







Not an act of war.



Everyone is spying on everyone else. ✓



1963





"All data is stolen at least twice."

2013

Sabotage.





2009





1982





Some people make a lot of money from it.





"In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by **the military-industrial complex**. The potential for the disastrous rise of misplaced power exists, and will persist..."

- Dwight D. Eisenhower, 17 Jan 1961





towards a cyber-  
military-industrial  
complex...?

"The United States is fighting a cyber-war today,  
and we are losing".

- John "Mike" McConnell

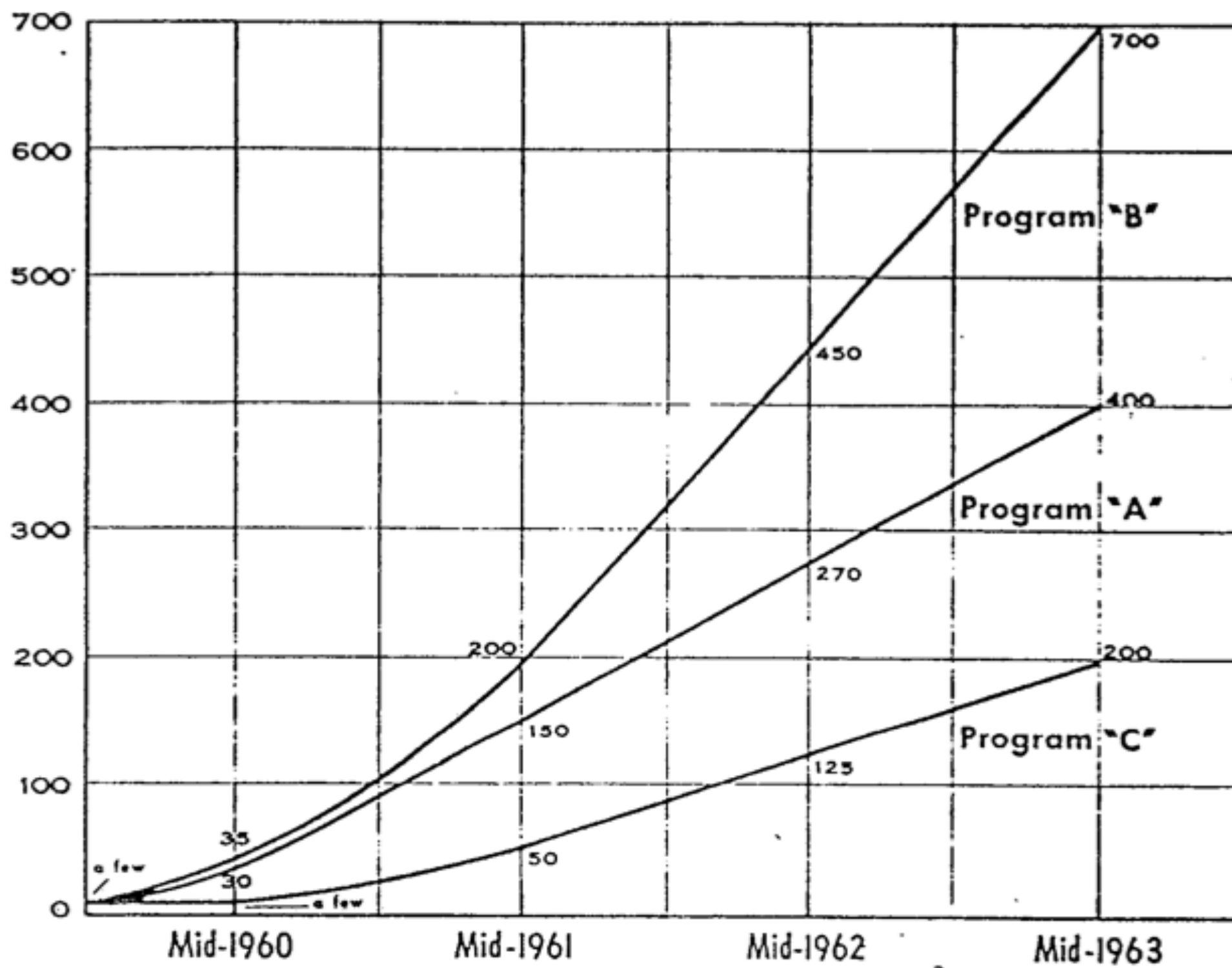


Little knowledge of actual enemy capacity.  
(And a lot of hype.)



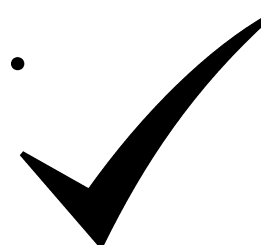


OPERATIONAL ICBM LAUNCHERS





Danger of escalation.

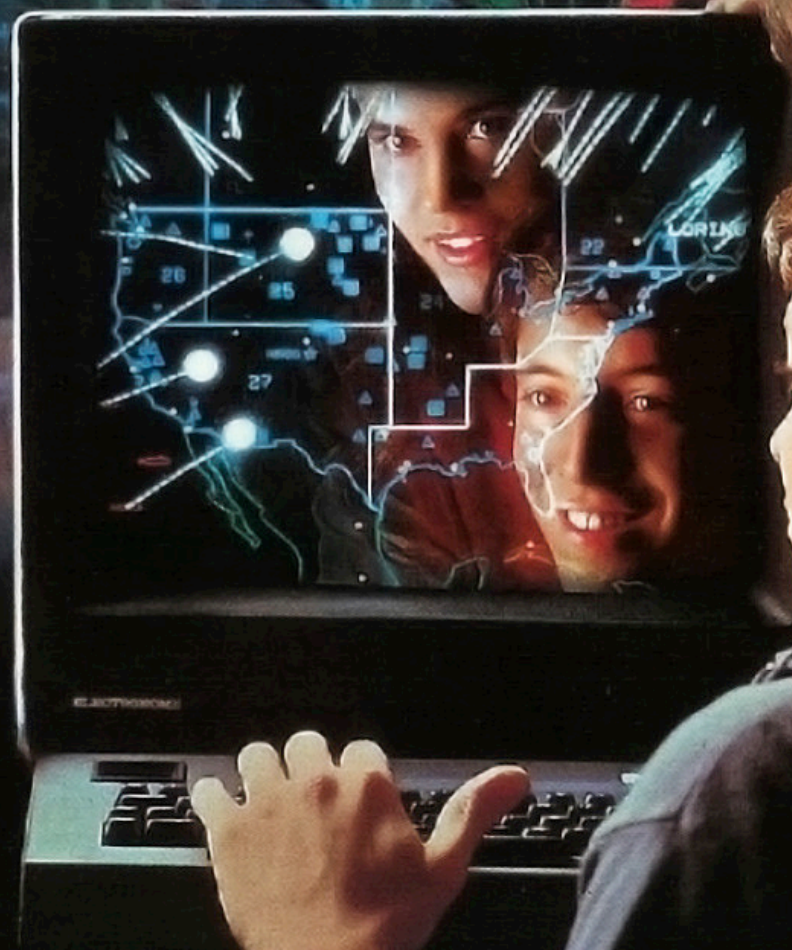




# WARGAMES

MISSILE WARNING

SUB-LAUNCH DETECTION





CHESS

POKER

FIGHTER COMBAT

GUERRILLA ENGAGEMENT

DESERT WARFARE

AIR-TO-GROUND ACTIONS


THEATERWIDE TACTICAL WARFARE

THEATERWIDE BIOTOXIC AND CHEMICAL WARFARE

GLOBAL THERMONUCLEAR WAR





A large, bright, orange and yellow nuclear explosion is centered in the upper half of the image. The explosion has a distinct, rounded, cloud-like shape. Below the explosion, the ground is visible, covered in a layer of dark, reddish-brown dust or debris that has been kicked up by the blast. The background is a deep, dark blue or black, suggesting a night sky. The overall scene is dramatic and powerful.

"The President reserves the right to respond using **all necessary means** to defend our Nation, our Allies, our partners, and our interests from hostile acts in cyberspace. Hostile acts may include **significant cyber attacks** directed against the U.S. economy, government or military. As directed by the President, response options may include using cyber and/or **kinetic capabilities** provided by DoD."

Confidence building measures are a good idea. ✓









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# How Cyberwar is not like the Cold War

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In the Cold War, people actually died.







We're not living in a bipolar world anymore.





(I won't even try to draw a map of today's alliances.)





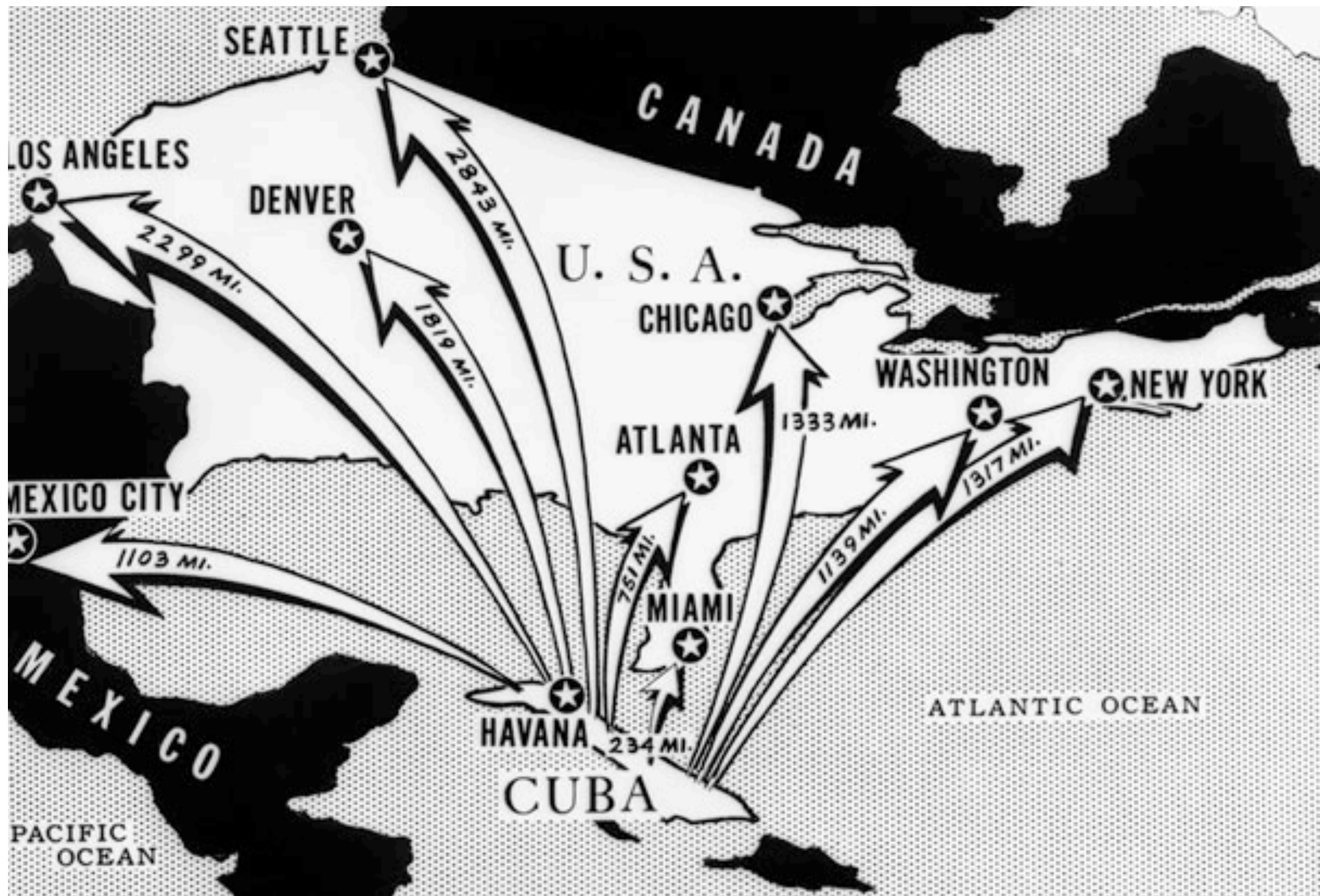
Non-state actors.







Deterrence won't work.







Arms control? Forget it.

# The good news:



There will (probably) be no cyberwar.

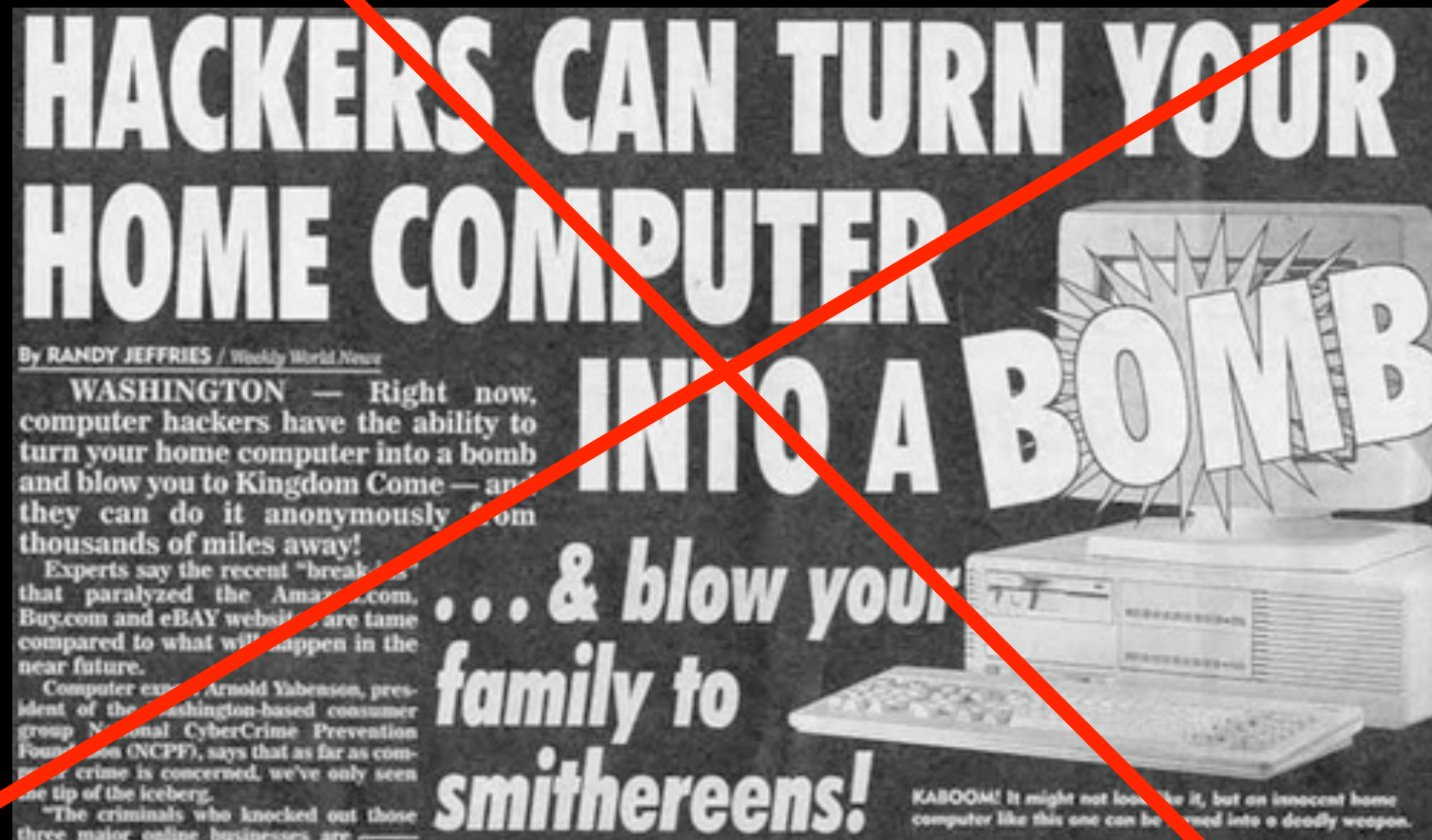


# The good news:



There will (probably) be no cyberwar.

The bad news:



No, I don't mean cyber terrorism.



The bad news:



There will be no war.

But in the struggle for peace  
not a single stone will be left standing.



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