

Wargaming and Professional Military Education

Rex Brynen, McGill University

1

Introduction

- What is wargaming?
- Why wargame?
- Wargaming approaches
- Additional resources
- Questions/discussions

Atlantic Rim, McGill University

2

About me



- ▶ Professor of Political Science, McGill University
 - ▶ Middle East politics
 - ▶ peace and humanitarian operations
 - ▶ conflict simulation (wargaming)
- ▶ Worked as a consultant/advisor:
 - ▶ Global Affairs Canada (game design, peacebuilding)
 - ▶ Department of National Defence (wargaming)
 - ▶ PHAC (red teaming), Agriculture Canada (gaming)
 - ▶ PCO (intelligence analysis)
 - ▶ UK Ministry of Defence/Dstl (wargaming)
 - ▶ NATO (wargaming)
 - ▶ World Bank and UN agencies (humanitarian and development assistance)
 - ▶ CNN (journalism simulation)



Former member—long, long ago—of 741 (Victoria) Communications Squadron (now B Squadron, 39 Signal Regiment).

3

AFTERSHOCK: A Humanitarian Crisis Game

Urban operations.

Humanitarian assistance and disaster relief operations (HADR)

Infectious disease readiness and response in humanitarian settings.

Pretty much anything.

We Are Coming, Nineveh!

A Digital Readiness and Response Simulation

Outbreak READY!

Matrix Game Construction Kit

Social Unrest

Cholera

EMERGENCY 6

3272 Persons at risk

Medical

WASH

Food

Shelter

Rescue

Rescue

Security

MaGCK

User Guide

5-Crisis

Opening

ures

Sticker Index

4

What is wargaming?

Wargaming was perhaps the first form of professional "serious gaming."

- ▶ **Wargaming** is the application of **serious games** to issues of **armed conflict**.

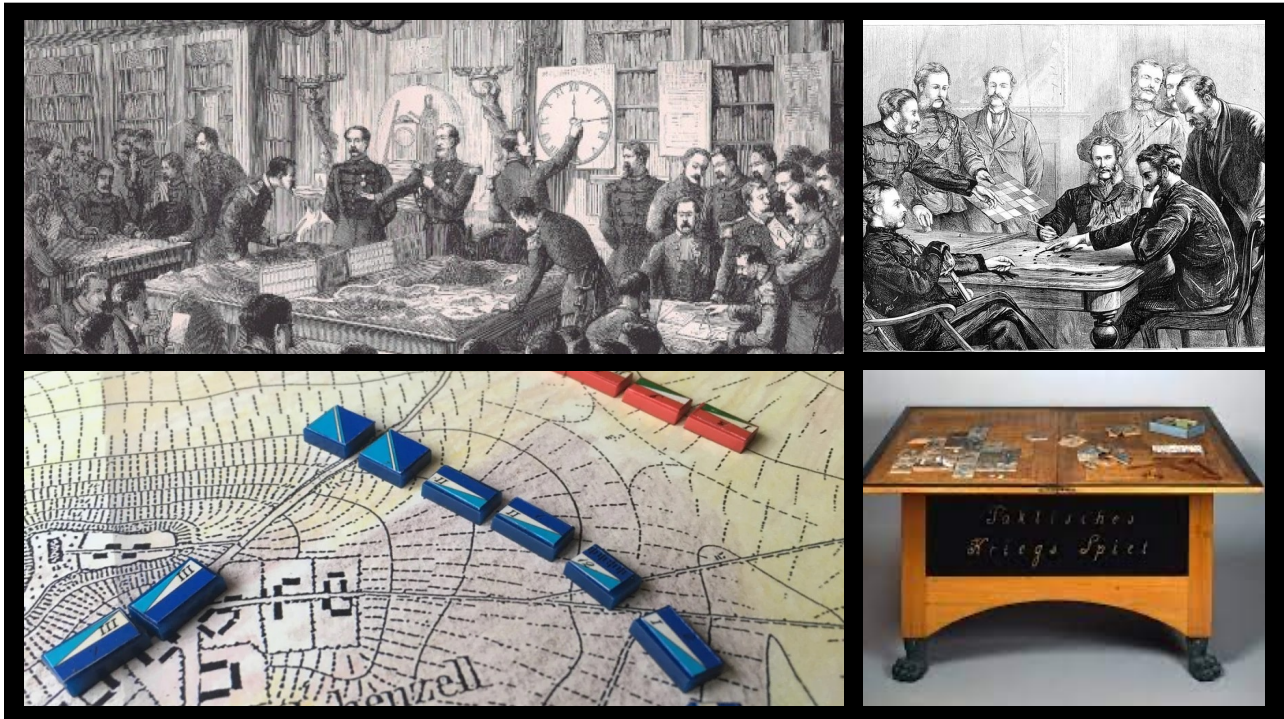
7

What are serious games?

- ▶ **Serious games** are those that have as their primary purpose a serious objective other than entertainment.
 - ▶ education and capacity-building
 - ▶ analysis
 - ▶ information, influence and advocacy

Serious games can also be engaging and even "enjoyable".


8



9



10

CANADIAN JOINT OPERATIONS COMMAND  COMMANDEMENT DES OPERATIONS INTERARMÉES DU CANADA

CJWC Wargaming 2023 in Summary

- Five Wargaming courses – >60 Officers and NCO's trained
- Canadian Army – Light Infantry Battalion x 5 concept games - Combat Training Centre support for Artillery School
- 1st Canadian Division HQ – Unified Resolve – Latvia including USA Atk Helo
- Global Integrated Wargame and Shriever Wargame in the US
- CJOC Vigilant Shield 23 – Arctic AO - NORAD
- 3 CSD Space Games - INDOPACOM (Japan and Australia) and France
- RCAF Warfare Centre – Human Machine Teaming Tactics and study
- CJOC – Conplan Jupiter –
- NATO Multinational Wargaming project
- Canadian Forces College – Wargame Support to Senior Leader final assessment
- USMCU OWS Development teaming and Modern Day Marine Obj1

12

SOURCE: David Redpath, CJWC

11


Currently, at HMCS Venture, we run a 2-week long course with the goal of using wargames to introduce the basics of naval operations, called the Introduction to Naval Operations course.

Week 1 focuses on tabletop wargames and the history of wargaming, and the second week is a combo of the COTS game Command: Modern Operations and tabletop wargames mixed in with some guest SME briefings.

The three main objects of the course are:

1. Introduce naval warfare and operations
2. Spark professional curiosity
3. Instill wargaming in Junior Officer culture and within the RCN

Sub-Lieutenant Luke Brannigan
Wargaming Advisor HMCS VENTURE



12

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13

...in the whole range of human activities, war most closely resembles a game of cards.

Carl von Clausewitz *with Marie Sophie Gräfin von Brühl*

- Prussian military theorist.
- Author of *On War*.

One thing a person cannot do, no matter how rigorous his analysis or heroic his imagination, is to draw up a list of things that would never occur to him.

Thomas Schelling

- Nobel Prize (Economics) for work on game theory.
- Pioneer of POL-MIL gaming at RAND.

14

Why wargame?

- ▶ **Educational wargaming** is the use of serious games to develop, practice, apply, and refine knowledge and skills.
- ▶ **Course of action wargaming** is a process of refining operational or tactical plans. (It is not always an actual wargame.)
- ▶ **Analytical wargaming** is the use of serious games to explore and answer questions, in conjunction with other research methods.

15

Why wargame?

- ▶ Wargaming provides a "safe to fail" environment.
- ▶ Wargaming is a form of "cognitive cross-training."
- ▶ Wargaming is engaging.
- ▶ Wargaming can mitigate risks and enhance foresight.
- ▶ Wargaming can build unit cohesion and networks.
- ▶ Wargaming is cheap.

16

HMS Itchen picks up survivors and reports that attacking U-boats are slow to dive when spotted.

HMCS St. Croix detects a U-boat, and moves to attack.. Suddenly, St. Croix is hit astern by a torpedo.

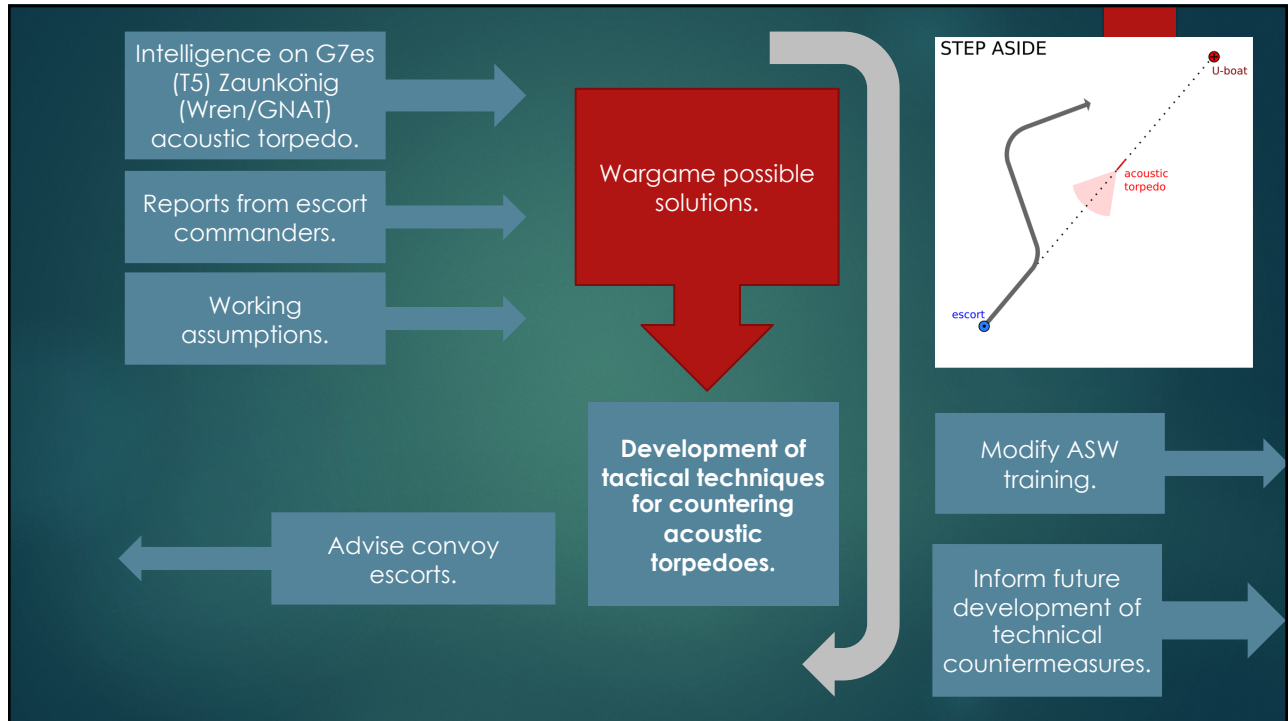
1943. Convoy ONS 18/ONS 202 is bound for Halifax.

17

Western Approaches Tactical Unit (RN)

Halifax Tactical Table (RCN)

18



19



20

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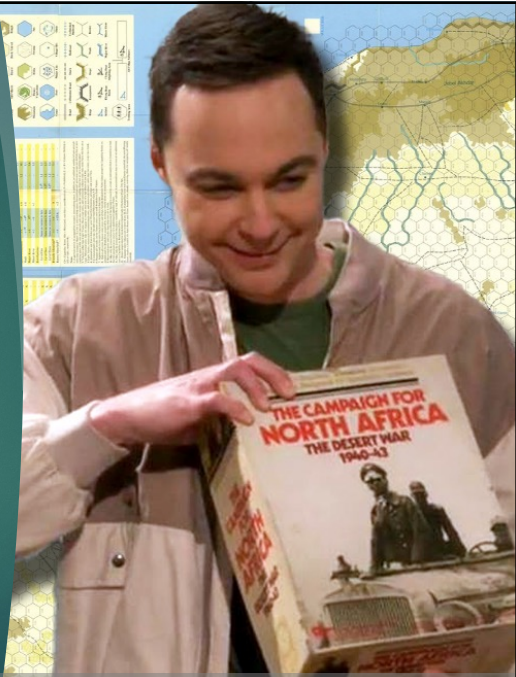


Apocalypse North at the Diefenbunker

21

Balancing fidelity and playability

- ▶ Making a game too accurate (with rich detail and complex causalities) can render a game unplayable
- ▶ Making a game too playable (via abstraction and simplified mechanics) can make a game unfit for purpose
- ▶ Getting the balance right depends on your objective and players.



Sheldon (Big Bang Theory)
Campaign for North Africa (SPI 1978)

22

Digital vs manual gaming

- ▶ Each approach has its advantages and disadvantages.
- ▶ The two approaches can be combined.

Cost.

Looks dated?

Flexibility/adaptability.

Complexity/fidelity.

Black-boxing.

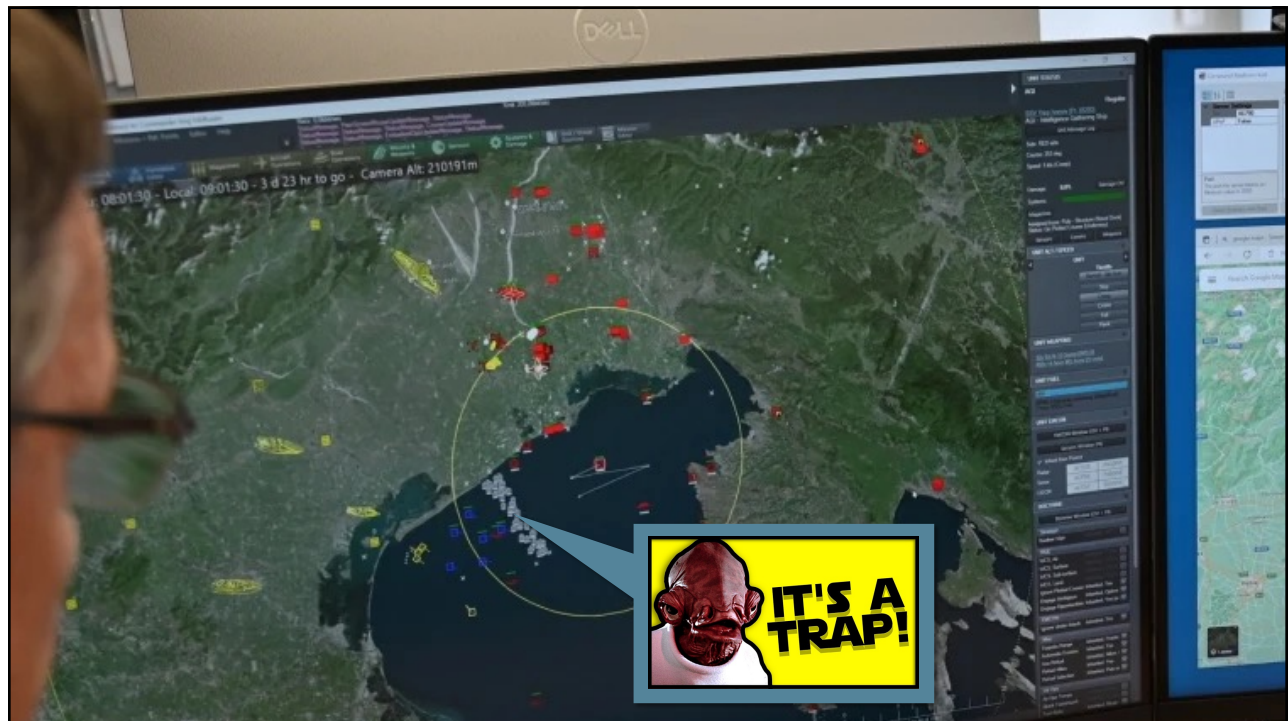
User interface.

Data capture.

Assassin's Mace (USMC)

Command: Professional Edition (Matrix Games)

23



24

Rigid vs free adjudication

Matrix games replace umpire adjudication with structured discussion and aggregation of player assessments.

Rigid adjudication uses prewritten rules (or digital algorithms) to determine outcomes.

- ▶ Works best with known causalities and relationships.
- ▶ More scope for incorporating operational research data.
- ▶ Players are limited by the imagination of the rule-writer (or software coder).

Free adjudication uses umpires to decide outcomes on a case-by-case basis.

- ▶ Works best with poorly bounded, highly contextual causalities and relationships.
- ▶ More scope for player innovation.
- ▶ Subject to idiosyncratic effects (umpire bias).

Adjudication can involve a mix of both approaches.

25

Seminar games

1. Multiple players/teams
2. Teams are given a briefing on their actor/role
3. Teams are presented with scenario
 - ▶ Possible additional injects
4. Teams decide on response
 - ▶ Teams might interact
5. Control team collects responses, adjudicates interactions and effects, and updates scenario
6. Teams presented with updated scenario and next turn begins



Clade X pandemic seminar game, Johns Hopkins University (2018).

26

Matrix games

1. Optimized for 4-6 players/teams.
2. Teams are given a briefing on their actor/role and scenario.
 - ▶ The current situation is visually depicted with maps and marker tracks.
3. Each team in turn declares an ACTION. Arguments PRO and CON are made.
 - ▶ Probability of success is determined based on player arguments, and the action resolved.
4. Next player turn.



27

LARPs and megagames

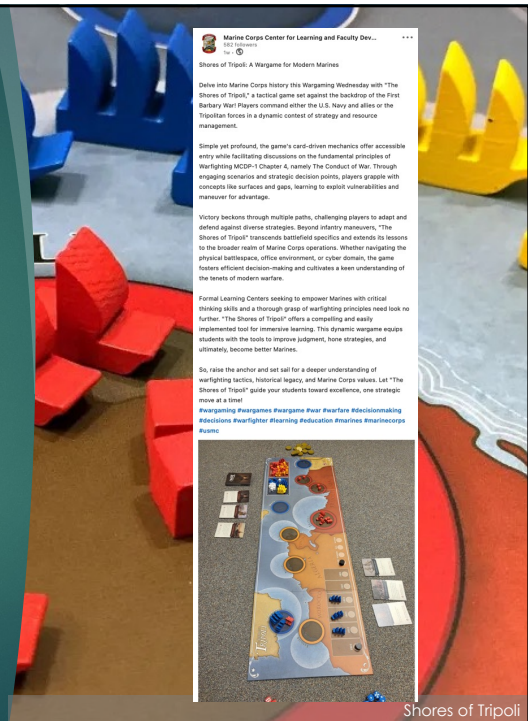
- ▶ Roleplay and negotiation can be combined with more conventional wargame techniques.



28

Wargaming for the Reserves

- ▶ In a Reserve unit, wargaming could be used in several different ways:
 - ▶ as an in-person unit training activity
 - ▶ as an (in-person or online) ancillary activity
 - ▶ Fight Club
 - ▶ tournaments
 - ▶ in conjunction with Army and RCAF Reserve units to support joint operations familiarity



29

Remember the basics

- ▶ What are you trying to do?
- ▶ How many (and who)?
- ▶ How long?
- ▶ How much?



30

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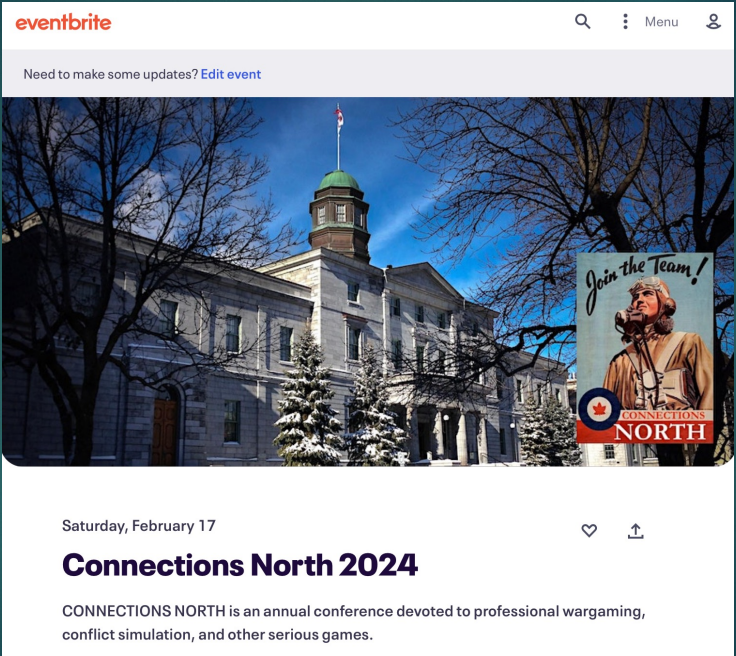
Wargaming approaches

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31



eventbrite

Need to make some updates? [Edit event](#)



Saturday, February 17

Connections North 2024

CONNECTIONS NORTH is an annual conference devoted to professional wargaming, conflict simulation, and other serious games.

32

Resources

- ▶ PAXsims
 - ▶ Also includes information on Connections North
 - ▶ <http://www.paxsims.org>
- ▶ Connections Conferences
 - ▶ US: <https://connections-wargaming.com/>
 - ▶ UK: <https://www.professionalwargaming.co.uk/>
- ▶ UK MoD Wargaming Handbook
- ▶ French MoD, Manuel du jeu de guerre
- ▶ Wargaming Department, US Naval War College
- ▶ NATO Wargaming Handbook
- ▶ Georgetown University Wargaming Society
 - ▶ <https://www.guwargaming.org/>
- ▶ Kings Wargaming Network
 - ▶ <https://www.kcl.ac.uk/research/wargaming-network>

33

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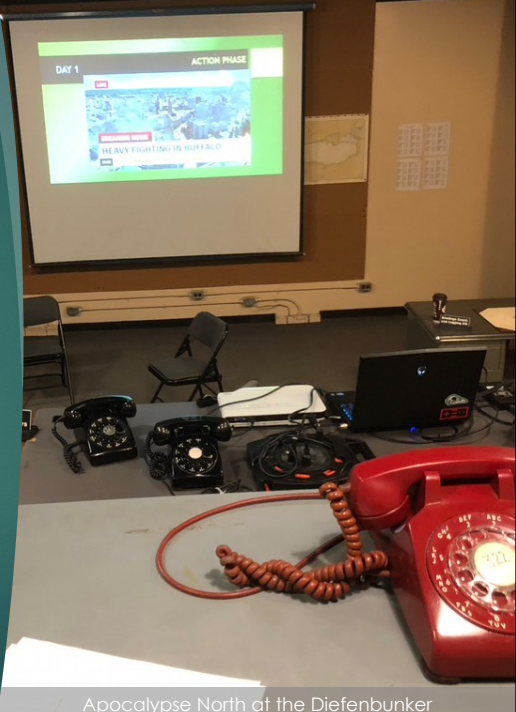
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Additional resources

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34