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USING SIMULATION TO INCREASE  
FISHING YIELDS IN ATLANTIC CANADA

Rex Brynen, McGill University

The slide features a dark grey background. At the top center is a stylized illustration of a fish, likely a salmon, facing left. Below the fish is a white rectangular box with a black border containing the title "USING SIMULATION TO INCREASE FISHING YIELDS IN ATLANTIC CANADA" in black, uppercase, sans-serif font. Underneath the box, the text "Rex Brynen, McGill University" is centered in a smaller, grey, sans-serif font. At the bottom center is the McGill University logo, which consists of a red square containing the white crest and the word "McGill" in white.

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# WARGAMING DECEPTION

Rex Brynen, McGill University



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## DECEPTION



Canadian Armed Forces, Directorate for Army Doctrine, *ACT: The Operational Function*, (2013), B-GL-320-000/fp-001

BLUF: Deception is about shaping an opponent's behaviour.

BLUF: Deception is an important part of warfare.

21. **Deception** and surprise are key to fixing adversary manoeuvre forces. Denying the adversary the opportunity to achieve his goals and putting him in a reactive frame of mind enhances our freedom of action. Distraction is achieved by deceiving, luring and surprising the adversary. When an adversary is deceived, he is certain how to react, but his decision is wrong. When he is lured, he is invited to take a course of action that will make him vulnerable. When he is surprised, he becomes uncertain how to react to ambiguous information until it is too late. Given such uncertainty, the adversary can be forced to cover all options, thereby dissipating his force and being distracted from his purpose. He is thus fixed.

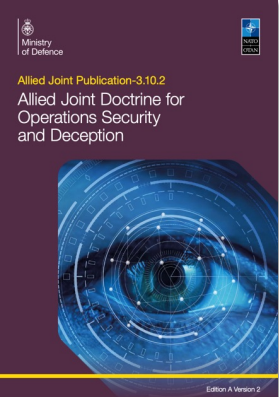
- a. **DECEPTION.** Deception will only be applied to adversary commanders and forces in order to affect their perception of the threat and intent. Deception is normally conducted in support of manoeuvre and fire support, with an adversary as the target audience, and therefore the planning should be led by those staff responsible for manoeuvre.

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## DECEPTION



UK Ministry of Defence and NATO, *Allied Joint Doctrine for Operations Security and Deception* AJP 3.10.2 (March 2020).

BLUF:

Deception is an important part of warfare AND doing it successfully can be quite complicated.

**Principles of deception**

- 1.21. **Create a behavioural response.** Deception must focus on creating a desired behaviour. This behavioural outcome must meet the commander's intent.
- 1.22. **Reinforce existing beliefs.** It is important to understand what the adversary is predisposed to believe (including how they expect friendly forces to act) and what they are predisposed to disbelieve. It is easier to reinforce a belief than to change it and difficult to convince them of something they would ordinarily reject.
- 1.23. **Target the decision-maker.** Deception targets the decision-maker. The targeted decision-maker must be able to detect deceptive events, process them and subsequently act upon them. The decision-maker may be at the tactical, operational or strategic level.
- 1.24. **Be credible, consistent, verifiable and executable.** Deception must be:
  - credible in their minds – is it believable;
  - consistent with the narrative of the operation and the strategic communications framework – does it make sense in context with what is happening;
  - verifiable by their collection assets in the time required – can it be satisfactorily confirmed;
  - verifiable by friendly forces collection assets – can we confirm the adversarial reaction; and
  - executable in terms of the actions required over the time period available to do so – can we actually do this in a timely manner.
- 1.25. **Multiple approaches.** Creating effects through joint action (the combined application of the joint functions of manoeuvre, fires, information and civil-military cooperation) will ensure an integrated approach. The greater the number of channels used, the greater the likelihood of the deception being perceived as credible.
- 1.26. **Conceal the real and reveal the false.** Draw attention away from real dispositions and intentions, while simultaneously attracting attention to false intentions. Alternatives require the adversary to evaluate them.

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### OP BARCLAY

OPERATION BARCLAY was a series of deceptive actions (including MINCEMEAT and WATERFALL) undertaken in 1943 to support HUSKY (the Allied invasion of Sicily).



OP Mincemeat



British "12th Army"

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### OP BODYGUARD

OPERATION BODYGUARD was a series of deceptive actions (including FORTITUDE and QUICKSILVER) undertaken in 1944 to support OVERLORD (the Allied landings in Normandy).



The London Controlling Section



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British "4th Army"



US "1st Army Group"

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## WARGAMING DECEPTION

4.10. **Incorporating deception.** Deception is an important feature in influence wargames. NATO defines deception as: *deliberate measures to mislead targeted decision-makers into behaving in a manner advantageous to the commander's intent.* The intended deception target will not be at the wargaming table, so all efforts to assess the effectiveness of deception must be attempted through proxy players. This requires specific design approaches and significant data capture effort. The appropriate approach is likely to be a closed game in which certain information is concealed from the players. This entails strict operations security concerning the scenario and objectives, and limiting out-of-game player interactions. Misinformation and disinformation are likely to feature, and varying degrees of information integrity and degradation (not just binary denial) can lead to player confusion and exacerbate the usual pressures inherent in a wargame. Hence, players must be carefully briefed, and the correct mindset instilled to pre-empt player disengagement and frustration. For each action taken by a player, it is important to ascertain that deception is intended, the type of deception, and the desired behavioural response of the target to being deceived. This must be done as each action is conceived and submitted. When information about actors' moves is provided (filtered and possibly distorted through the control cell) players should then interpret what is happening. This must be captured before they plan their next move. Finally, the players declare what they now intend to do, and whether this deviates from previously stated plans. In this way, the following can be determined after the game:

- if deception was intended and, if so, what type and how;
- if the deception target's perception of reality changed; and
- if the changed perception changed the target's behaviour in the way desired by the deceiver.

**BLUF:**  
Wargaming  
it is  
complicated.

UK Ministry of Defence, *Influence Wargaming Handbook* (2023)

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- if deception was intended and, if so, what type and how;
- if the deception target's perception of reality changed; and
- if the changed perception changed the target's behaviour in the way desired by the deceiver.

1. An actor need to be able make the **CHOICE** to deceive and take **ACTIONS** to support that deception.
2. The target must have their view of reality changed.
3. The target must act on that changed view of reality.

Is this simply a game effect, wherein an (unplayed) subordinate is fooled, rather than the actual player?

Or is this a game of wits between the players?

This doesn't require imperfect information (and, indeed, may benefit from being evident).

This usually requires imperfect information.

Nor does it have to be a player choice, since the player may simply be observing the importance of deception (in an educational game).

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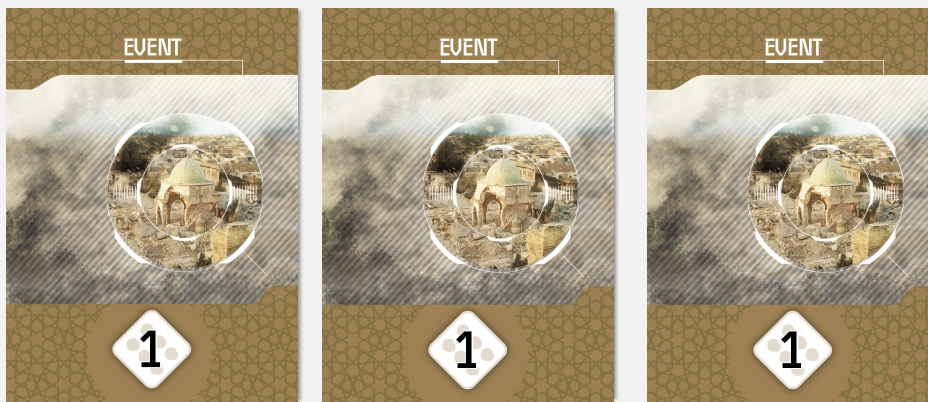
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## TYPES OF (WAR)GAME DECEPTION

- **Modelled deception**
  - The game includes an evident deception effect, much the same as modifiers for (say) air or artillery support or defensive positions.
  - Possibly as a choice, possibly as a randomized or narrative event.
- **Executed deception**
  - Players must execute deception in a way that changes perceptions and behaviour.
  - That is, they must use the game mechanisms available to them to actually achieve (cognitive) deception.

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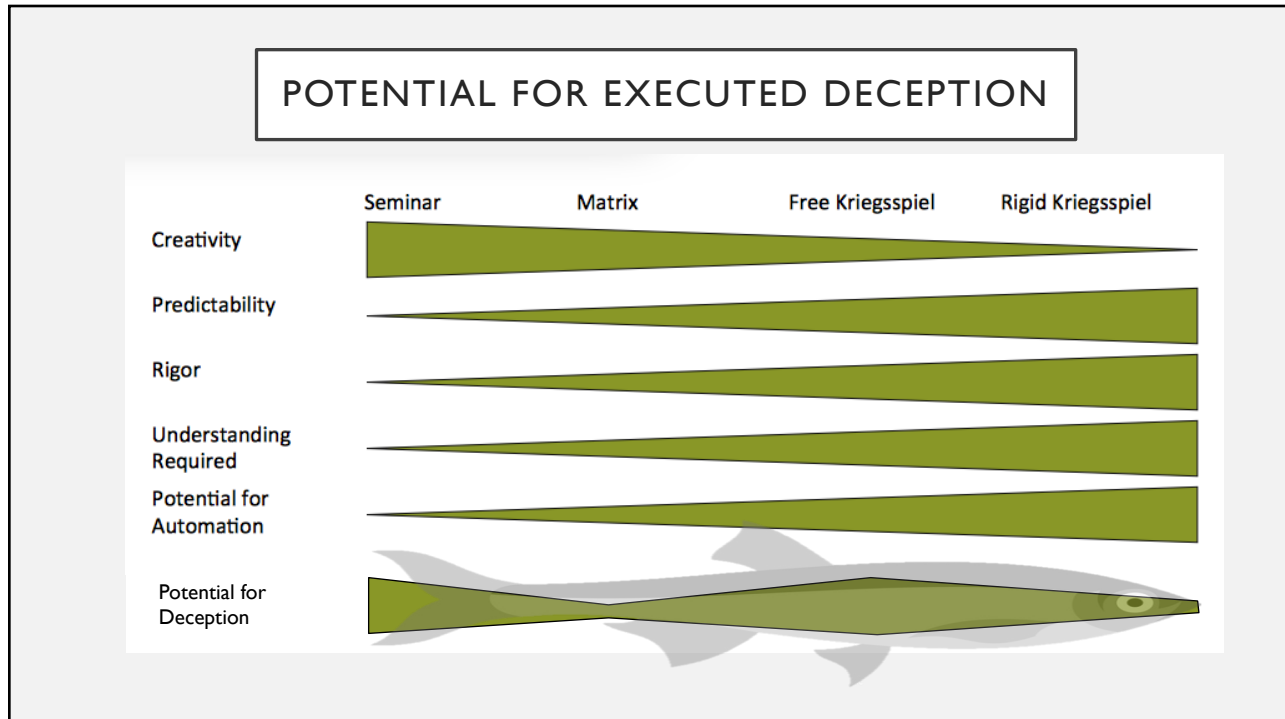
## MODELLED DECEPTION



We Are Coming, Nineveh!

With these Event cards, players aren't undertaking actual deception, but they ARE learning about its battlefield importance.

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## GAME TYPES AND DECEPTION

### MATRIX GAMES

- Players can execute deception in negotiation with each other, or undertaken deceptive action via facilitator, but the rapid pace of play constrains both.
- Modelled deception is possible, however.

### SEMINAR GAMES

- Range of player options and pace of adjudication provides substantial opportunities for designing and implementing innovative executed deception.
- Limited number of turns may be a complicating factor, however.


### RIGID KRIEGSSPIEL

- Finite range of permitted actions and rigid application of rules may constrain deception.
- Can be done, however, especially with imperfect information and/or major negotiation component (*Diplomacy*).

### FREE KRIEGSSPIEL

- Range of player options and flexible adjudication provides substantial opportunities for designing and implementing innovative executed deception.
- Limited time for adjudication may be a complicating factor, however.

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**We Are Coming Nineveh!**

With these game mechanisms—blocks, rumours (dummy counters), tunnels, stay-behind forces, etc.—the Daesh player is provided with the **building blocks of (executed) deception.**

**STAY-BEHIND FORCE**

Play this card at any point during the game (including during ISF movement), then remove from play. Immediately place 1 (or 2) stay-behind unit(s) in any area(s).

**MEDIA CENTRE**

Production unit may be placed in any non-ISF area during deployment. May not be moved once placed.

Roll die to attempt one operation during each Daesh support phase, adding 1 if Daesh is in majority.

3-4: **Manufacture** Place rumour block (if available) in any non-ISF area.

4-6: **Call of Daesh** Daesh units in one area receive +1 combat bonus this turn.

6-6: **Assess and Counterintelligence** Collateral damage effects doubled until end of this game turn.

**LARGE TUNNEL NETWORK**

Once per game during the Daesh support phase, place two tunnel markers on the map. The first must be placed in a Daesh-controlled area, and the second in another area up to three areas away. A tunnel marker is removed from play at the end of a game turn if the area is under ISF control.

Once per turn during the Daesh movement phase, one Daesh unit may move from one tunnel marker to any another up to three areas away. This counts as the unit's regular movement for the turn.

**RUMOURS**

Rumours may be placed in non-ISF areas during initial deployment, or by Event Cards and Media Centre operations.

Rumours are removed as soon as revealed and can be used to take some step losses (7.4).

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## EXECUTED DECEPTION

**Use multiple information sources to "triangulate" important information**

**CLAIM:** Opposition MPs have been forced to flee the capital.

**VERDICT:** The claim is TRUE. More than one third of all elected MPs have now fled the capital because of the actions of the Minister of Defence.

RED deceives target audiences as to the accuracy of (dis)information by posing as BLUE.



Liked by natasha and 111,560 others

Bobr the Beaver It's great to be back! I can't wait to have adventures with all my friends! #BobrtheBeaver #MyLanguage #Hyatta #Cheerless #AdamsForum #ElectricResistance #Legislators


**Another case of malicious disinformation**

Use critical analysis skills to identify disinformation.

- What is the political interest or perspective of the sender? The Minister of Defence wishes to justify military intervention in Syria. He is not however an elected official. The local government agencies have confirmed the information is false and dangerous.
- What do other sources report? International media outlets have also reported that this information is false, dangerous, and widely supported by the local population.

**VERDICT:** MINISTER OF DEFENCE IS AN ULTRANATIONALIST ASSHOLE.

RED uses humour to overcome audience resistance to influential (dis)information.



Liked by Cindybuwho and 11,834 others


Bobr the Beaver Oh my goodness, I can hardly believe it! The content isn't even over yet, and already my friends are making their very own #BobrtheBeaver hats to show that they believe in friendship and kindness and (Bryan minority rights)! Here we see my pals Ivona and Natasha and Katherine and Alessandro from Inhabla Public School #1! Don't forget share the #BulliesBad tag and you could win an official Bobr the Beaver hat of your very own.

**Not all media outlets are independent of government influence**

Democracy Today has reported that the Hyattian government has ordered the arrest of ethnic-Ilytan (or 'Ikkalan') officials. Hyattian Television has denied this. Who is being more truthful?

The truth is somewhere in between. According to the Hyattian Minister of Defence, all Ikkalan officials who participated in the recent assembly celebrations are to be arrested. This represents almost all elected officials in the region. Ikkalan Members of Parliament have fled the Hyattian capital because they believe they will be arrested. They are reported to already be in police custody. The effect of martial law, therefore, may be to entirely disenfranchise the Ikkalan minority.

RED uses deception to increase threat perception in target audience, thereby shifting their behaviour.

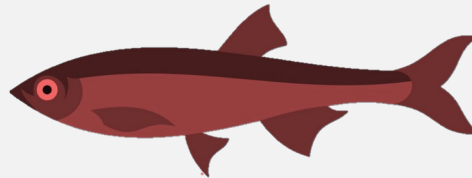


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## DECEPTION BY CONTROL ("RED HERRING" CHALLENGES)

- As part of an educational (war)game, CONTROL can also create deceptive pathways in order to:
  - assess how well players avoid them (or why they follow them)
  - provide "teachable moments."



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Character	Handle	Details
Brynania Ministry of Environment		RP and Scripted
Brynania Ministry of the Economy		RP and Scripted
Bybots		Scripted. Several simulated bot accounts that exist simply to amplify Brynanian government statements.
Environmental Activist		RP and Interactive
Rainforest Action Cyberts		RP and Interactive
Green Brynania		RP and Interactive
Teacher of Language		RP and scripted
McGillidaily Times		RP and Scripted
<b>Conspiracy Theorist</b>		Interactive. Very active on social media, and can be contacted by email or by social media. They will enthusiastically provide information, most of it misleading or wrong.

## "THE CONSPIRACY THEORIST" CNN ACADEMY 2023

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