



Defence Academy
of the United Kingdom

Wargaming

Major Tom Mouat



Disclaimer

This presentation represents the **personal** view of the author and is in no way representative of official UK MOD policy.

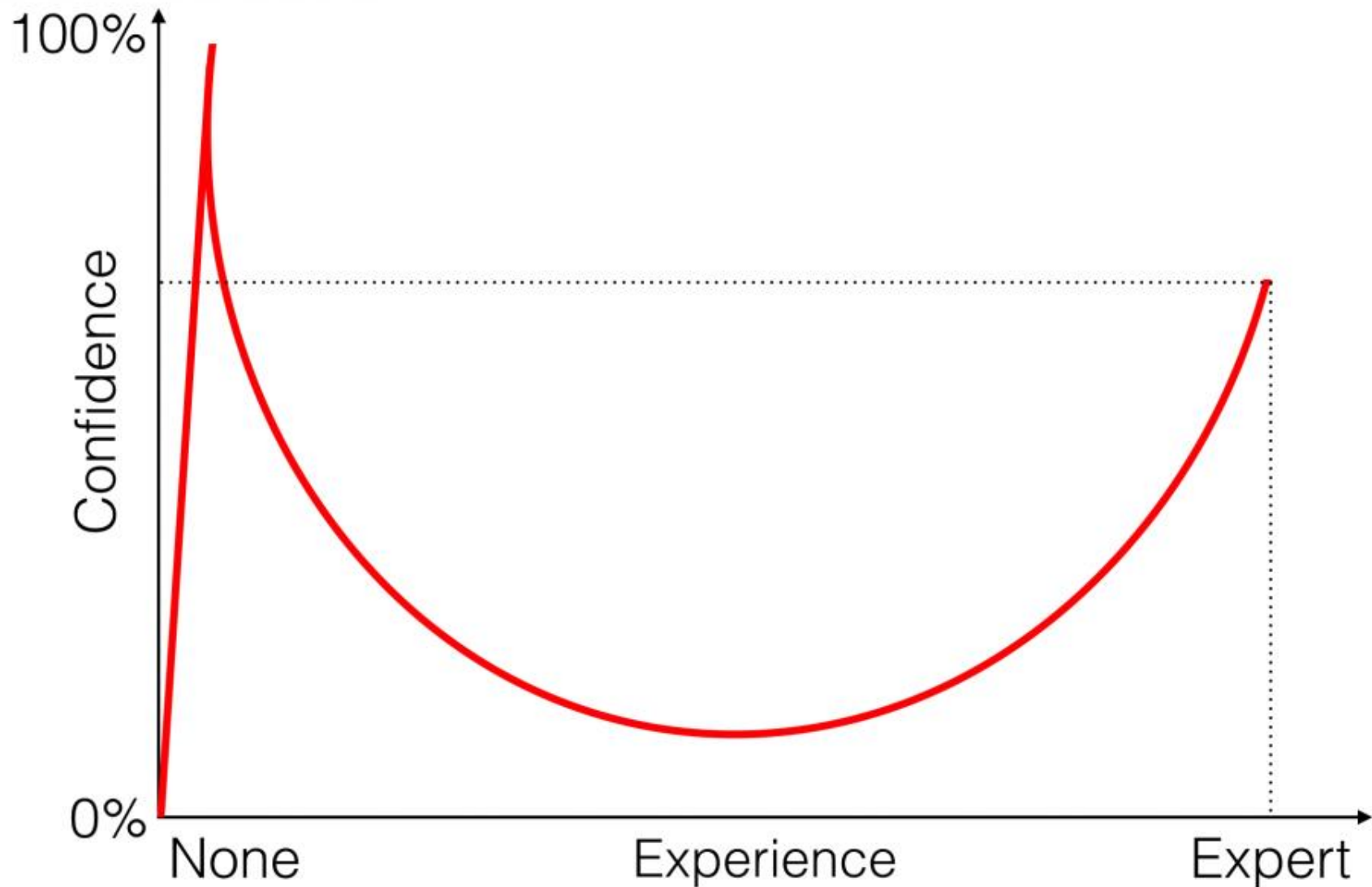
The UK MOD is small, but still bigger than one man can know.
He might have missed something.

The author is a full-time reservist serving beyond mandatory retirement age and is therefore possibly **embittered** and **cynical** after 40 years service... :-)

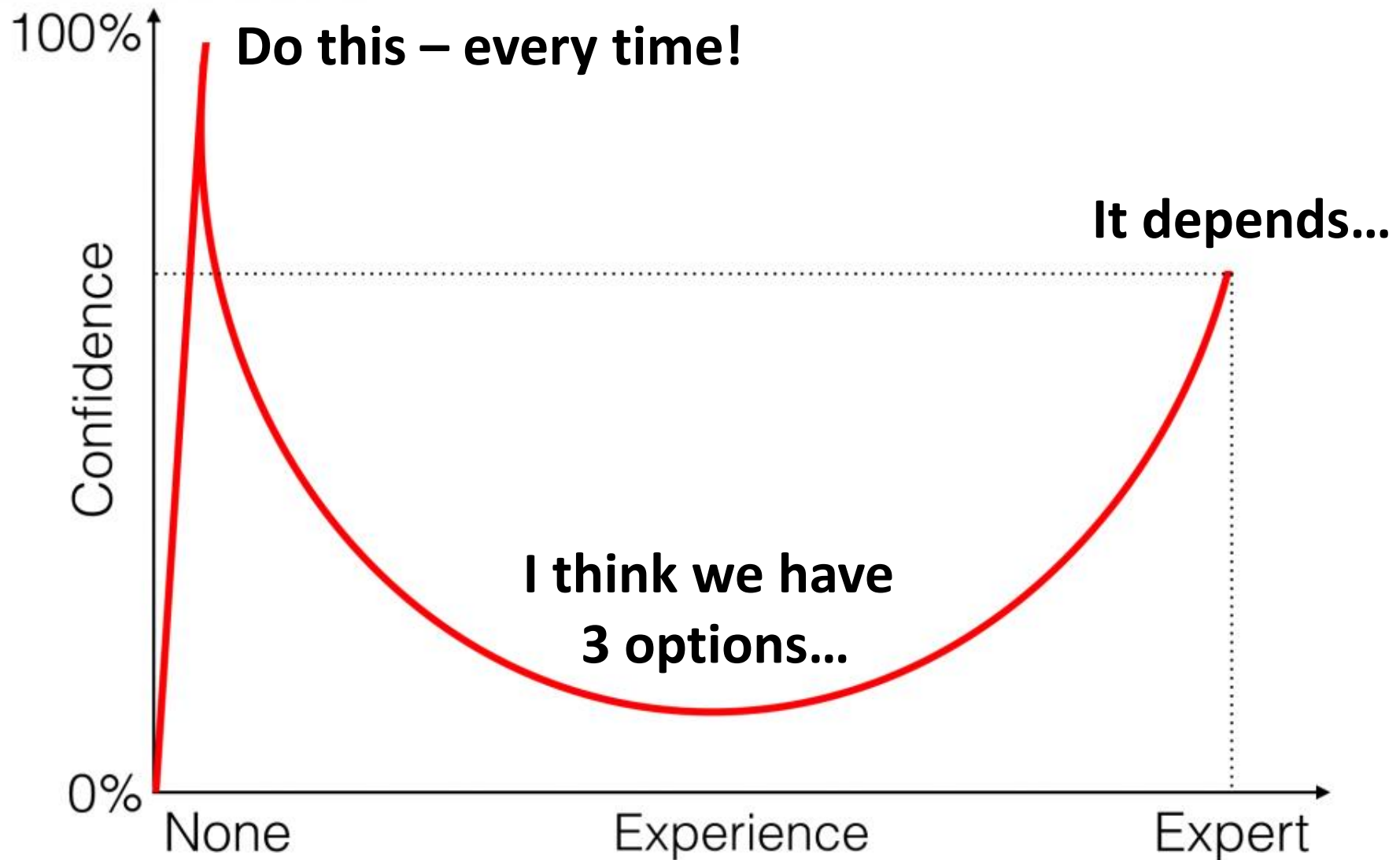
The Expert problem.



The first rule of Dunning-Kruger Club is...
...you don't know you are in Dunning-Kruger Club.



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**How do we
get better
at something?**

**Practice
Makes
Perfect.**

Command And Staff Training:

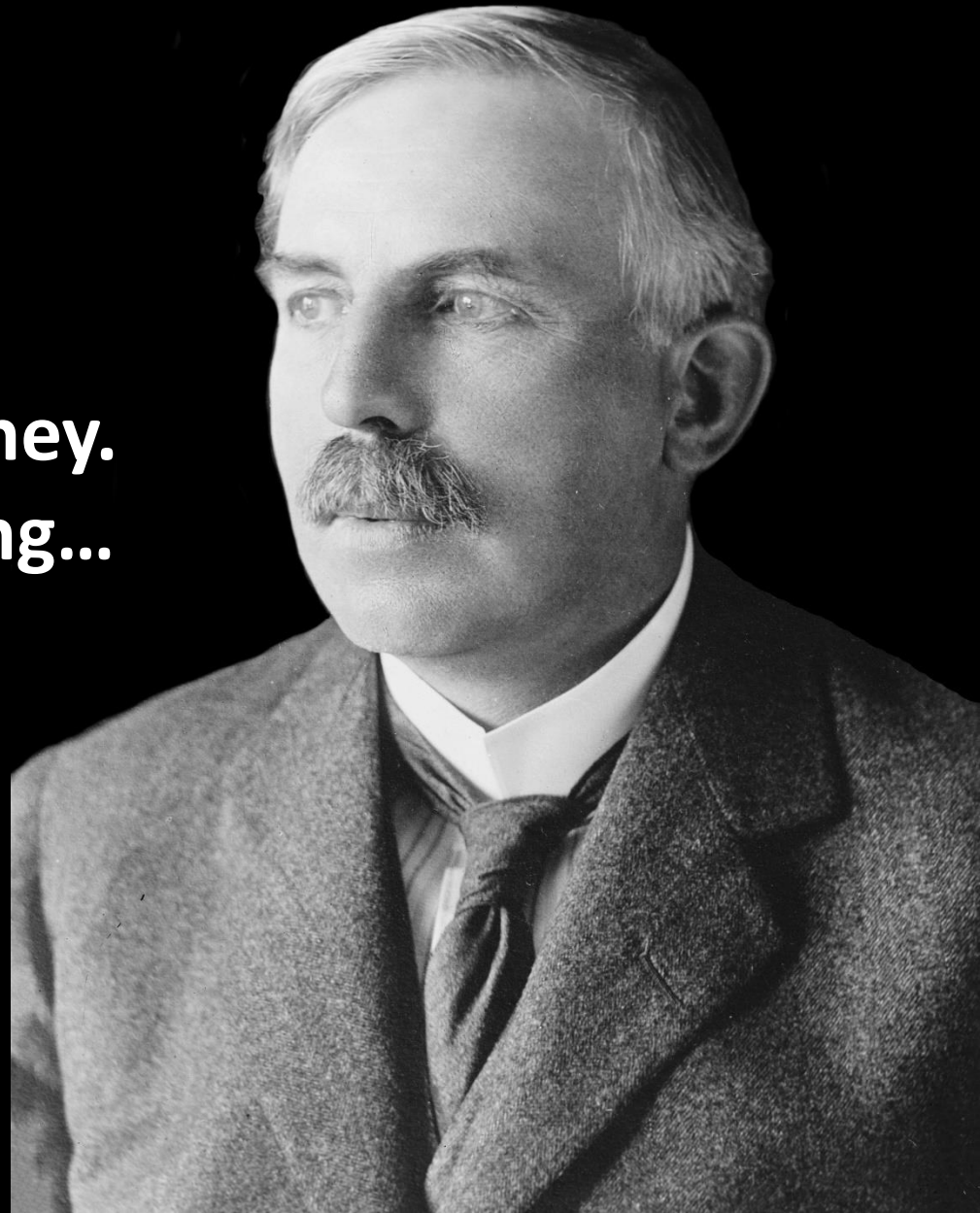


CAST Characteristics:

- **Expensive.**
- **Complex.**
- **We have few of them.**
- **Future Force 2020 - Steady State Training:**
 - **Reaction Force: Twice in 3 years.**
 - **Adaptable Force: Once in 3 years.**

**Gentlemen,
We have run out of money.
It is time to start thinking...**

Sir Ernest Rutherford, 1962

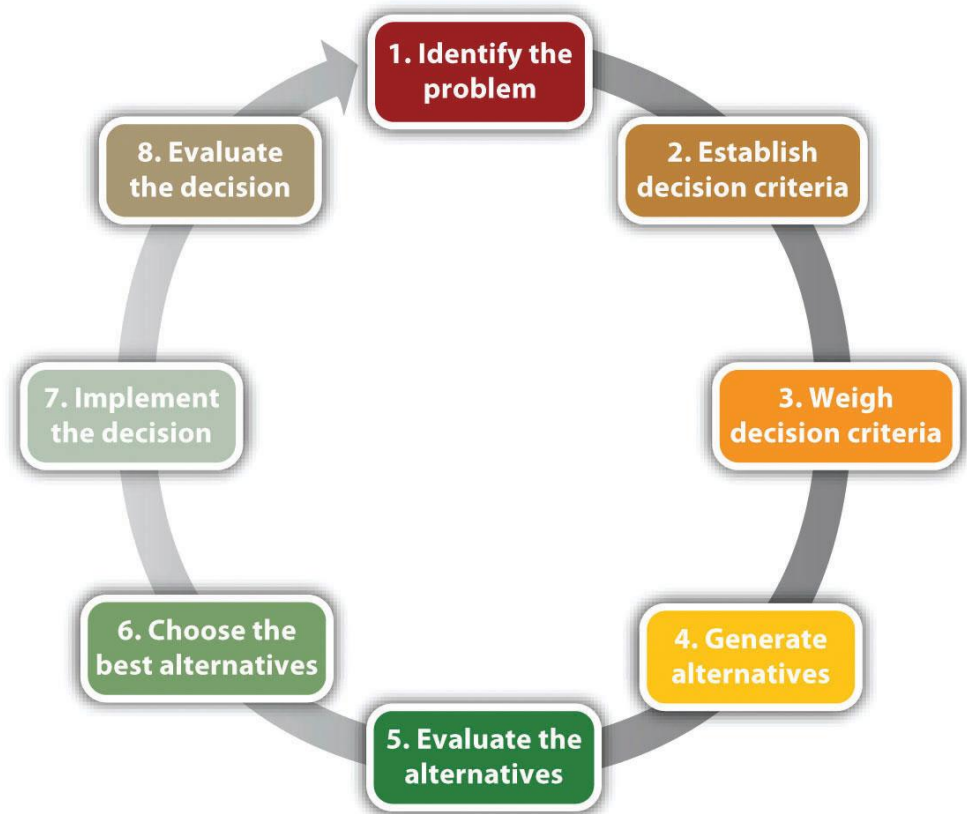


Why Wargame?

- In order to *practice* decision making.

- Against *opposition*.

- To *gain insights*.



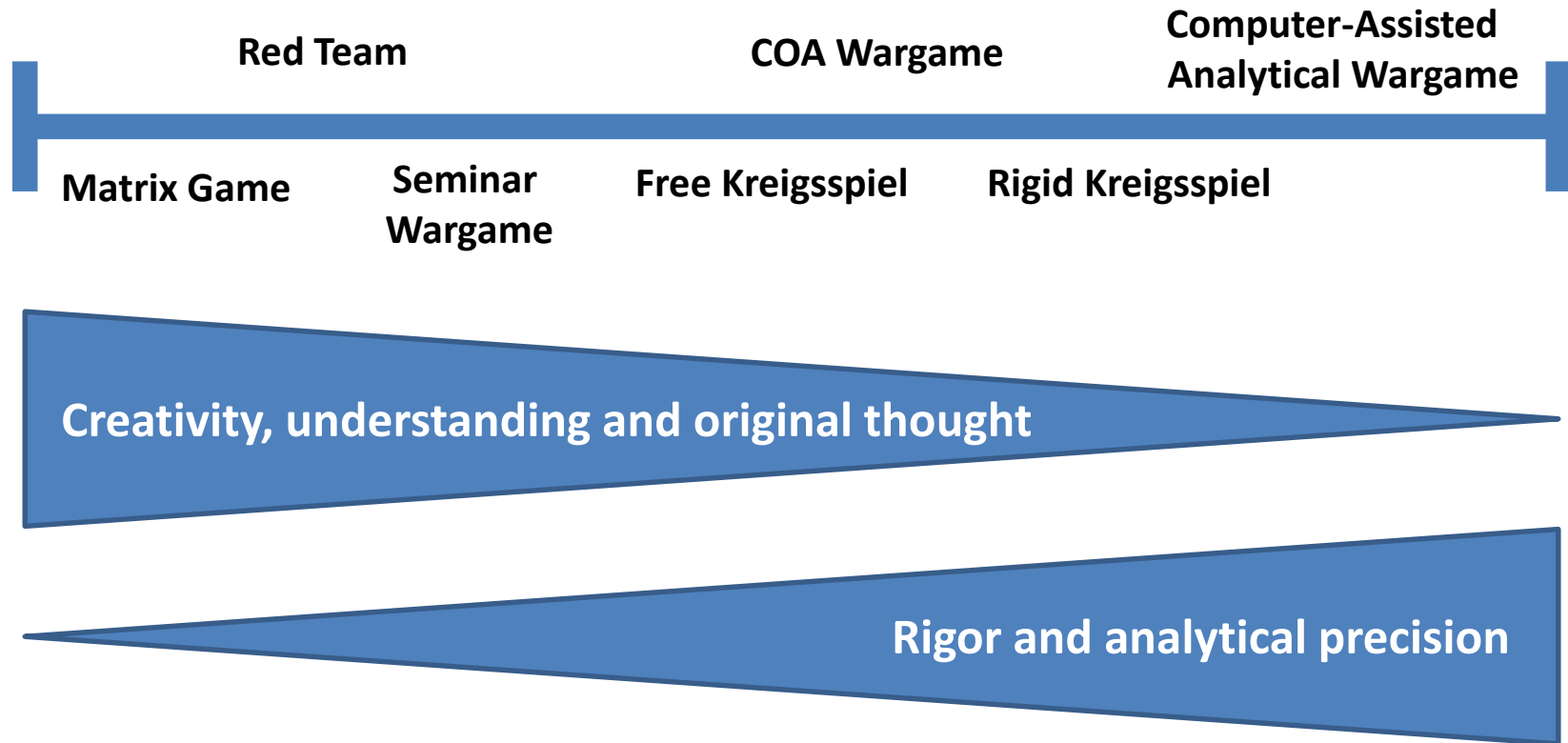
General Von Moltke

Process:

- Off-site.
- TEWT.
- Wargame.
- Validation.
- Records.



Wargames cover a broad spectrum:



Wargaming and Innovation...



09 Feb 15

The Class of 1927

■ Participants in the wargame:

Von Prager*, Adam, List*,
Von Kluge*, Von Brauchitsch*,
Von Witzleben*, Von Kleist*,
Kesselring, Von Reichenau,
Von Manstein*, Busch, Paulus,
Guderian, Heinrici, Von Arnim,
Von Mackensen, Matzky, Ott,
Donitz.

■ Versailles Treaty.

ling

RH2

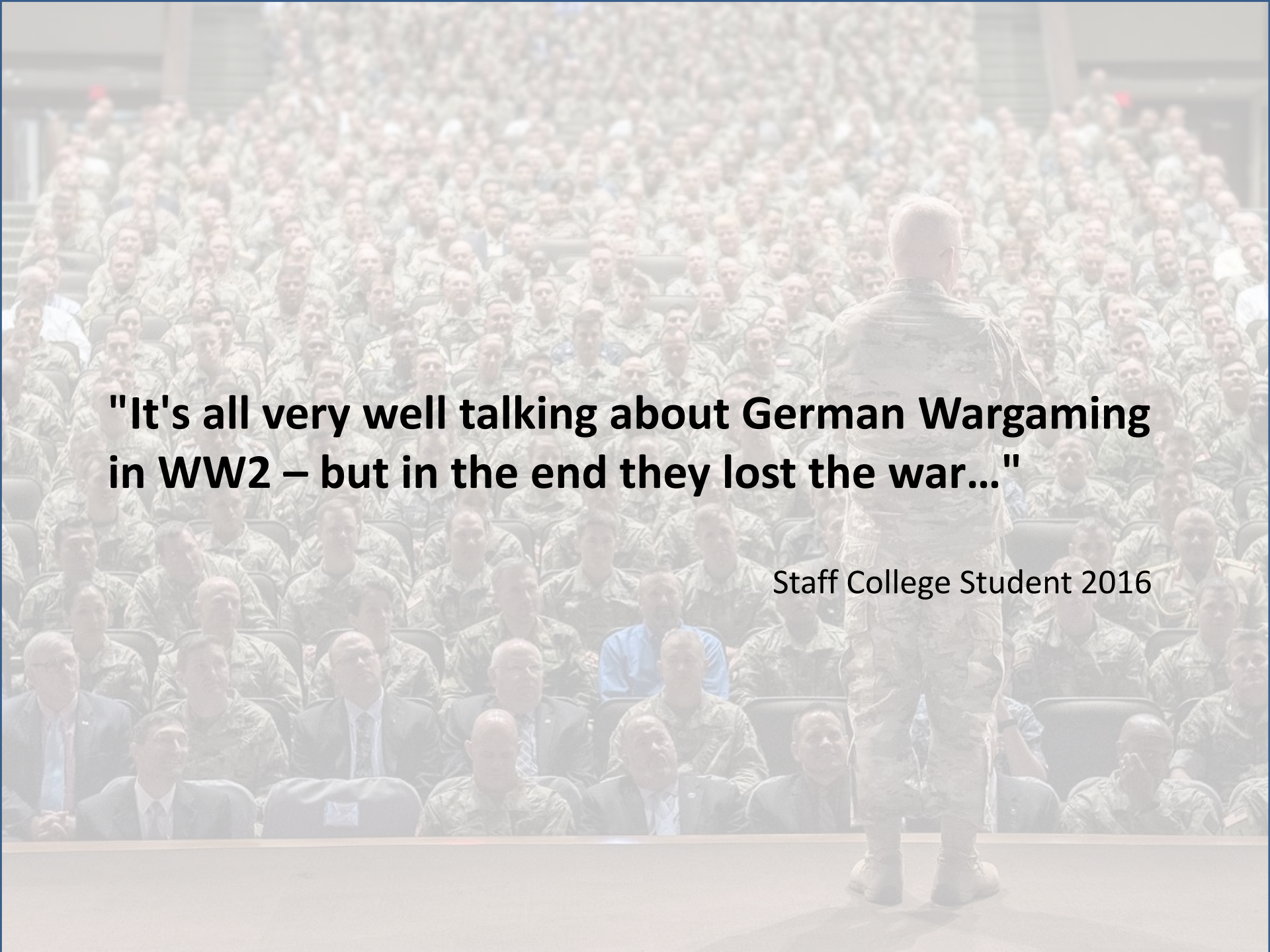
73

BLAUPIEL - RECHSIAHISTORISCH 1927

RH 2/73

Teilnehmer: Oberst v. Prager, ganz groß, aber gefürchtet
 Oberstlt. Adam, ganz wacker, später war
 Hitler mit ihm 2. Inf. und
 Oberstlt. Adam hat ihn
 Oberstlt. Adam hat ihn
 Oberstlt. Adam hat ihn
 Major List - sein feind
 " v. Kluge - " "
 " v. Brauchitsch - "

Teilnehmer: Hauptleute und Majore, dabei
 Major v. Witzleben - der spätere
 " v. Kleist - " "
 Major Kesselring " "
 " v. Reichenau " "
 " v. Manstein " "
 " Busch " "
 " Paulus " "
 " Guderian " "
 " Heinrici " "
 " v. Arnim " "
 " v. Mackensen " "
 " Matzky " "
 " Ott " "
 Oberstlt. Donitz " "
 und andere namhafte Generale. Liquidator des
II. Weltkrieges



**"It's all very well talking about German Wargaming
in WW2 – but in the end they lost the war..."**

Staff College Student 2016

The Western Approaches Tactical Unit

"The only thing that ever really frightened me during the war was the U-boat peril¹."

Winston Churchill

- **1942 – We were losing the Battle of the Atlantic.**
- **Churchill's orders: "Find out what is happening in the Atlantic, find ways of getting the convoys through and sink the U-Boats".**
- **Series of Wargames to determine U-Boat tactics.**
- **Trained 5,000 escort commanders using Wargames.**
- **Wargamed German counter actions and created a sustain advantage for the rest of the war.**

The Western Approaches Tactical Unit



Captain Gilbert Roberts CBE RN



Israeli Perspective

Create an adaptive military culture:

- *learn, not to win.*
- Trainee must:
 - *Fail.*
 - *Be surprised.*
 - *Be mentally challenged.*
- Learn that a failure doesn't mean defeat.



Chilcott Report



- Didn't understand the situation.
- Didn't apply foresight about how events would develop, particularly post-warfighting.
- Ineffective decision-making:
 - Processes impeded information flow.
 - Strategy-making was weak and inflexible.
 - Insufficient attention paid to capability and resources required for the operation.
- How do we "*scratch the Chilcott itch*"?



Home >> China >> China Society

Adversarial training enriches PLA's combat experience

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China's armed forces are stepping up combat adversarial training and war games in a bid to make up for diminishing real combat experience among their ranks.

Field troops of the People's Liberation Army (PLA) are taking year-end military examinations in which their superior commands have introduced war games played by "red" and "blue" sides.

The testing method, new for all the PLA services, has been set down as a training regulation to improve overall battle effectiveness, said Maj. Gen. Chen Zhaohai, chief of the military training and arms department of the PLA's General Staff Headquarters.

2015年新兵训练旅军人宣誓大会



"Hybrid Warfare"



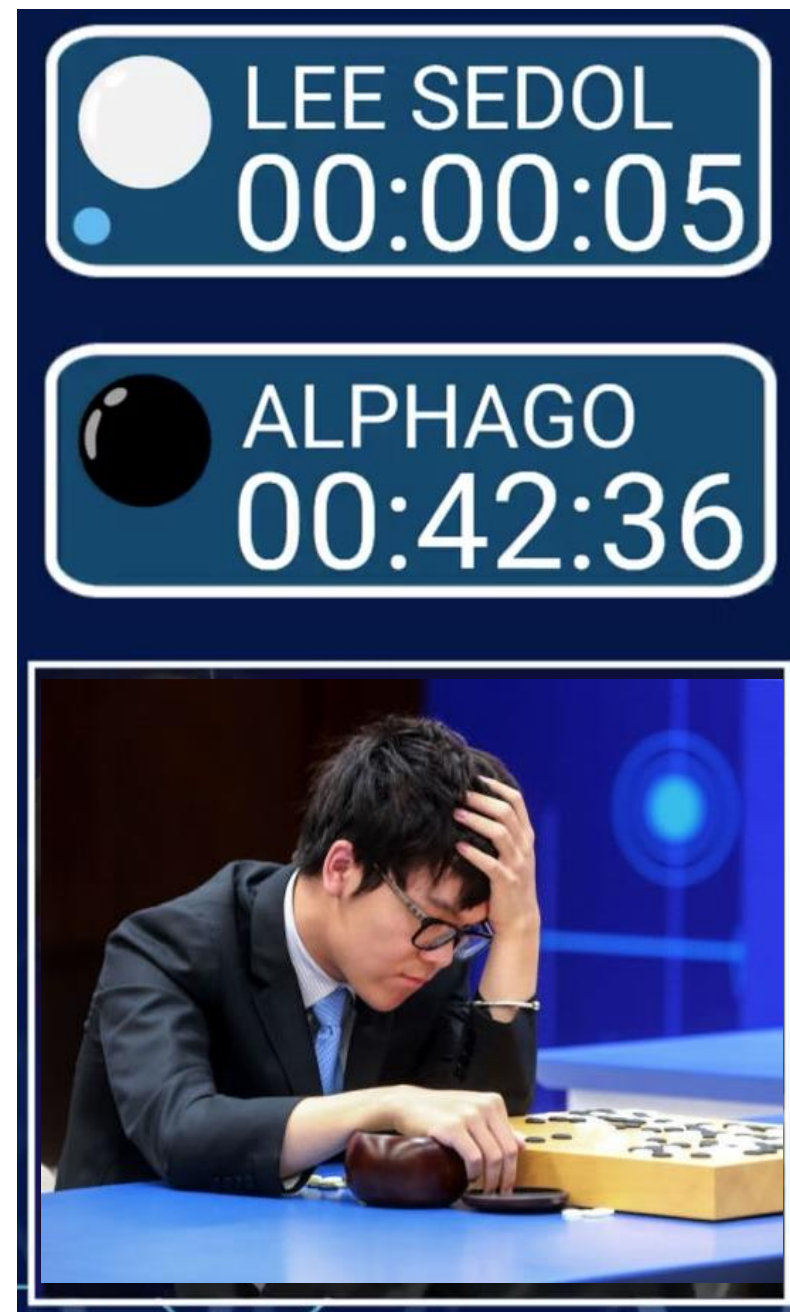
What is "Hybrid Warfare"?

- Things like Operations Other Than War, Effects Based, Non-Kinetic, Hearts & Minds, Soft Effects, Shaping, Influence, Messaging, Grey Zone...
- Involving religion, training, morale, belief, cohesion, leadership, motivation, public support, political will...

- 
- NATO conference on hybrid warfare.
- *“there is no agreed definition of terms related to hybrid warfare.”*

What about computers?

- Rules, Triggers & Pre-Sets.
- Simple Rule-based behaviours.
- Cannot deal with **new ideas.**



Surely AI and machine learning will give us the answer?

GAMING & CULTURE —

Elon Musk's *Dota 2* AI beats the professionals at their own game

But humans did eventually prevail over the computers.

PETER BRIGHT - 8/14/2017, 5:06 PM

Dendi vs. OpenAI at The International 2017



OpenAI takes on Dendi.

Last week was the high point of the *Dota 2* competitive year: it was the week of [The International](#), Valve's biggest tournament. On Saturday, Team Liquid walked away with more than \$10 million after defeating Newbee 3-0 in the grand final.



Before inspiration,
comes the slaughter.

A person in a light-colored jacket and dark pants stands with their back to the camera in a field of tall, dry grass. In the background, a line of evergreen trees is visible through a thick fog or mist. The overall mood is contemplative and serene.

KEEP
PANICKING.

Why Wargame?

- To gain understanding.
- To practicing decision making.
- To appreciating risk.
- To exploit imagination.
- To understand competition & adversarial thinking.
- To understand those you work with.
- To *learn* from defeat.

Original Thought...





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