Is Analytical Wargaming better than Wargaming?

- Reflecting on the NATO Wargaming Handbook -

<u>Thomas Danger</u>
- thomas.danger.contact@gmail.com
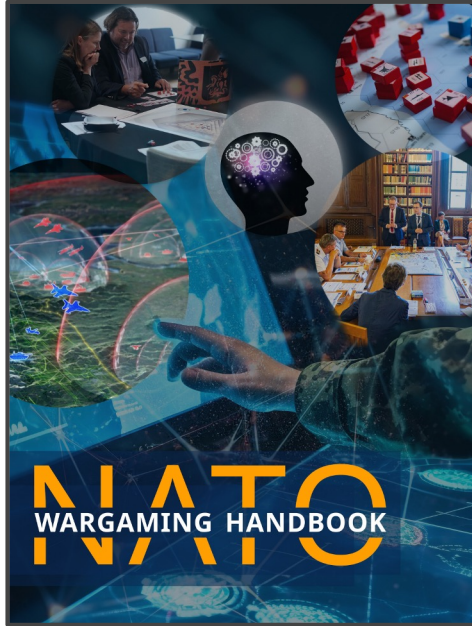- Twitter: @Thomas_DangerRI

Strand Simulations Group
(Soon!) Royal Danish Defence College

1

Apologies in advance: we are going to discuss the definition of wargaming

Please write questions in the chat!

NATO & the Definition of Wargaming

Cover of the "*NATO Wargaming Handbook*" (NWH), 2023.

"Wargames are representations of conflict or competition in a safe-to-fail environment, in which people make decisions and respond to the consequences of those decisions." - NWH, p. 8, 2023

But there is Two Kinds of Wargames: Learning & Analytical

Learning wargames provide decision- making **EXPERIENCE** (learning **THROUGH** player decisions)

Analytic wargames provide decision- making **INFORMATION** (learning **FROM** player decisions

NWH, p. 12, 2023

Similarities:

- Similar design process and execution.
- "both wargames are about learning from decision- making, and both types require creating a narrative-driven experience for the players" p. 11

Differences:

- The DCAP (Data Collection & Analysis Plan).

"However, an analytic wargame will require **more effort to craft a Data Collection and Analysis Plan (DCAP)** to ensure achievement of analytical goals and have a more robust reporting requirement in order to inform a broader campaign of analysis." p. 11

All about the DCAP

"...the **entire point of the analytic wargame** is to collect the right data to meet the aim and objectives of the wargame." NWH, p. 26, 2023.

- Designer and analyst are not the same person.

Goal: Collect data!!!!!

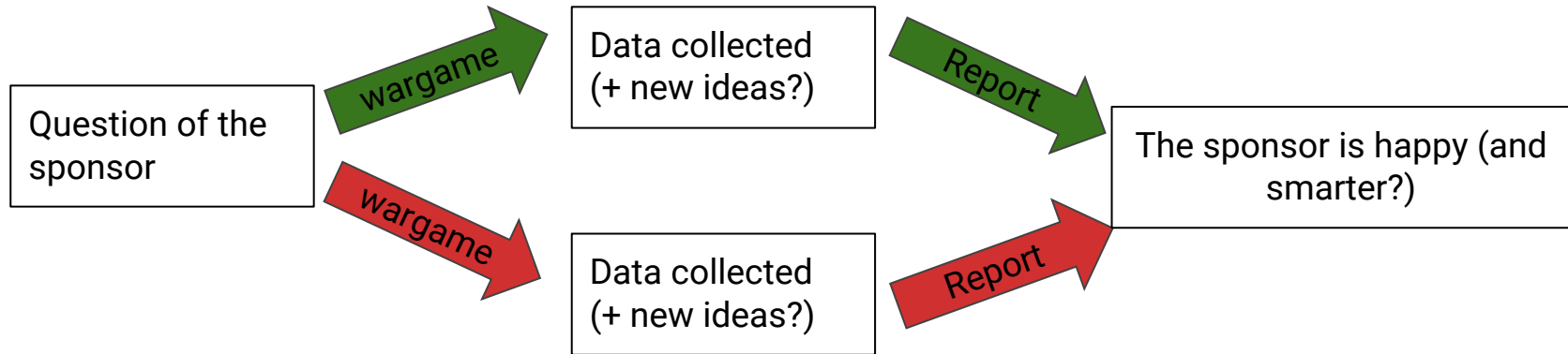# How to be Smarter Through Analytical Wargaming?

Step 1: Create an analytical wargame:

- Question of the sponsor.

- Wargaming creation process - please refer to *"Successful Professional Wargames: A Practitioner's Handbook"*. With a good DCAP.

- Deliver the wargame, rigorously report your results on a excel sheet, send them to sponsor.

Step 2: You have a better informed sponsor :-)
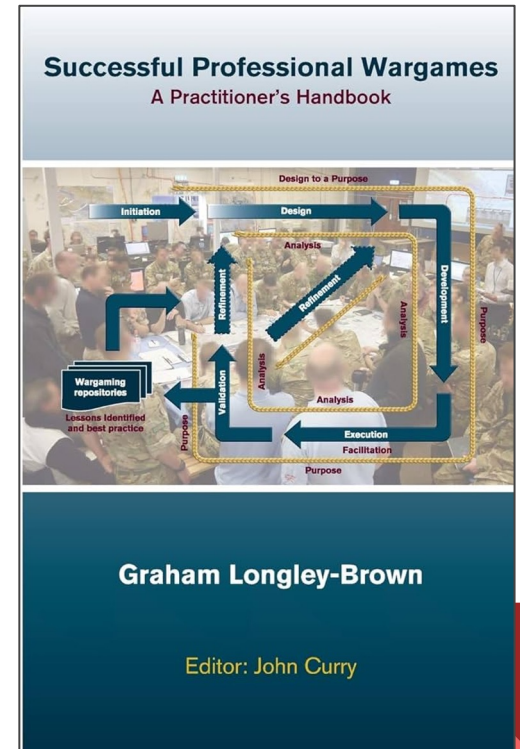
The process of an "analytical wargame" or "data-gathering wargame" or "knowledge producing wargame" or etc...

Question of the sponsor

wargame → Data collected (+ new ideas?)

Report → The sponsor is happy (and smarter?)

wargame → Data collected (+ new ideas?)

Report →

WRONG

Acknowledged Limits to Analytical Wargaming in the NWH

- "Wargames are not reproducible" NWH, P.6 2023

- "Wargames support qualitative analysis" NWH, P.6 2023

Jon Compton and Analytical Wargaming

- "**analytical wargaming** is the act of competitive, contextualized decision making within the pre defined constraints for the purpose of **gaining insights** into complex, adaptive, interactive and cognitive systems"- "Wargaming != INNOVATION Searching for the Emergent Properties of Cat Herding", Jon Compton, 2016.

- "**the purpose of an analytical wargame is not to answer any specific question with a point of solution. Its purpose is to gain insight** into complex questions in order to generate a better analytical focus" - Jon Compton, 2016

Going even further against Analytical Wargaming: Peter Perla

"The term Compton uses — analytical wargaming — demonstrates obeisance to the concepts of analytical rigor and objectivity based on the principles of economics and the physical sciences."

- "Rolling the Iron Dice: From Analytical Wargaming to the cycle of Research", Peter Perla et all, 2020, War on the Rock


- Positivism is bad

Peter Perla and the Cycle of Research

"**Real wargaming is about neither the unverifiable quantification of computer models of future warfare nor the insubstantial pontification of subject-matter experts prognosticating about an unpredictable future**. Real wargaming is about the conflict of human wills confronting each other in a dynamic decision-making environment."

- Wargaming and The Cycle of Research and Learning, Peter Perla, 2022

Analyses help us understand the effects and effectiveness of current and future weapons, systems, and concepts. Wargames help identify how that understanding — and how what we don't know and how what we are mistaken about — may influence how we act, and in doing so can help us identify critical analyses that need to be done. Exercises, experiments and real-world assessments help us understand better how real people and systems perform in the real environment. Which of these pieces can we do without?
- WotR, Peter Perla et al., 2019
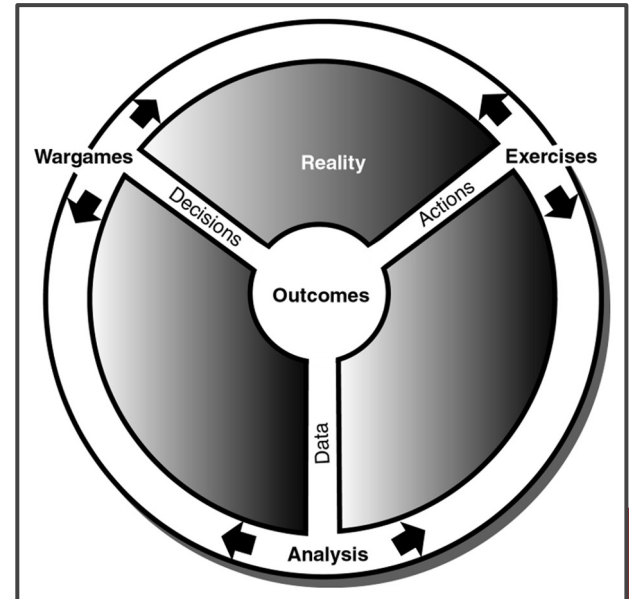
What about "non-analytical wargames"?

- Are "learning wargames" (about education and learning) not generating useful insights, better understanding & new knowledge?

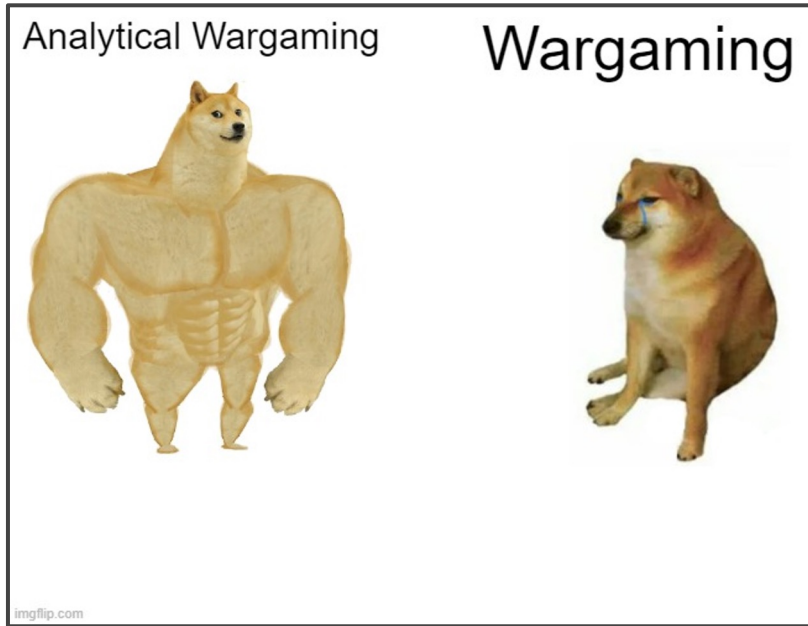Learning wargames provide decision- making **EXPERIENCE** (learning **THROUGH** player decisions)

Analytic wargames provide decision- making **INFORMATION** (learning **FROM** player decisions

NATO's answer, probably

The Danger of Analytical Wargaming for NATO Onward

- Something "serious", "scientific", "applicable".

Summary, Takeaway and Reflection for Later

- Metaphor for more "serious", "useful" wargaming? "Scientific" because its has data in it?

- The danger to consider:

  Analytical wargaming > other kind of wargaming

So, what about the NATO Wargaming Handbook?

- The NATO Wargaming Handbook proposes to standardise NATO wargaming practices.

- A normative project: that is how we think wargaming is, and how YOU should do it. Whether the authors wants it or not.
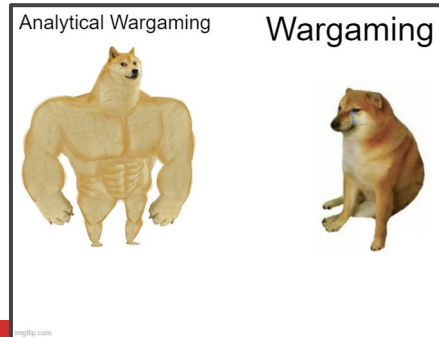
Going Further

- Does your boss care about the wargame, or do they have a box "doing wargaming and provide tangible results" to check?

- Does having a strong DCAP is a requirement to get funding? A wargame with strong DCAP would be serious, without one it is just "vibes", not justifying the spending?

Issues with Making Analytical Wargames

- Cost & Time?

- Impossible to spread across the force (civilian or military) because of greater complexity?

- Not accessible easily (security reasons, fun & immersion)

- Detach us from one of the greatest strength of wargaming: better Professional Military (and Civilian) Education (PME)

A Middle Ground to Find?

Exploring Command and Control of Semi-Autonomous Units: Co-constructing the future battlefield using a tactical board game

Diana Saleh
Swedish Defence Research Agency
diana.saleh@foi.se

Anna Pestrea
Swedish Defence Research Agency
anna.pestrea@foi.se

Björn JE Johansson
Swedish Defence Research Agency
bjorn.j.e.johansson@foi.se

Abstract

The introduction of semi-autonomous units on the battlefield raises many questions related to command and control (C2). Some of these involve command responsibilities and tactical decision making concerning whether the usage of unmanned ground vehicles (UGV) or unmanned aerial vehicles (UAV) can potentially be allocated to a number of different roles within the organizational structure of a battalion. Due to the differences between the purposes and operating conditions for UGVs and UAVs, different individuals are likely to command them. However, such units can be used in a coordinated fashion, suggesting that these commanders need to collaborate. Two workshops have been conducted with personnel from the Swedish Land Warfare Centre. During these, a tactical board game was used as a basis for discussing possibilities and limitations of using semi-autonomous UGVs and UAVs in ground warfare scenarios. Both workshops were video recorded and transcribed. The transcriptions showed that an understanding of the autonomous units, and possible ways of using them (attack/defense), was developed during the workshops. A thematic analysis revealed different perspectives on how semi-autonomous units can be used, what roles they can undertake on the battlefield, in what ways they could be incorporated into existing command structures, and what kind of capabilities they should have to be useful.
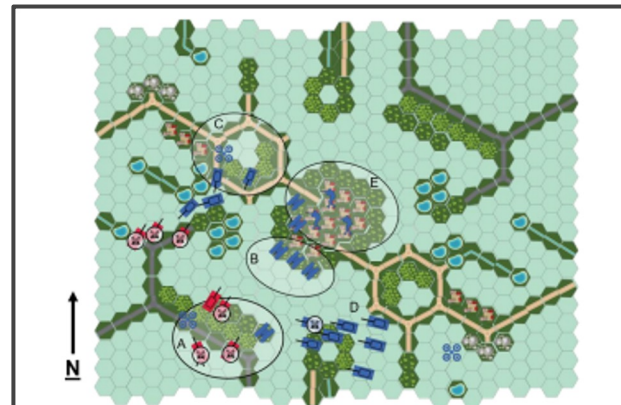
Figure 13. The game board at the end of the game session Defense in trial B.

4.3 THEMATIC ANALYSIS

The main themes and sub-themes identified were:

- Autonomy
- Tactics related to using the UGV and UAV
- The Game

CENTER FOR LONG-TERM CYBERSECURITY

CLTC OCCASIONAL WHITE PAPER SERIES

Cyber Operations in Conflict

LESSONS FROM ANALYTIC WARGAMES

BENJAMIN JENSEN AND DAVID BANKS

Results

During the games, the state and violent non-state actor predominantly focused on progress in the security domain, conducting activities ranging from high-value individual targeting (i.e., drone strikes, raids) to terrorist attacks and seizing strategic villages. These actors often invested more in traditional security instruments of power rather than in cyber capabilities. Faced with violent threats and limited resources, they opted for brute force, as opposed to cyber coercion.

Conclusion

- Do we care about the distinction between analytical and learning wargaming?

- Or is the NATO Wargaming Handbook putting its finger on a deeper problem within wargaming?

Possible Future for Wargaming in NATO Countries by 2026

Sources

- "NATO Wargaming Handbook", NATO, 2023: https://paxsims.wordpress.com/2023/09/14/nato-wargaming-handbook/
- "Searching for the Emergent Properties of Cat Herding", Jon Compton, slides: https://slideplayer.com/slide/9739077/
- "The Obstacles on the road to better analytical wargaming", Jon Compton, 2019: https://warontherocks.com/2019/10/the-obstacles-on-the-road-to-better-analytical-wargaming/
- "Rolling the Iron Dice: from analytical Wargaming to the Cycle of Research", Peter Perla et al, WotR, 2019: https://warontherocks.com/2019/10/rolling-the-iron-dice-from-analytical-wargaming-to-the-cycle-of-research/
- Saleh, Diana & Pestrea, Anna & Johansson, Björn. (2022). "Exploring Command and Control of Semi-Autonomous Units: Co-constructing the future battlefield using a tactical board game."
- "Wargaming and The Cycle of Research and Learning", Peter Perla, Scandinavian Journal of Military Studies, 2021.

Further Reading

- "Wargame Pathologies", CNA, September 2004
- "Why Wargaming Works", Peter Perla & Ed McGrady, Naval War College Review , Vol. 64, No. 3 (Summer 2011), pp. 111-130
- "Doing Analysis", Margaret M. Polski & Jon Scott Logel, U.S. Naval War College War Gaming Department, May 2019