

The History of Wargaming

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Disclaimer

The views expressed in this briefing are those of the speaker and do not necessarily represent those of the Air Force Research Laboratory or the United States Air Force.

My Bio

- ↪ Previous Civilian positions:
 - ↪ Professor of Wargaming, ACSC
 - ↪ Research Associate, SAAS
- ↪ Colonel USAFR (ret.) Assignments included:
 - ↪ Senior Reservist, AFRL, Info Directorate
 - ↪ Chief Wargaming, AF/XOOC (Checkmate)
- ↪ Co-author Gulf War Fact Book

If you are professionally interested in Wargaming you probably want to know

- ↪ Is it advantageous to wargame?
- ↪ If advantageous, what factors degrade utility?
- ↪ What can be done to increase the utility?

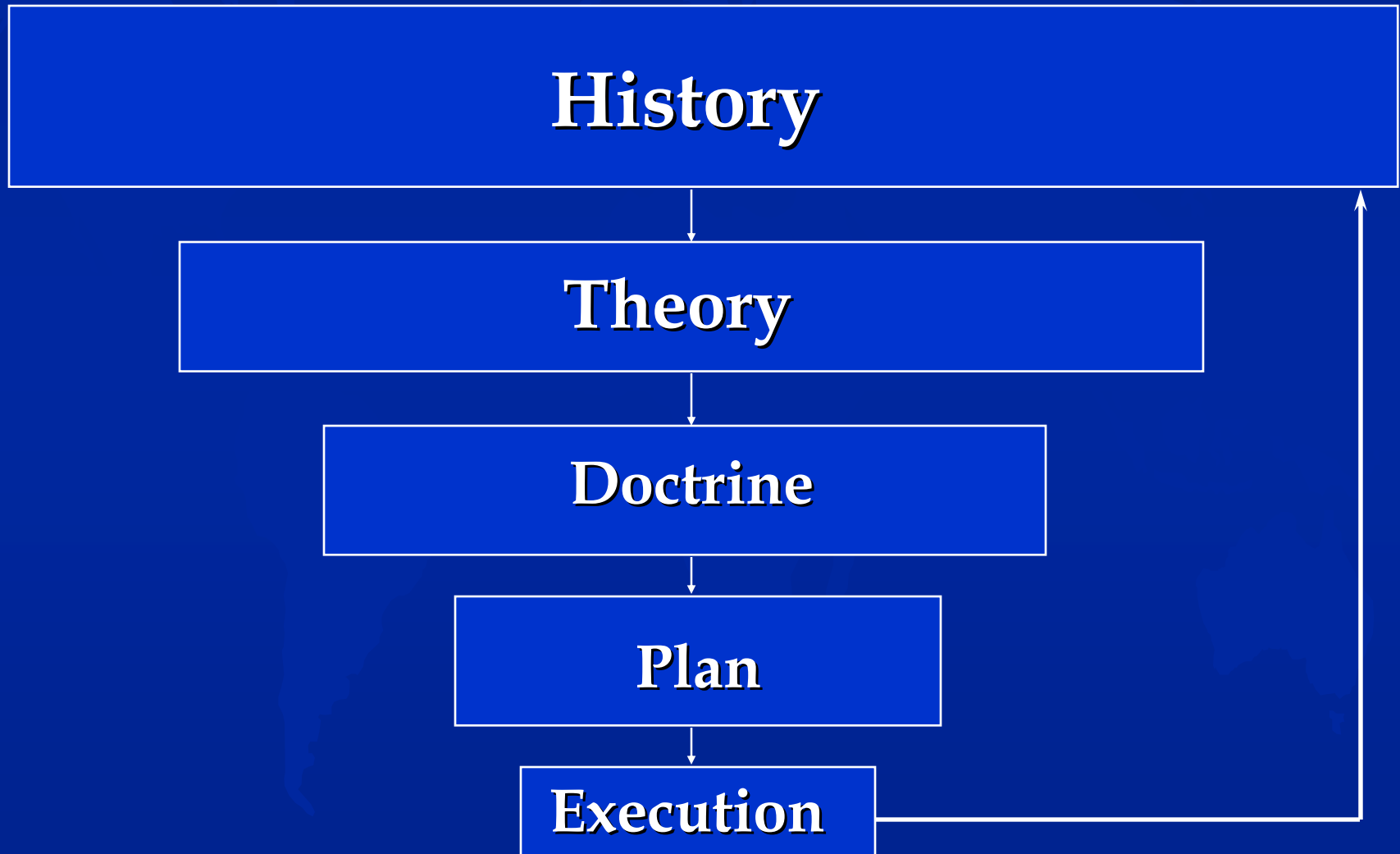
How Do We Answer These Questions?

↪ Set Up Experiments?

How Do We Answer These Questions?

- ↗ Set Up Experiments?
- ↗ Find Natural Experiments

Strategy Cycle

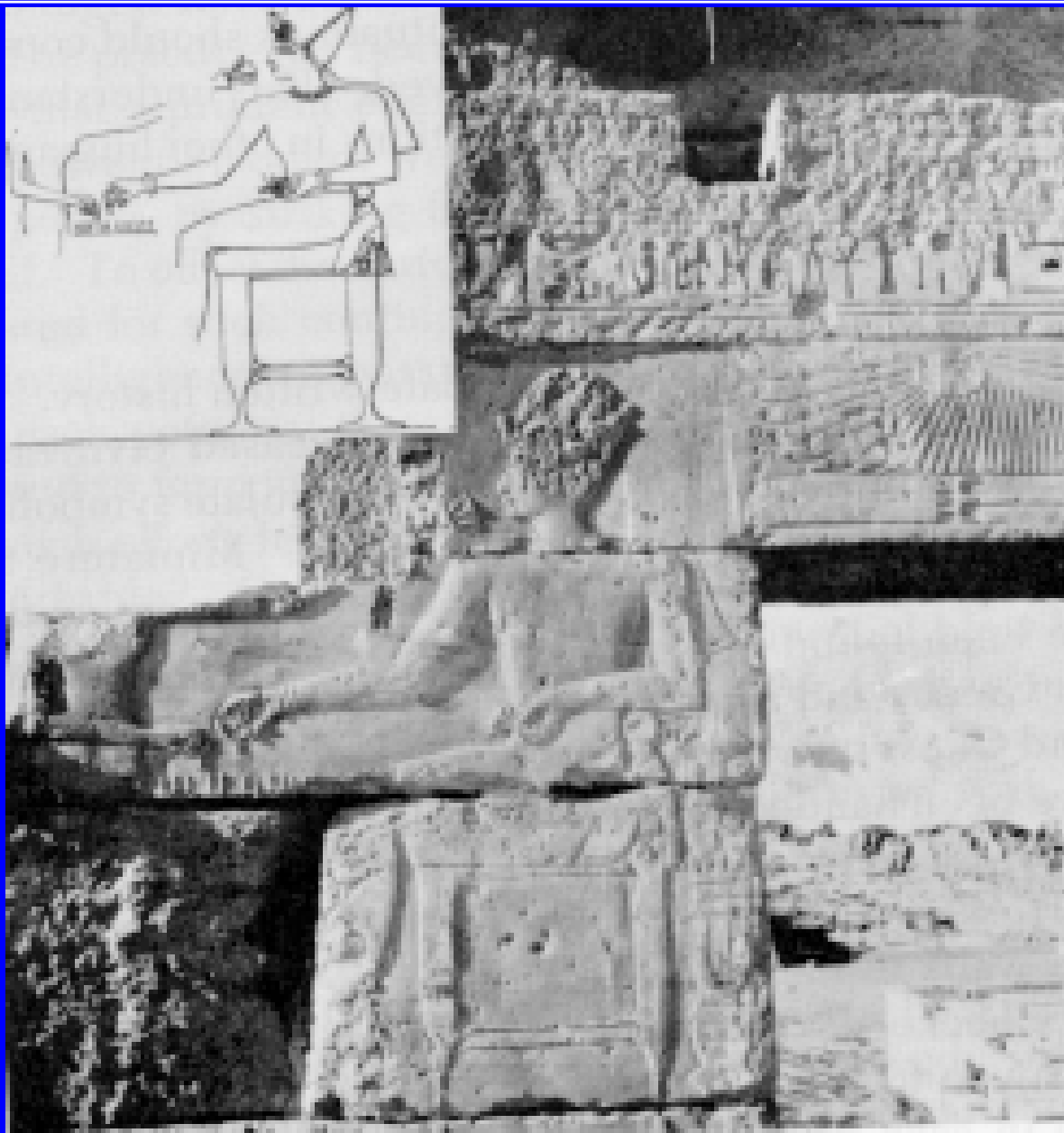


Other Reasons to Learn The History Of Wargaming?

- ↗ Gives credit to those who advanced the field
- ↗ It provides “the rest of the story”
- ↗ It’s interesting

In the Beginning

- ↪ It all started with language - and toys
- ↪ The Royal Toys



In the Beginning

Egypt

Rome

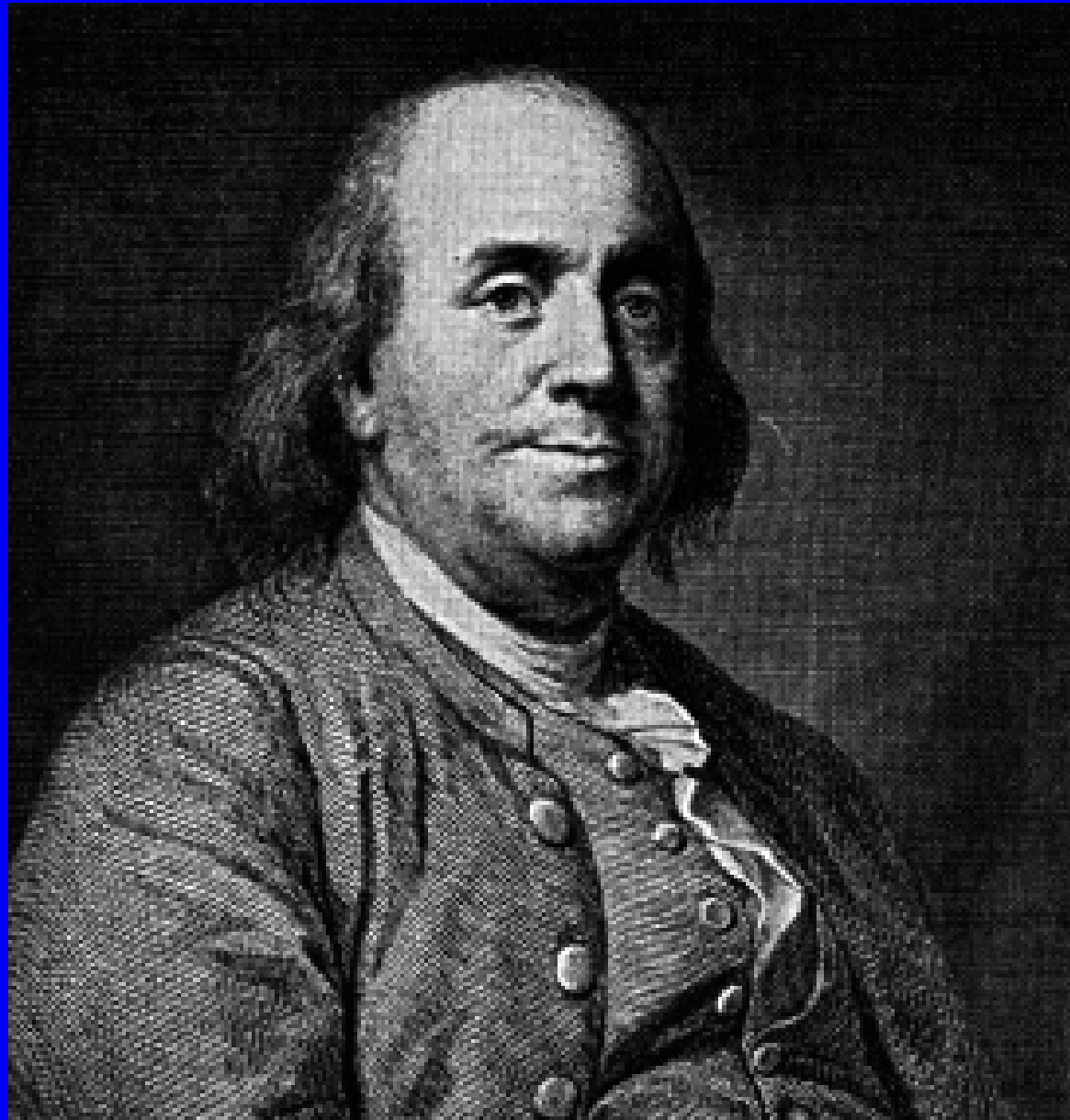
China

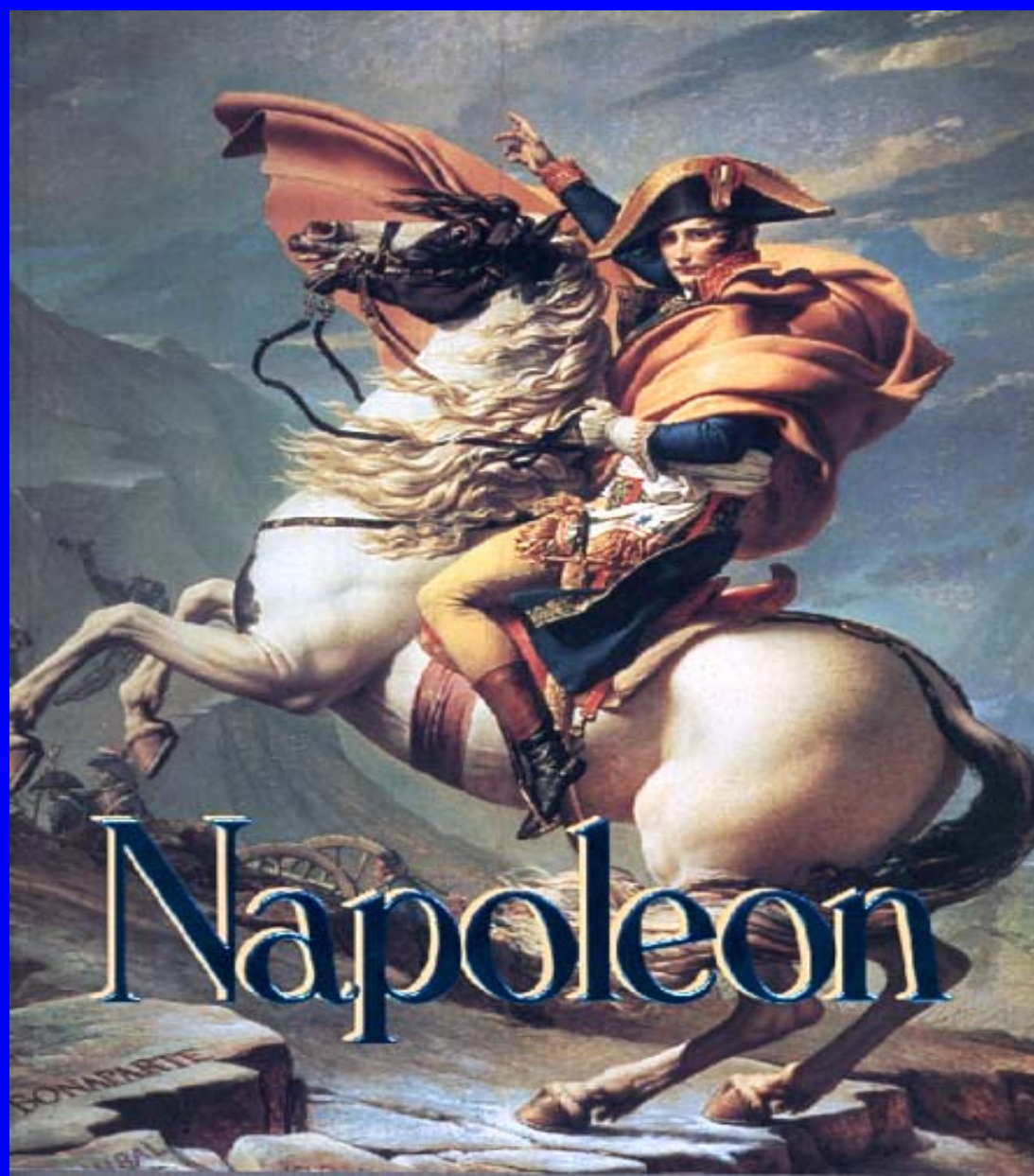
India

On The Brink



- ↪ Fredrick's use of maps
- ↪ Clerk models naval combat
- ↪ Abstract games grow less abstract:
 - ↪ 1664 Koinigspiel
 - ↪ 1780 Kriegschach
 - ↪ 1797 New Kriegspiel





Napoleon's Advantages


 Technology

 Genius

 Meritocracy

 Numbers

The Origins of Modern Wargaming

1811 - Herr von Reisswitz - a base of sand

1824 - Lt Reisswitz - the expanding circle





Moltke's Process

- Offsite
- Brain Storming
- Wargame
- Exercise
- Deliberate Planning

World Wide Wargaming

1866

Austro-Hungarian

1872 / 1883

England

1873

Italy

1874 / 1889

France

1820 / 1875 / 1905

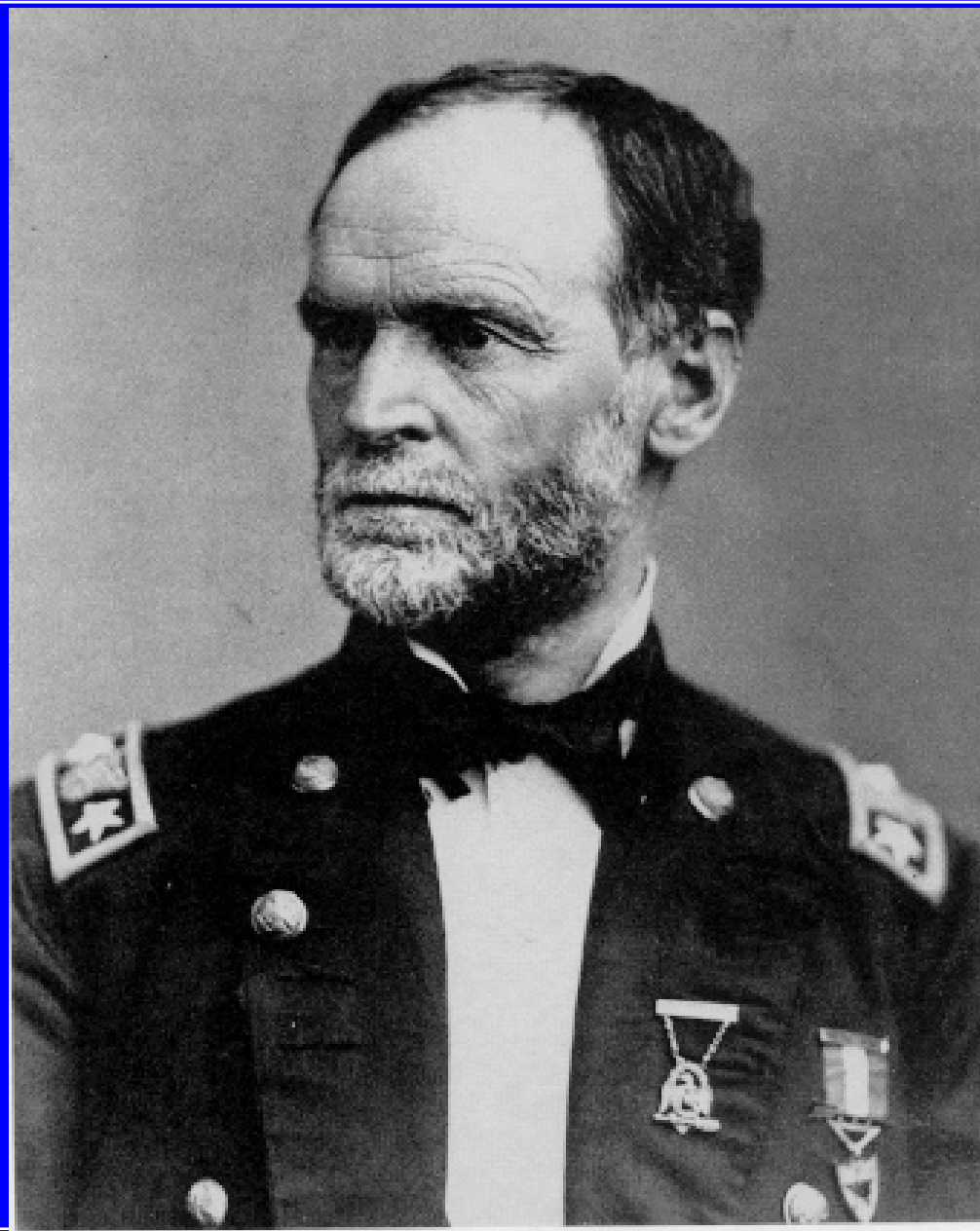
Russia

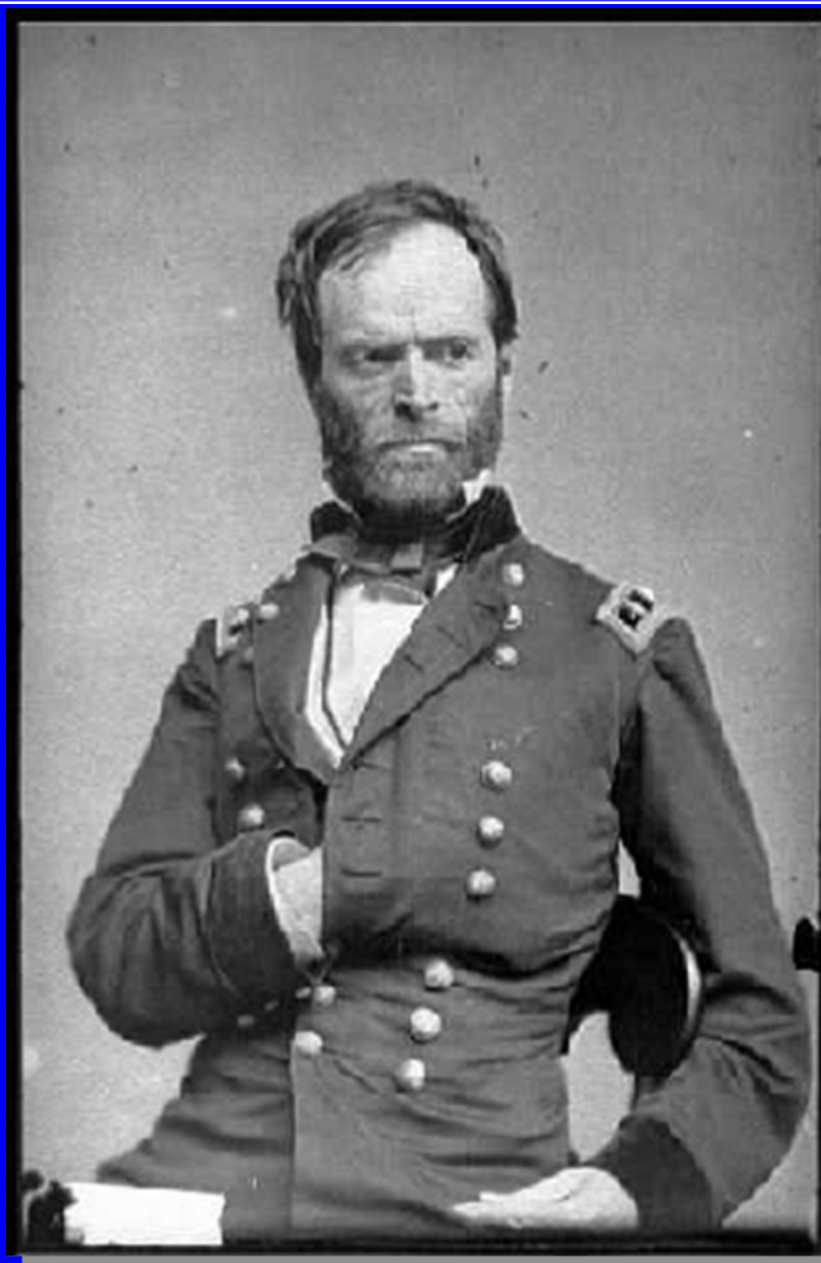
Secondary diffusion

Japan, Turkey, Latin Am.

Coming to America

⇒ 1883 - Major Livermore





Coming to America

1883 - Major Livermore

⇒ 1886 - US Naval War College



Coming to America

1883 - Major Livermore

1886 - US Naval War College

➤ 1900 - US Army War College

Innovation & Decline in Germany

Innovation

**Morale
Factors**

**Free
War-
gaming**

Decline

**Cmd
Influ-
ence**

**Face
Time**

Birth of Modern Civilian Wargaming

The Reserve Connection

- ↪ 1873- Wilkinson - one man's impact
- ↪ 1890s Delbrück - first duty of the new rulers

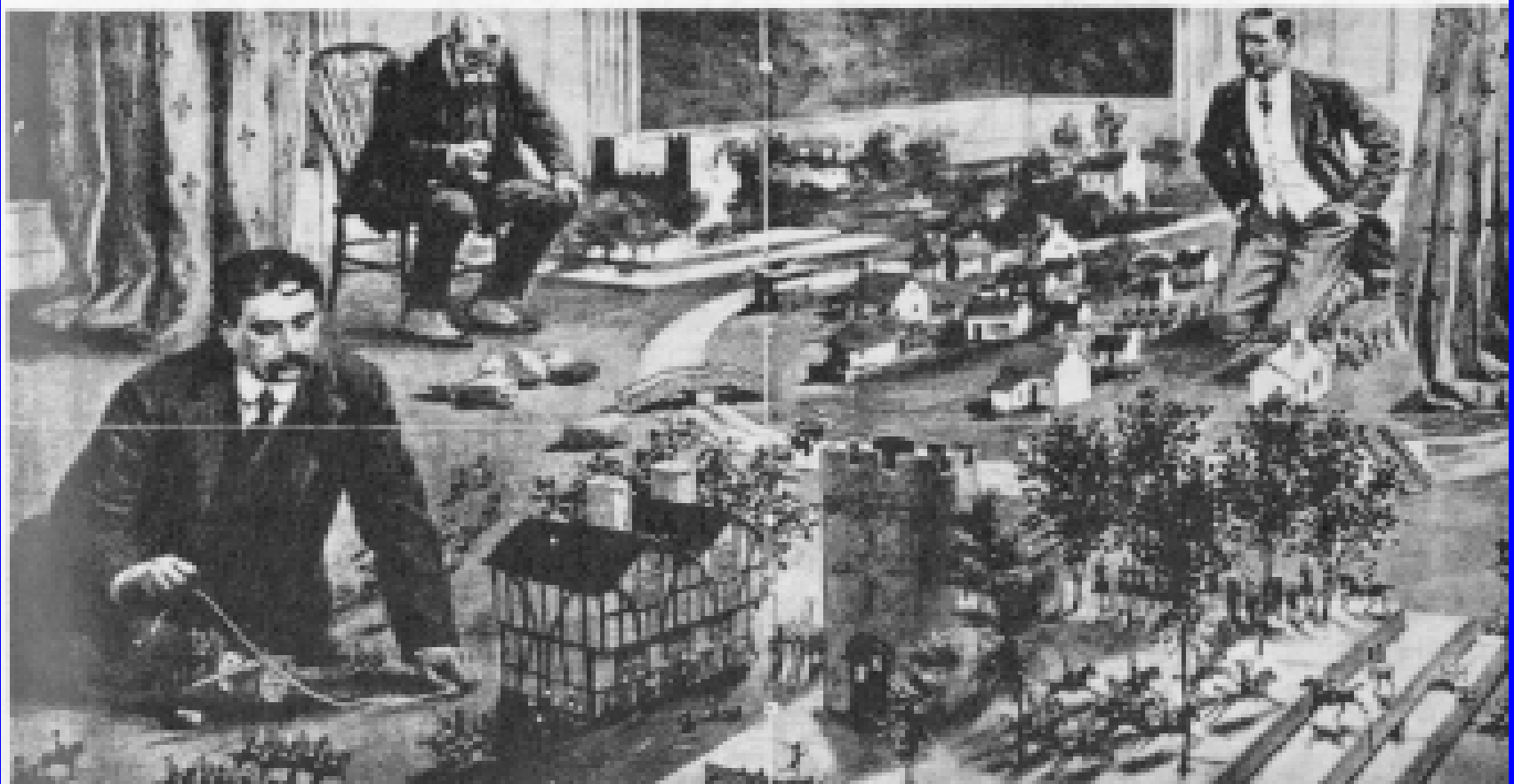
Birth of Modern Civilian Wargaming

The Popularizes



Birth of Modern Civilian Wargaming

The Popularizes



Wargaming the Great War

↪ Pre-war Wargaming

- 1905 The wargames that shaped the world
- 1910s Moltke the Younger and the return of rigor
- 1914 The wg that didn't change history

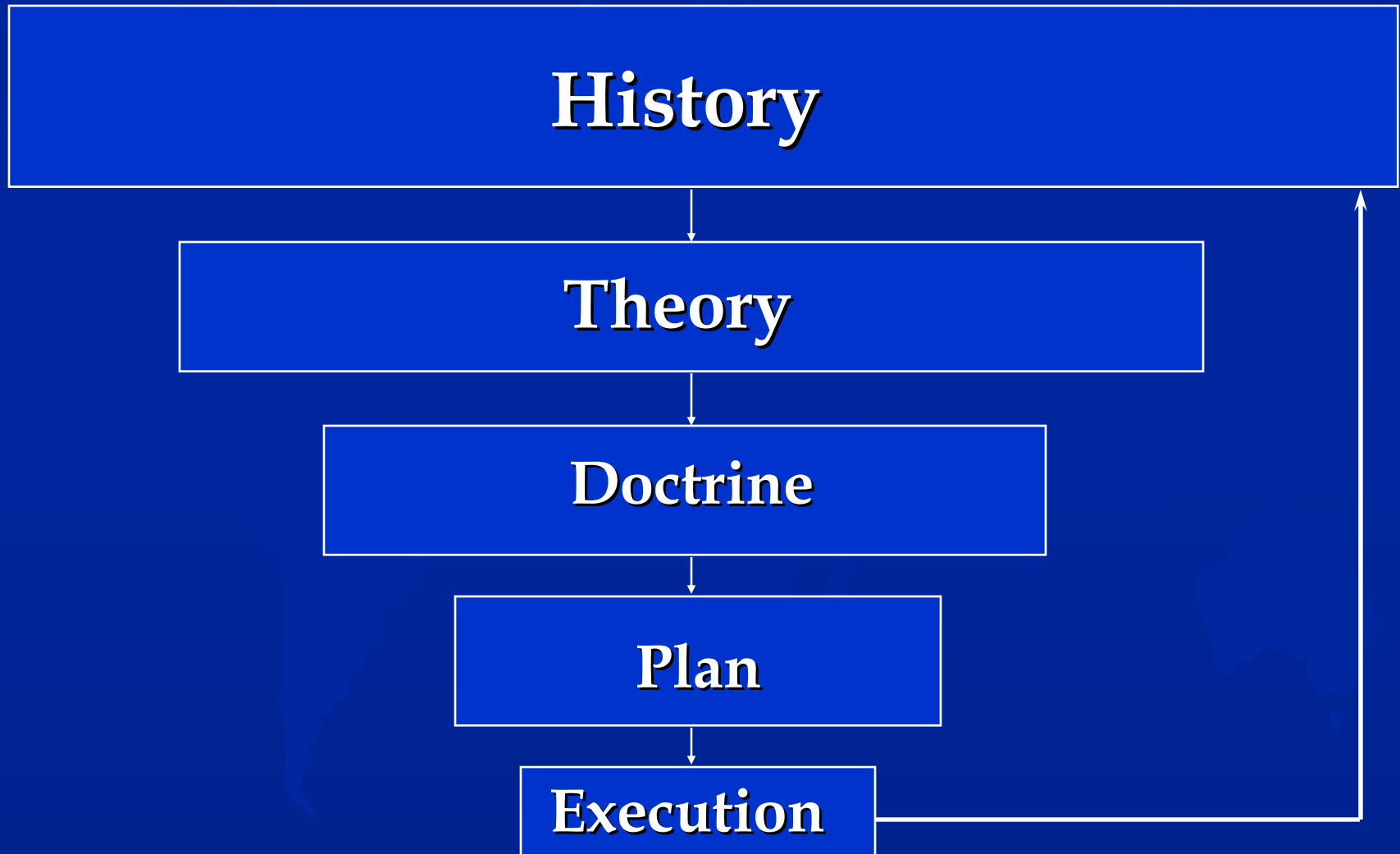
↪ Wargaming & the Great War

- The Peace offensive - the limits of „force on force“ wargaming

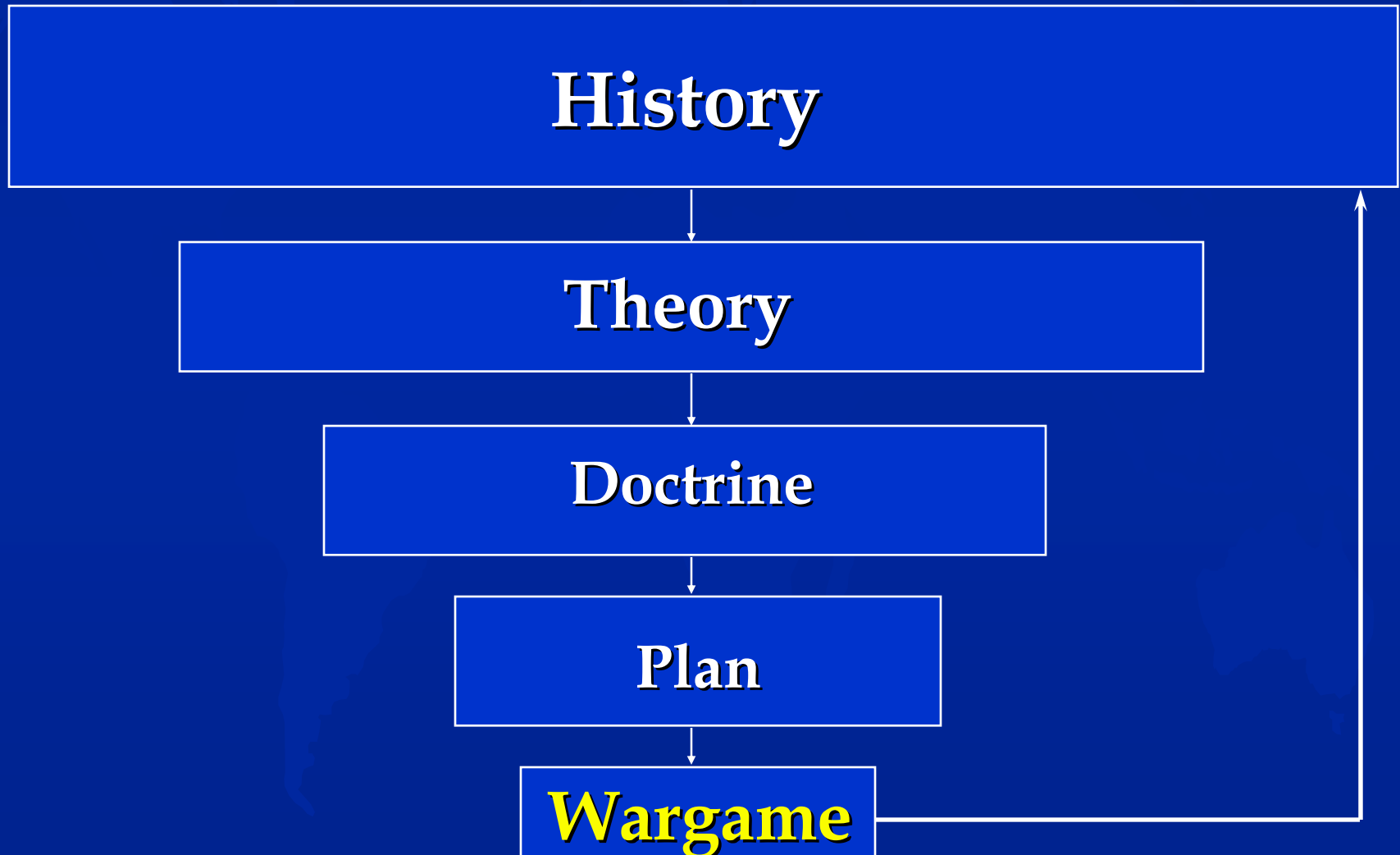
Inter War Wargaming

- ↪ Germany – Strat Innovation > “Blood & Soil”
 - Opp Innovation > Blitzkrieg

Strategy Cycle



Strategy Cycle



Inter War Wargaming

↗ Germany – Strat Innovation > “Blood & Soil”
- Opp Innovation > Blitzkrieg

↗ US

Navy PME:

- Teach how to learn
- Accelerate MTR

Army: Just in Time

Air Corps: A false dawn

↗ UK - Negative example

↗ USSR - Victory through defeat

World War II

Germany

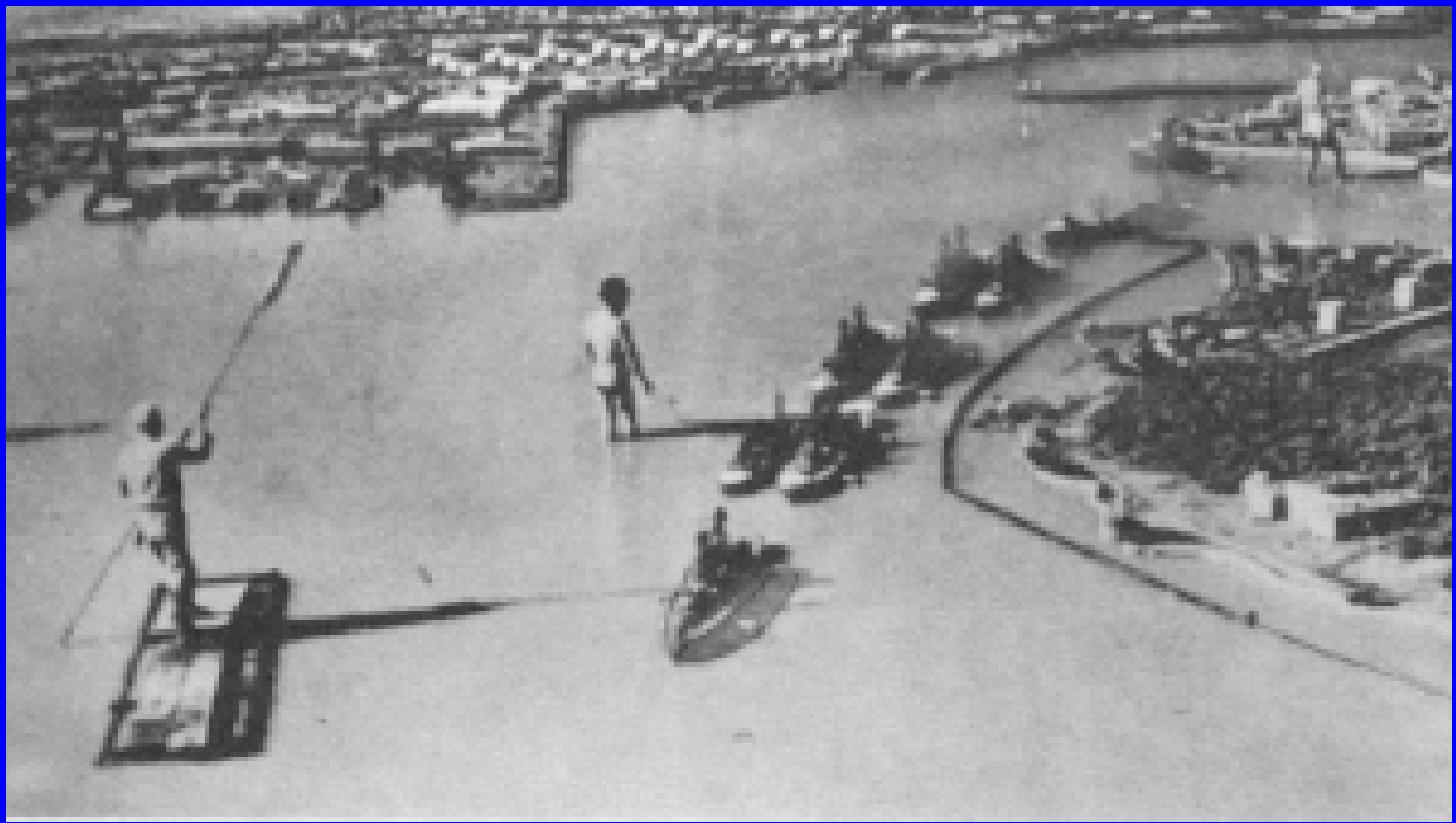
- Mannstein makes his case
- Barbarossa - an accurate mistake
- Victory at Normandy, twice

World War II

Japan

↪ The Total War Research Institute

World War II



World War II

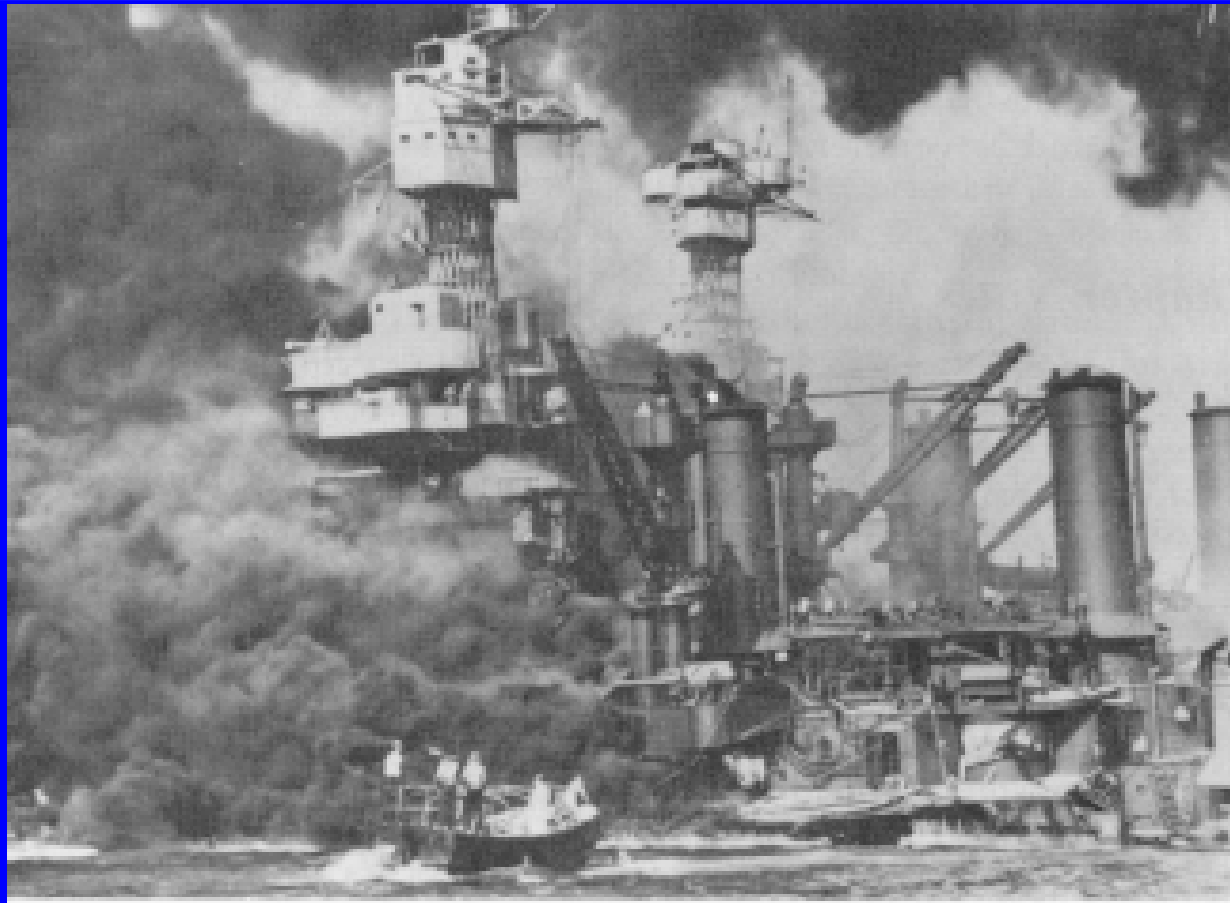
Japan

The Total War Research Institute



Both attacks on Pearl Harbor

World War II



World War II

Japan

The Total War Research Institute

Both attacks on Pearl Harbor

Both battles of Midway

Why did Japan keep on fighting

World War II

↪ UK

↪ Both extremes



12A7 Sir Henry Tizard and General Sir Bernard Montgomery, Oxford, March, 1944

World War II

↪ UK

↪ Both extremes

↪ US

↪ US Army Ground Forces - unknown

↪ US Army Air Forces - sorely missed

↪ USMC “eerie” success, then..

↪ Navy success - but ...

World War II

The war with Japan had been [enacted] in the game room here by so many people in so many different ways that nothing that happened during the war was a surprise, – absolutely nothing except the Kamikaze...”.

Fleet Admiral Chester Nimitz

Eclipse

Decline in the
study of war
at the war colleges

Rise of
deterrence &
the efficient DoD

Did „The Bomb“ make
wargames obsolete?

Korea seen as
an aberration

Why was Wargaming Reborn?

↗ The onset of the Cold War

↗ Assumed credibility of computers

↗ The obsolescence of war had been greatly exaggerated

1950s Analysis models

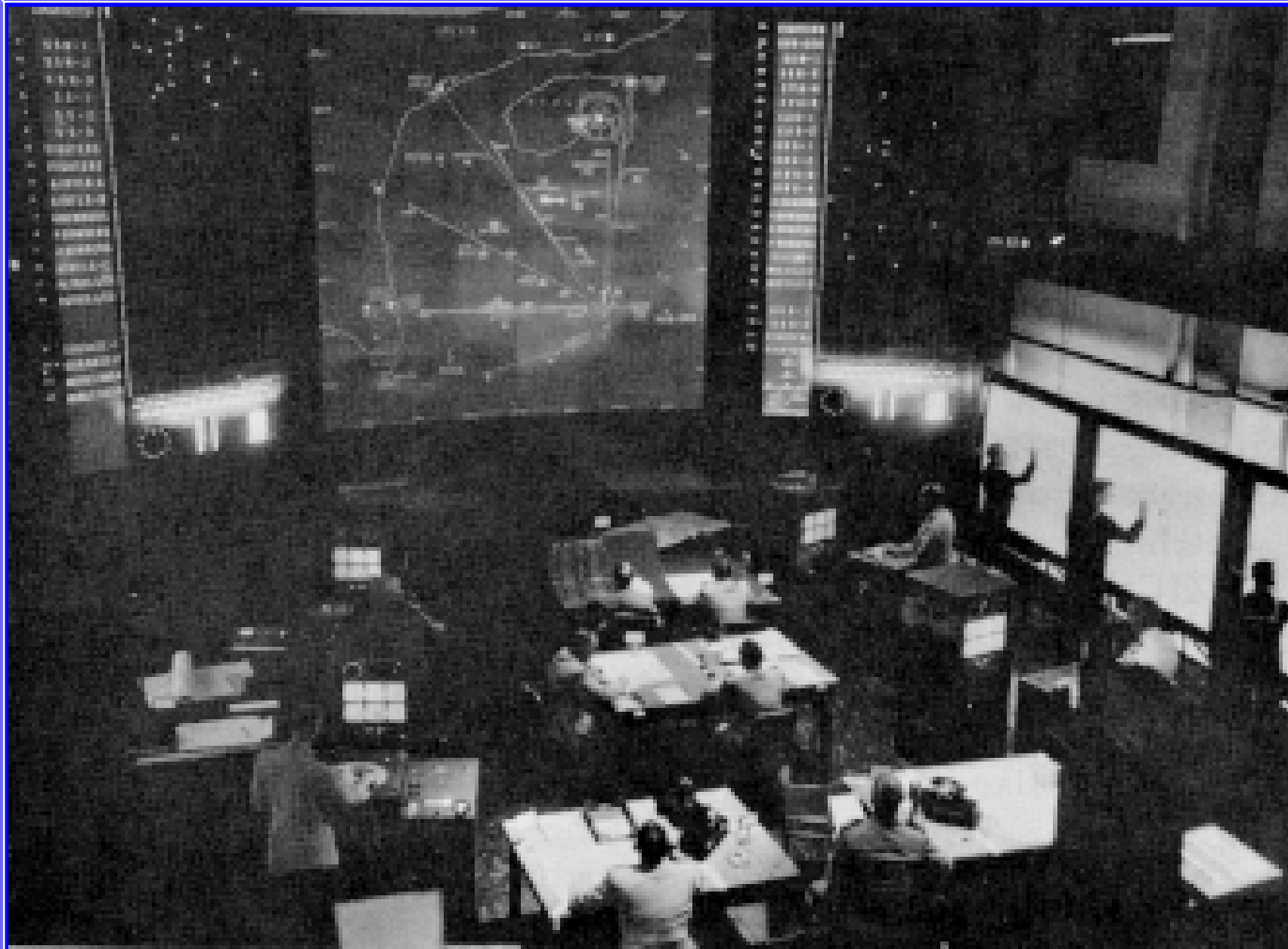
↪ US

- ↪ Naval - “NEWS” from the Naval War College
- ↪ USMC - Landing Force War Game series
- ↪ Army - “Aggressors,” at least a start
- ↪ Air Force - RAND & war gaming

↪ International

- ↪ Soviet historical rigor
- ↪ UK OR





1960s Pentagon Games

↪ US

↪ Joint - Wargaming at the heart

↪ Naval - NWC goes to “WARS”

↪ Army - making the case for Air Mobile

↪ Air Force - loses Skybolt, gains PME WG

↪ International - UK & Canadian OR

Wargaming - The Vietnam War

North Vietnam

- Soviet method of wargaming
- Partial explanation of lack of radio use, style of fighting

US

↘ Wargame predicted stalemate -- NOT continued to conflict resolution

↘ Limited in theater use

↘ Wargame predicted victory

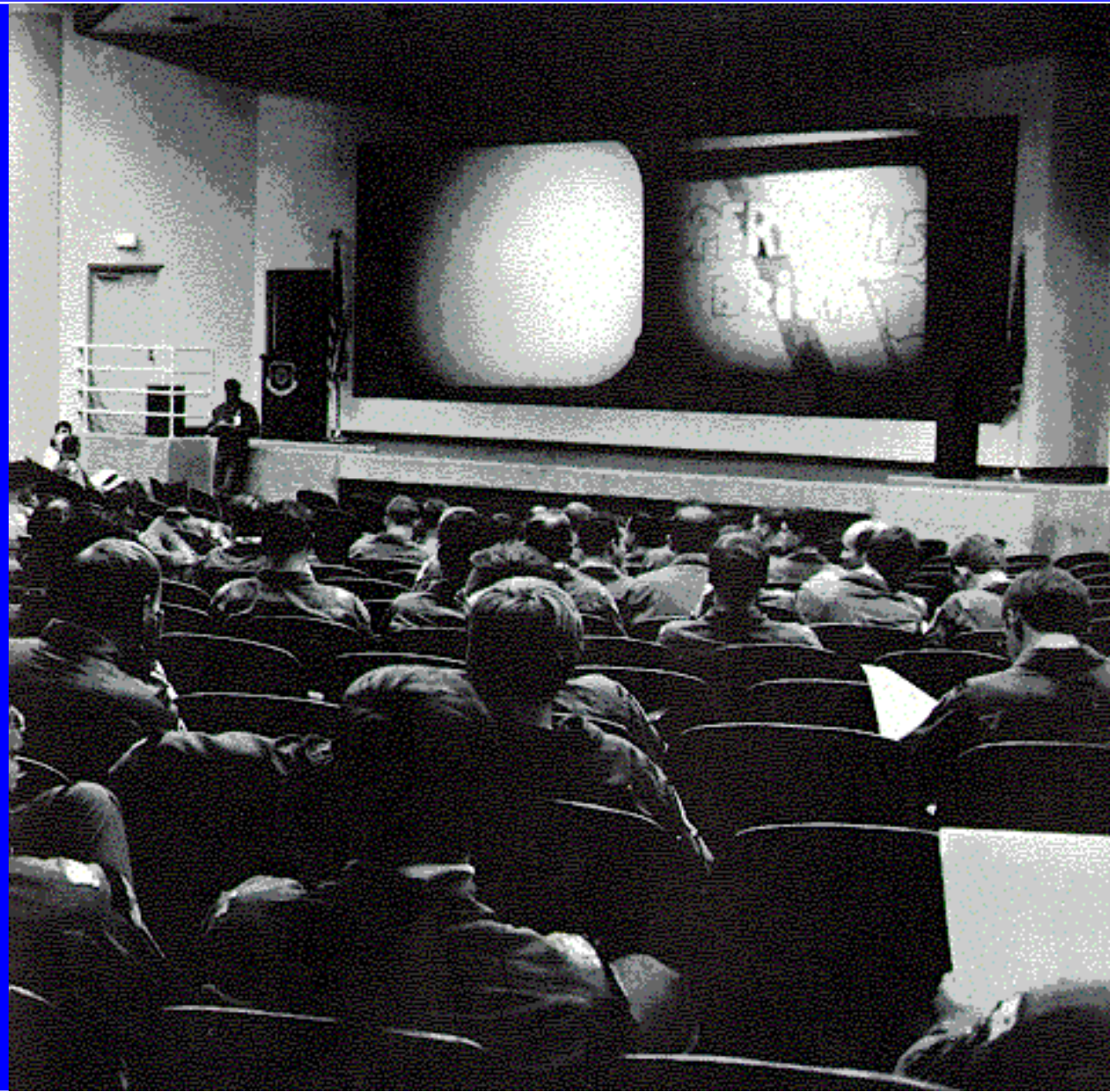
1970s Education and Training

↪ US

↪ Naval - Top Gun, to CRP, to Global

↪ Army - Tech solution to a people problem?

↪ Air Force - Red Flag!



1980s O-Plan Development

↗ US

↗ Naval - The golden age of Global

↗ Army - From III Corps to NTC

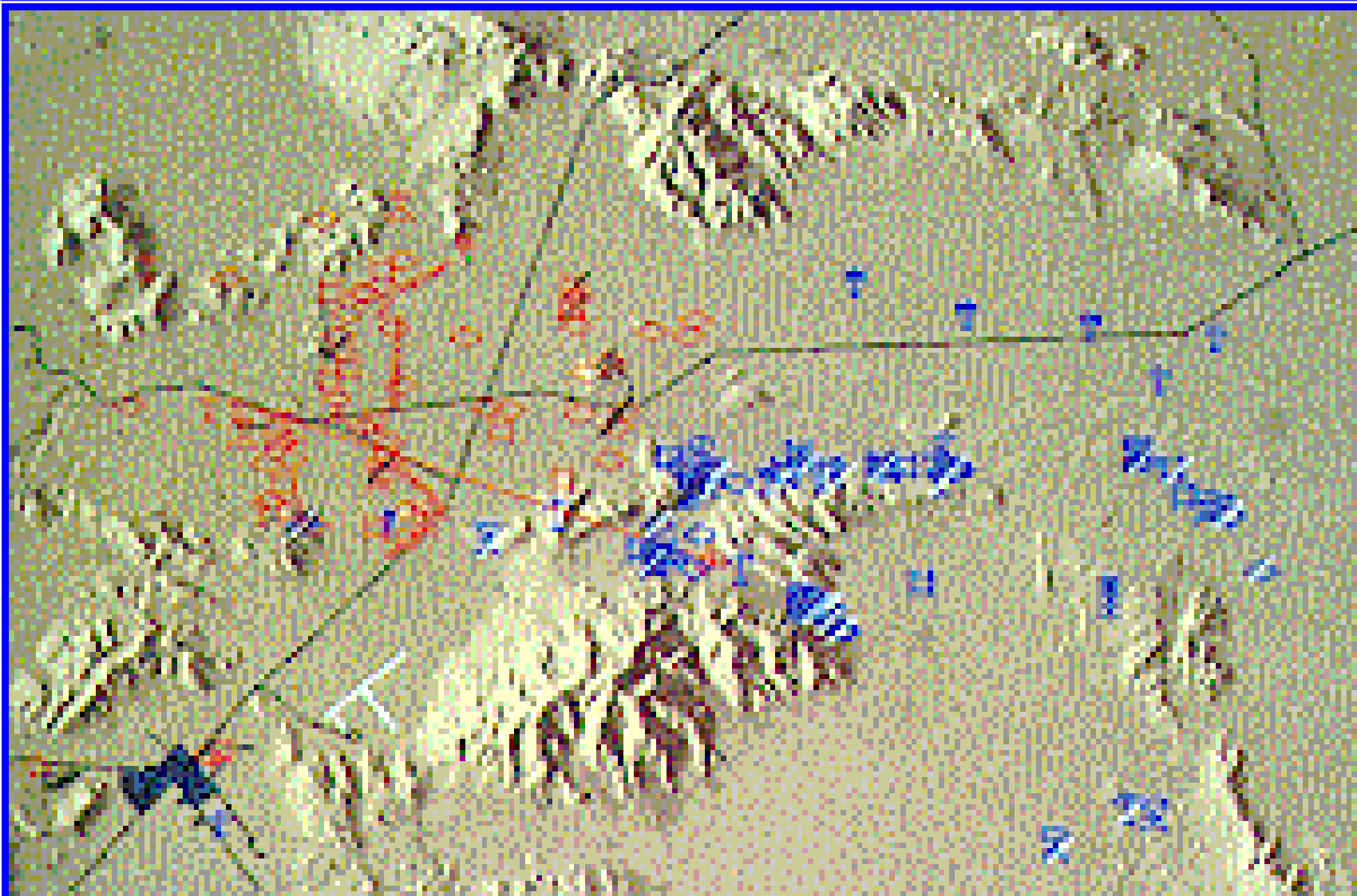
↗ Air Force - Air Force Wargaming Center

↗ USMC – The right wargame for each need

↗ Joint

↗ CENTCOM takes the lead

↗ DARPA's modest innovation



Wargaming - The Gulf War

- ↗ Exercise in the Desert - Patriots accelerated
- ↗ Internal Look 90 - a reason we moved so fast?
- ↗ Wargamers at war - the road not taken
- ↗ Wargames in the field
- ↗ The US training edge



1990s Jointness

- ↗ US:
 - ↗ Greater Jointness
 - ↗ Service Wargames “talk” to each other
 - ↗ Fewer, more Joint “engines” JSIMS, JWARS
 - ↗ “Expanded” Use:
 - ↗ Congressional Liaison
 - ↗ Procurement Decisions
 - ↗ Tactics Development
 - ↗ Force Tradeoffs
 - ↗ Growing use of virtual wargaming
- ↗ International: Study US

DoD Wargaming at a Crossroads



More money going to wargaming

Relatively
less
expensive

No
environ-
mental
impact

Secure
from
“overhead”
observation

Exploits
more
computing
power for
less money

Credibility
with
Congress

DoD Wargaming at a Crossroads

- ↗ More money going to wargaming
- ↗ More doubts than any time since the late 40s
 - High Desert Storm Casualty Predictions
 - RAND's Base of Sand Paper
 - HQ USAF concerns
 - Irrelevance in armed conflict with Serbia
 - "Competition" from commercial wargames

DOD / Commercial War Games 1950 - 1990

[Bottom Up]
Operational
Research
Models

History Based
Wargames
[Top Down]

Analysis

Training

PME

Prof Dev

Recreation

The Rise of Commercial Wargaming

- ↪ More Accessible Wargames
- 1950s Charles Roberts
 - 1960s Eric Dott & Avalon Hill
 - 1970s James Dunnigan & the S&T Staff +
 - 1980s Chris Crawford & Gary Grigsby
 - 1990s 25 Billion dollar global industry

The Rise of Commercial Wargaming

↪ More Citizens Playing Wargames

- 1950s Thousands
- 1960s Tens of Thousands
- 1970s Hundreds of Thousands
- 1980s Millions
- 1990s Tens of Millions

Commercial/DOD Integration



2000+

Old bothersome problems become major needs

↪ OEF too fast to wargame

↪ OIF

↪ “This is not the enemy we wargamed against.” Lt Gen Wallace, V Corps CC

↪ How do you wargame Phase IV?

Has The Above Helped Answer Our Questions?

- ↗ Is it advantageous to wargame?
- ↗ If advantageous, what factors degrade utility?
- ↗ What can be done to increase the utility?

Is it advantageous to wargame?

YES!

- ↪ Education & Training
 - ↪ German War College – NWC wargames
 - ↪ Louisiana Maneuvers – Red Flag - Virtual Battles
- ↪ Doctrinal Development & Tech Utility
 - ↪ Mobile Opps, wolf Packs – CV/ Amphib
- ↪ Operations Planning
 - ↪ Fall of France – Drive on Baghdad

What Factors Degrade Utility?

- ↗ Command Influence
- ↗ Red and/or Blue not following the anticipated strategy
- ↗ Model omits a factor that is decisive in conflict depicted
- ↗ Critical juncture in conflict occurs after end of game time
- ↗ Very Improbably events occur

What can be done to increase the utility?

To Learn More

◆ History

- The Art of Wargaming, Peter Perla, 1990
- <http://www.airpower.maxwell.af.mil/airchronicles/cc/caffrey.html>

◆ News

- <http://www.msrr.dmsoc.mil/>
- <http://afmsrr.afams.af.mil/>
- <http://www-leav.army.mil/nsc/warsim/index.htm>

To Learn More

➤ Go to: WWW.AU.MIL

➤ Pull Down: Aerospace Power
Chronicles

➤ Go to Fall 00 Issue

Questions?

Comments?

Discussion?