The History of Wargaming

Matthew B. Caffrey Jr.
AFRL Wargaming
Plans & Programs Directorate
Air Force Research Laboratory
6 December 2007
**Report Documentation Page**

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and
maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information,
including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it
does not display a currently valid OMB control number.

<table>
<thead>
<tr>
<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 MAR 2008</td>
<td>N/A</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. TITLE AND SUBTITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The History of Wargaming</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. AUTHOR(S)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wargaming Plans &amp; Programs Directorate Air Force Research Laboratory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. PERFORMING ORGANIZATION REPORT NUMBER</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. SPONSOR/MONITOR’S ACRONYM(S)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>11. SPONSOR/MONITOR’S REPORT NUMBER(S)</th>
</tr>
</thead>
</table>

**DISTRIBUTION/AVAILABILITY STATEMENT**

Approved for public release, distribution unlimited

**SUPPLEMENTARY NOTES**


**ABSTRACT**

**SUBJECT TERMS**

**SECURITY CLASSIFICATION OF:**

<table>
<thead>
<tr>
<th>a. REPORT</th>
<th>b. ABSTRACT</th>
<th>c. THIS PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>unclassified</td>
<td>unclassified</td>
<td>unclassified</td>
</tr>
</tbody>
</table>

**LIMITATION OF ABSTRACT**

UU

**NUMBER OF PAGES**

71

**NAME OF RESPONSIBLE PERSON**

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18
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

History

Theory

Doctrine

Plan

Execution
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
Fredrick’s use of maps
Clerk models naval combat
Abstract games grow less abstract:
1664 Koinigspiel
1780 Kriegschach
1797 New Kriegspiel
Napoleon’s Advantages

- Genius
- Meritocracy
- Numbers

Technology
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
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>1866</td>
<td>Austro-Hungarian</td>
</tr>
<tr>
<td>1872 / 1883</td>
<td>England</td>
</tr>
<tr>
<td>1873</td>
<td>Italy</td>
</tr>
<tr>
<td>1874 / 1889</td>
<td>France</td>
</tr>
<tr>
<td>1820 / 1875 / 1905</td>
<td>Russia</td>
</tr>
<tr>
<td>Secondary diffusion</td>
<td>Japan, Turkey, Latin Am.</td>
</tr>
</tbody>
</table>
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 Influence
- 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
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

History

Theory

Doctrine

Plan

Execution
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
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

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
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 ...


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 Col
  - 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 - looses 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 environmental 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

History Based Wargames
[Top Down]

[Bottom Up]
Operational Research Models

Analysis  Training  PME  Prof Dev  Recreation
Old bothersome problems become major needs

- OEF to 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

- **News**
To Learn More

- Go to: WWW.AU.MIL
- Pull Down: Aerospace Power Chronicles
- Go to Fall 00 Issue
Questions?

Comments?

Discussion?