

A painting depicting two women sitting on a red rug, playing chess. The woman on the left is wearing a light-colored dress and is looking at the chessboard. The woman on the right is wearing a light blue dress and is also looking at the chessboard. The chessboard is in the foreground, and several chess pieces are scattered around it. In the background, there is a round table covered with a green cloth, a red chair, and a red sofa. The overall style is impressionistic with visible brushstrokes.

Complexité de la Simplicité

Le concept d'empreinte du jeu de guerre



Who am I?

IRL: Statistics Director in a Danish toy company.

Background:

- History
- Political Science

Not an academic!

Discovered tabletop wargaming in 2015 with Twilight Struggle

Started a YouTube Channel in 2018.

First game published in 2021.





ConSim Game Jam

Inspired by Video Game jams, an event were anyone can join and make a wargame from scratch in 3 days.

Edition #1 - 2020: recycle a COIN Game.

Edition #2 - 2022: make a card driven card game.

More info here:
<http://consimgamejam.com/>



CONSIM
GAME JAM

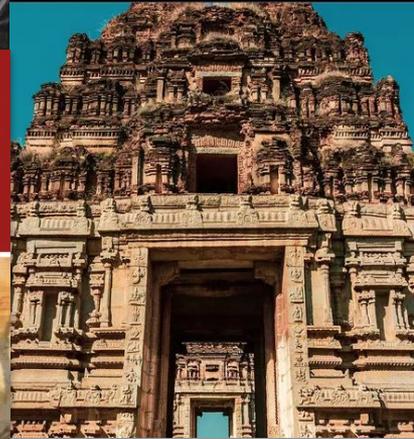
IN THE SHADOWS

French Resistance
1943-1944



VIJAYANAGARA

The Deccan Empires
of Medieval India



REBELLION BRITANNIA

Resistance against Rome in 1st Century Britain





Purpose of this session

This is not a formal academic presentation. I'm here to share my experience and thoughts about game design.

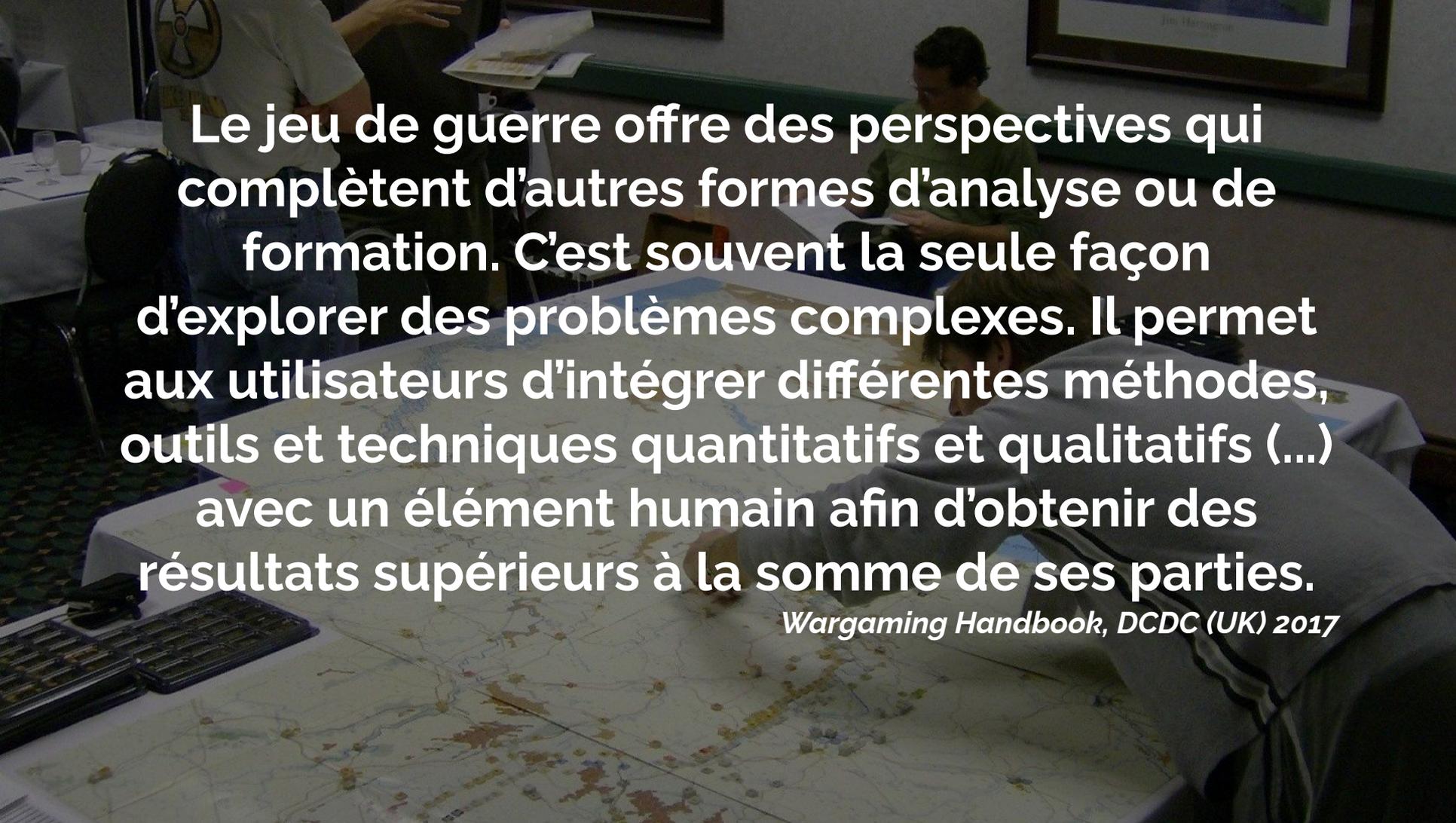
My objective: spark a conversation with you and refine my own thinking on this topic in the process.

The core idea: boardgame footprint is a core aspect of the player's experience and needs to be central to the designer's reflexion. It comes in different dimensions: temporal, spatial, cognitive, social etc..



Pourquoi "jouer" la Guerre?





Le jeu de guerre offre des perspectives qui complètent d'autres formes d'analyse ou de formation. C'est souvent la seule façon d'explorer des problèmes complexes. Il permet aux utilisateurs d'intégrer différentes méthodes, outils et techniques quantitatifs et qualitatifs (...) avec un élément humain afin d'obtenir des résultats supérieurs à la somme de ses parties.

Wargaming Handbook, DCDC (UK) 2017

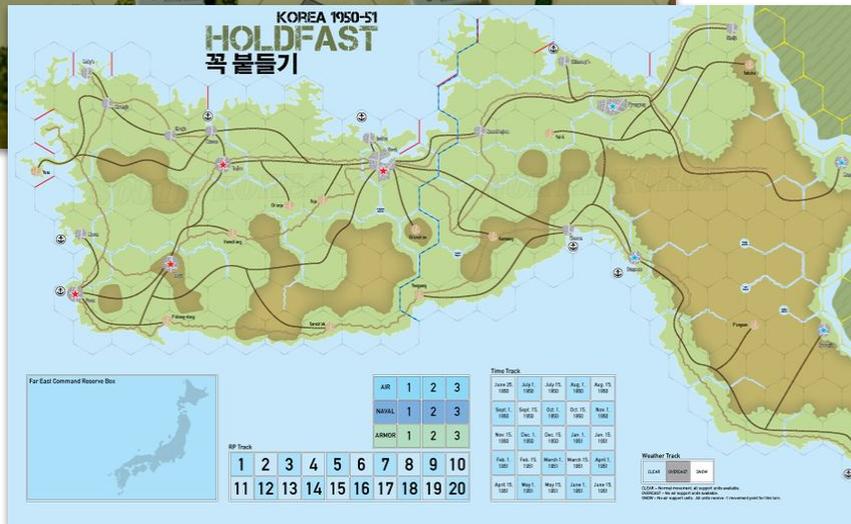


Un outil heuristique pour le joueur et le concepteur

Une manière différente d'interagir avec l'histoire, ou un problème complexe.

Pour le concepteur : recherche avec un objectif, aide les non-universitaires et les universitaires. Force à condenser des idées complexes en mécanismes.

Pour le joueur : un outil heuristique pour rendre la connaissance historique ou doctrinale plus tangible.



Un modèle historique interactif

Partir de la recherche et construire un modèle "top-down" pour représenter les objectifs, les modes d'actions et les contraintes physiques.

Matrice d'interaction joueur/faction comme modèle historique dynamique.

Un travail de synthèse basé sur la recherche du sujet.



AFFECTED Faction

	AMISOM	TFG	PIRATES	SHABAAB
AMISOM	<ul style="list-style-type: none"> - Train for Civic Actions - Counter-Piracy to increase Support - Assault / Air Support to remove Shabaab pieces 	<ul style="list-style-type: none"> - All AMISOM Ops and SA may change Control 	<ul style="list-style-type: none"> - Non-existent 	<ul style="list-style-type: none"> - Non-existent
TFG	<ul style="list-style-type: none"> - Civic Action to improve Support - Train, Sweep, Assault, Patrol, reduces Shabaab control - Federalize to decrease Support 	<ul style="list-style-type: none"> - Train, Sweep, Assault, Transport, Patrol to get COIN control - Federalize, Govern to improve Patronage 	<ul style="list-style-type: none"> - Govern to improve Pirates Dirty Money 	<ul style="list-style-type: none"> - Transport, Sweep, may change Control - Federalize increase opposition.
PIRATES	<ul style="list-style-type: none"> - Rally, March, Militia Pressure, Suborn may reduce Shabaab control - Raise trouble to reduce Opposition - Rally, March, Militia Pressure, Suborn may reduce COIN control - Raise trouble to reduce support 	<ul style="list-style-type: none"> - Militia Pressure, Suborn may reduce Shabaab control - Raise trouble to reduce Opposition - Rally, March, Militia Pressure, Suborn may reduce COIN control 	<ul style="list-style-type: none"> - Raise Trouble to obtain Hostages token - Ransom to improve Dirty Money - Launder to get Laundered Assets 	<ul style="list-style-type: none"> - Rally, March, Militia Pressure, Suborn may reduce COIN control - Raise trouble to reduce support - Rally, March, Militia Pressure, suborn may reduce Shabaab control - Raise Trouble to reduce Opposition
SHABAAB	<ul style="list-style-type: none"> - Non-existent 	<ul style="list-style-type: none"> - Non-existent 	<ul style="list-style-type: none"> - Non-existent 	<ul style="list-style-type: none"> - Terror to increase Opposition - March, Attack, Rally, Ambush to achieve Control

ACTING Faction

How the faction on the left HELPS the faction along the top's victory condition

How the faction on the left HINDERS the faction along the top's victory condition



Avantages du wargame "manuel"

Faible barrière d'entrée : Si vous savez jouer, vous pouvez concevoir. Aucune exigence technique. Cout de production faible etc.

Une relation plus viscérale avec le jeu : vous devez intégrer cognitivement le modèle, interagir physiquement avec, interaction directe entre joueurs etc.

Les contraintes cognitive obligent le concepteur à synthétiser son propos et à créer un "modèle".



What is a board game footprint?



	Large Counter	Elevation	Random
10000			
9000			
8000			
7000			
6000			
5000			
4000			
3000			
2000			
1000			
0			



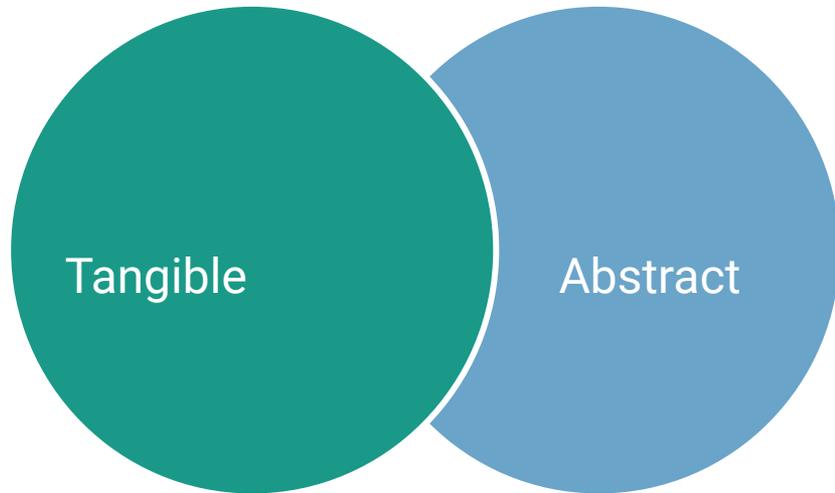
Two types of footprint

The footprint of a board game has multiple dimensions that can be regrouped in two larger categories.

Tangible: relates to the physical object, irrespective of the players.

Abstract: relates to what the game asks from the player.

Taken together, this constitutes the comprehensive game's footprint.





Necessity of the footprint

There is nothing inherently good or bad about having a large or narrow design footprint.

Each game should have a conscious intent about the experience it is offering to players and use this footprint to its advantage.

Usually, historical board game design have by nature a need for a larger footprint as they convey a point of view about an event, and not just gameplay.

The game for designers is optimising this footprint.

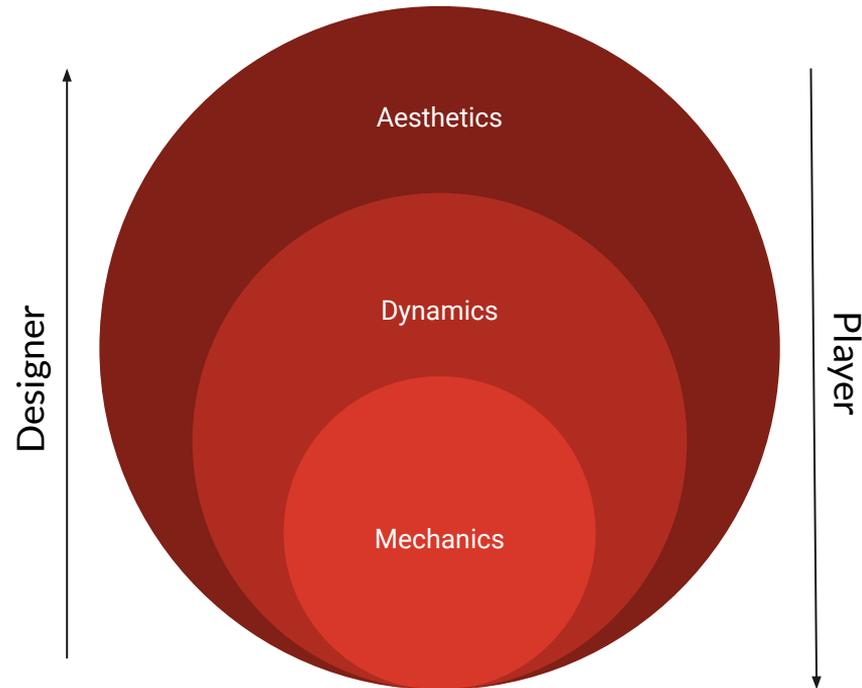




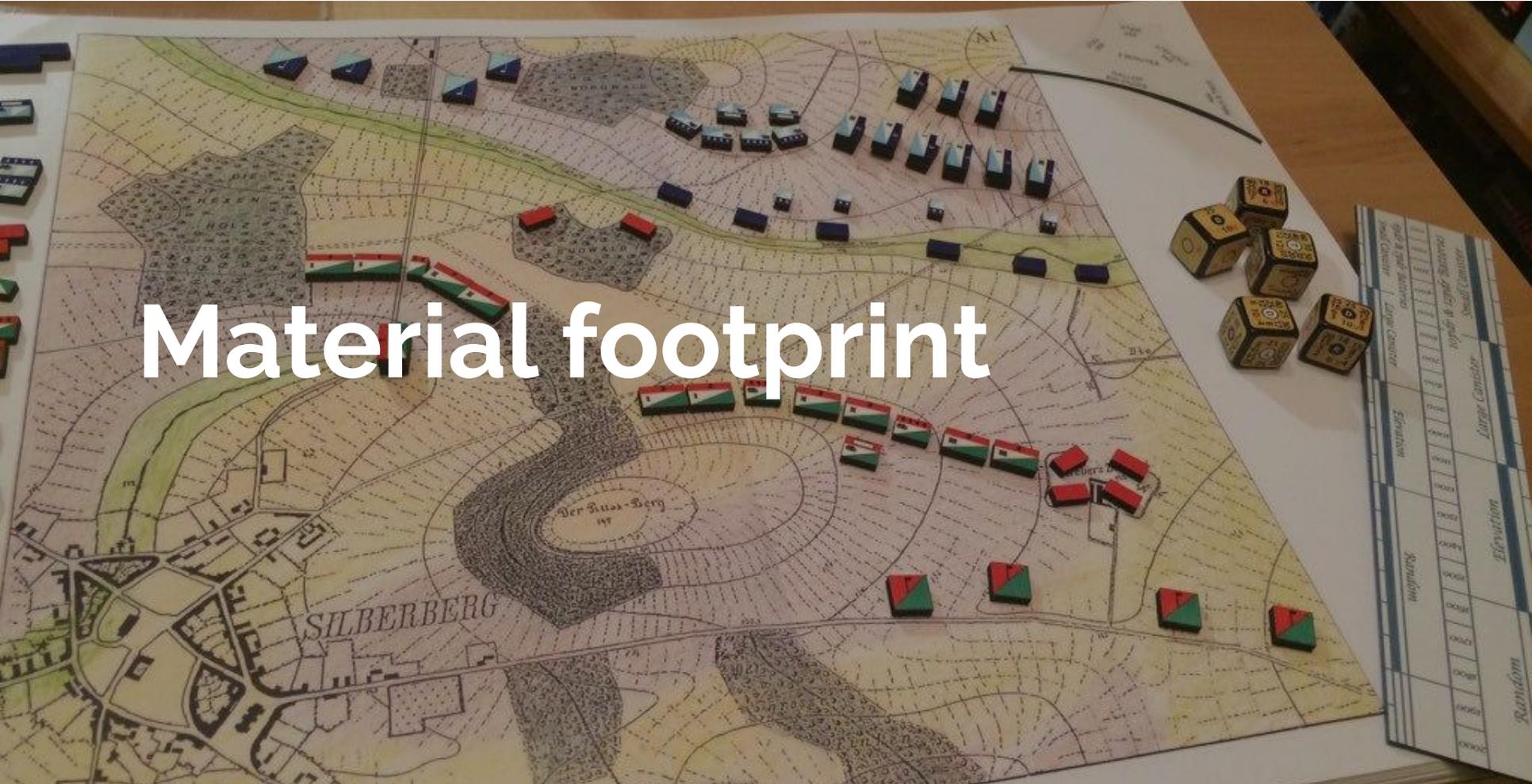
MDA framework

Two opposed approach to a same object:

- **Mechanics:** what are the systemic components of a game, behavioral options offered to the player.
- **Dynamics:** how the mechanics interacts with each other, what behaviors are rewarded or sanctioned.
- **Aesthetics:** what makes the game unique / fun / interesting ?
 - Sensation
 - Narrative
 - Challenge
 - Fellowship
 - Expression...



Material footprint





Temporal

Definition: length that it takes to play the game (learning + teaching the rules, set-up, actual gameplay)

Benefits: a longer playtime enables the designer to build more complex narrative, reward long term planning from players, propose more complex models.

Risks: attention loss, increased social cost, less opportunity to play, imbalance between length and gameplay.

Example of High footprint: Campaign for North Africa

How to play with this dimension: scenarios based systems.





Spatial

Definition: physical space that it takes to play and store the game (from bar counter to dedicated room and storage).

Benefits: player immersion, illusion of movement.

Risks: space occupied (US vs EU players), dilute real decision making on geographical detail, gamey mechanics.

Example of High footprint: OCS Case Blue

How to play with this dimension: abstract geography (Pax games), maps per scenarios, individual components (optimise table space).





Social

Definition: how much does the game rely on social structures? Income, community etc. What we're considering here: player count, level of involvement from on-owning players, sessions required, game's cost, etc.

Benefits: complex player interaction, immersion.

Risks: inclusivity, ability to play (playtesting?)

Example of high footprint: any miniature wargame.

Example of low footprint: any print and play wargame.

How to play with the footprint: variable player count, learn to play scripts, entry level versions (ie card bases minis)



Abstract footprint



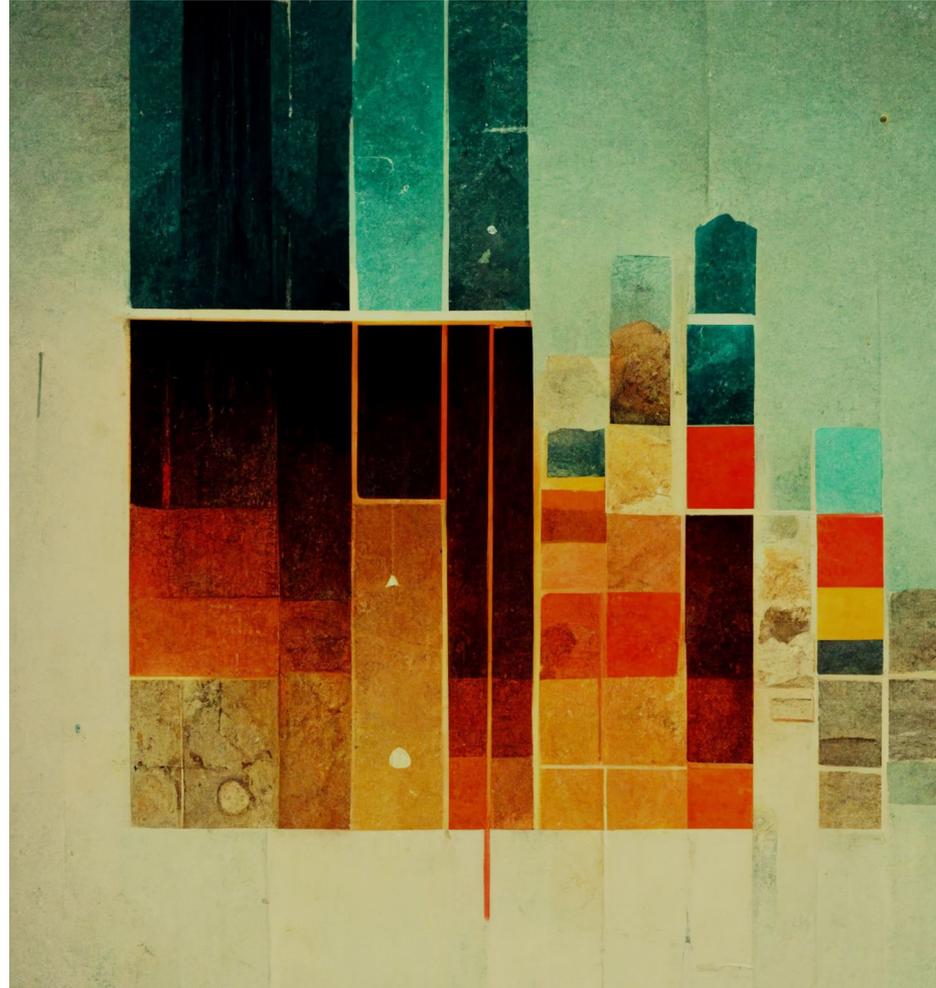


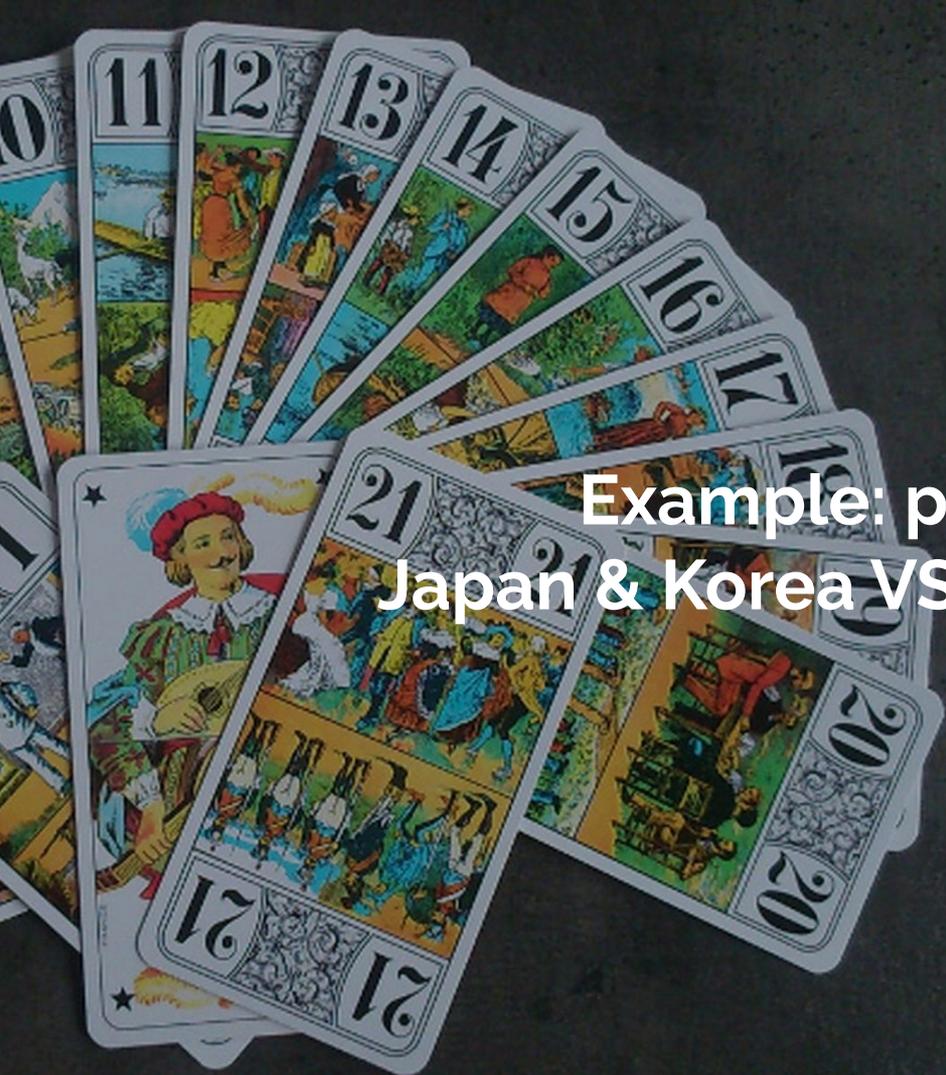
Design Sedimentation

Game design has a historical becoming: gradual abstraction and stabilisation created the toolbox of mechanics that designers have access to and that players are used to.

Those mechanics are like other various forms of culturally inherited practices. Such as language or social norms, those patterns are acquired and internalised in a specific socio-cultural context, constituting a sedimentation of game design conventions.

Therefore, even when game designers innovate, they do it on top of centuries of inherited conventions through their own ludic experiences. Their work, in turn, becomes part of the game design sediment.





Example: playing cards
Japan & Korea VS. Southern Europe



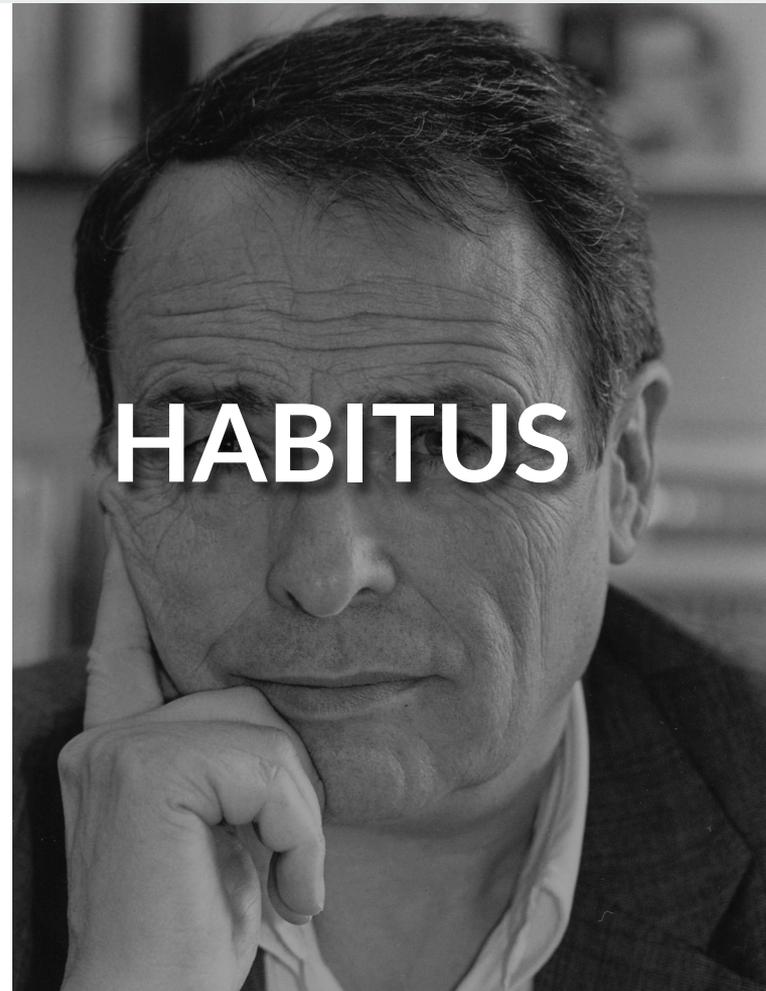


Ludic Cultural Capital

Each player comes with social baggage, including their embodied cultural capital that affects their experience with the game:

- Did they play as a kid?
- What kind of games was prevalent in their social environment?
- What mechanics are they used to?
- How acceptable is "playing" in their social circle?

Additionally, gaming is a social practice correlated to socioeconomic background. Example: boardgaming is more prevalent in upper-middle-class families with kids etc.





Cultural

Definition: how much does the game relies on the players Ludic Cultural Capital? How much does its mechanics are tied to specific sub-categories of gaming?

Benefits: lower cognitive load to learn the game for experienced players, play with conventions (Helsinki 1918), popularise and engage with the cultural context of those conventions.

Risks: lower inclusivity, participate in community segmentation.

Example of high footprint: Standard Combat Series (pure HnC conventions)

How to play with the footprint: transpose context of conventions (Napoleon's Triumph, Brian Boru)





Emotional

Definition: the potential emotional impact of the game on the player. This is tied to the existing relationship that the player has with the topic.

Benefits: increase player involvement, raises ethical dilemmas for players to explore, prevent whitewashing.

Risks: discomfort, ethical dilemmas, existing trauma from the players.

Example of High footprint: This War of Mine

How to play with the footprint: abstraction, artwork, flavour text etc.





Cognitive

Definition: the cognitive load put on the player to engage with the game. Taking into account: learning the rules, game complexity and depth.

Benefits: increase decision making space, enable more complex historical models.

Risks: increase mistakes by player, analysis paralysis, introduce rules edge cases.

Example of High footprint: Advanced Squad Leader

How to play with the footprint: player aids, UI, use components for edge cases (cards), segmented rules, intro scenarios, tutorials etc.



Economy of complexity

Complexity comes from:

- The game's bureaucracy
- The game's decision space

In the case of historical game design, even if the games we create don't have vocation to be played for centuries, I think it is crucial to reflect on which part of the cognitive footprint increases the refinement and which part is just mechanical complexity.



Game Refinement

Game complexity could be a presentation in itself. In the context of this discussion I think it's important to consider that complexity potentially plays a significant role in the game's practice in a unsuspected way.

In fact, if games that are too complex struggle to reach a wider audience, complexity can play a major role in a game's staying power.

In cultural spaces where variants of similar games compete, the most refined one is the one that survives.

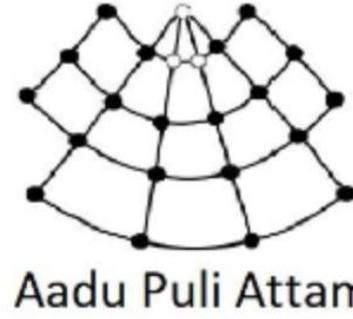
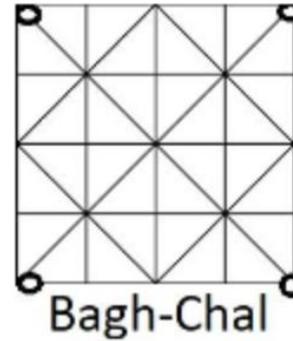


TABLE 1. Measures of game refinement for several board games

Game	B	D	GR
Chess	35	80	0.074
Chinese chess	38	95	0.065
Shogi	80	115	0.078
Go	250	208	0.076

TABLE 4. Measures of game refinement for BAGH-CHAL (Nepal) and AADU PULI ATTAM (India)

Variant (Country)	B	D	GR
BAGH-CHAL (Nepal)	8.56	39	0.075
AADU PULI ATTAM (India)	3.14	50	0.035

How to evaluate the footprint? A proposal





Footprint Measurement Matrix

Based of the BGG scale, something more quantitative should be possible (refinement + rules length?)

	Temporal	Spatial	Social	Cultural	Emotional	Cognitive
1	>30 minutes	Bar counter	Solo, cheap, low involvement	Common: playing cards, dice...	Abstract game, no emotional ties	Light
2	30-60 minutes	Kitchen table	2 players, affordable, low involvement	Common with specific mechanics: trick taking, area majority...	Distant historical context, no individuality in game pieces	Medium Light
3	20-120 minutes	Living room table	2+ players, expensive, medium involvement	Contemporary: drafting, worker placement etc.	Contemporary context, some sensitive topics	Medium
4	120-240 minutes	Gaming table	3+ players, expensive for all players, high involvement	Contemporary expert: complex card mechanics, deck building	Close historical context, some individuality, sensitive topics	Medium Heavy
5	240+	Dedicated space	3+ players, expensive, requires storage, high involv.	Dedicated sub culture: HnC, Pax, COIN etc.	Sensitive topic, individuality, moral dilemmas	Heavy

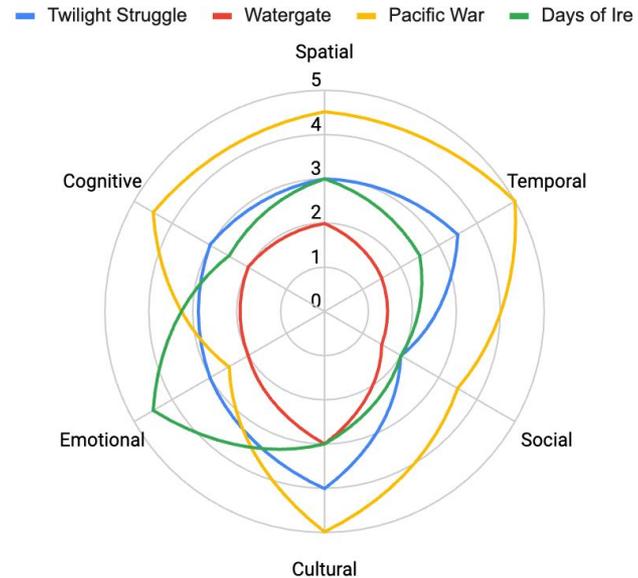


A few examples

A concrete application of the footprint measurement matrix to a selection of conflict simulations game of different kind, in order of footprint size:

- Watergate
- Days of Ire
- Twilight Struggle
- Pacific War

Comparative Footprints



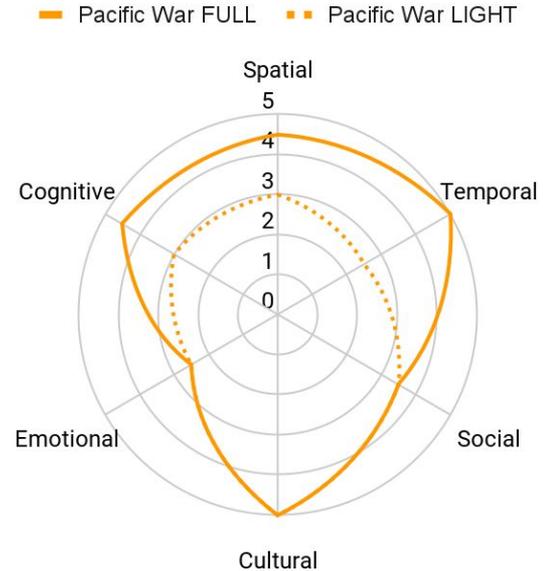


Playing with the footprint: Pacific War

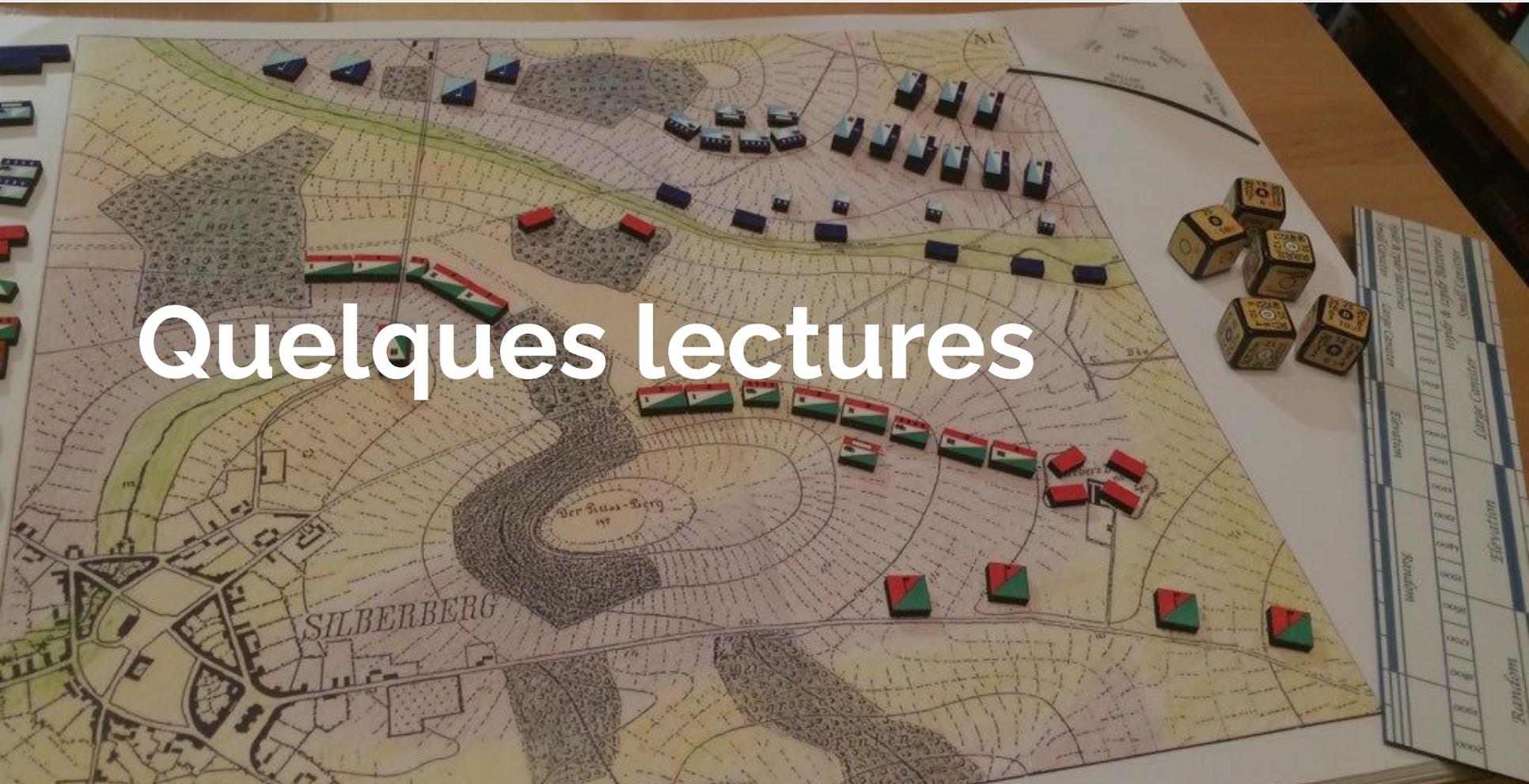
How does Pacific War alters its footprint?

- Spatial: multiple map system to adapt to scenario
- Temporal: scenario mechanic that starts from 30-45 minutes one to a full on campaign
- Cognitive: layered rules (engagement, battle, operation) with separated rule books.

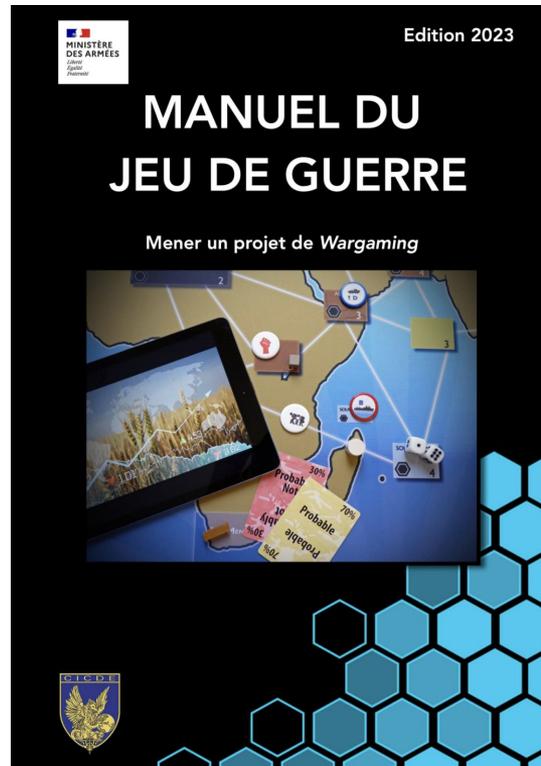
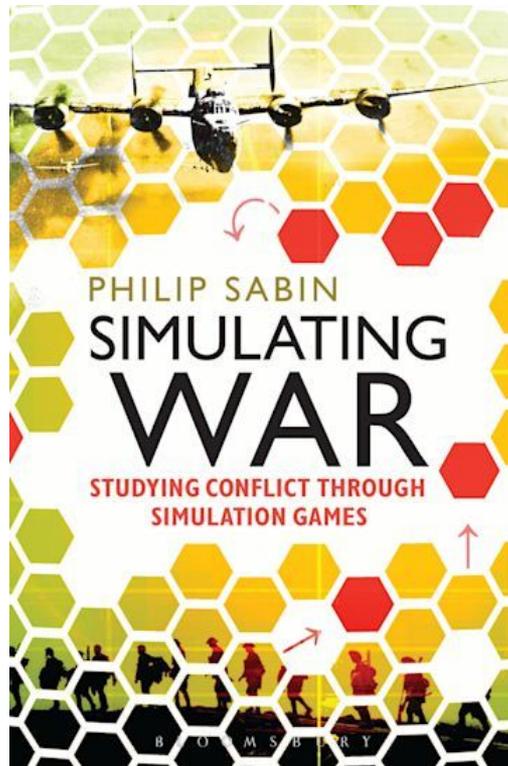
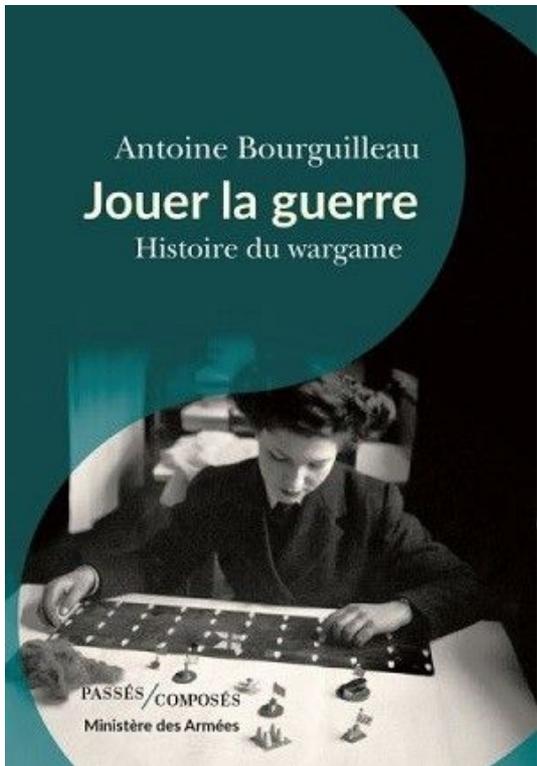
Varying footprint of Pacific War



Quelques lectures



Random	Elevation	Large Consider	Small Consider
10000	10000	10000	10000
9000	9000	9000	9000
8000	8000	8000	8000
7000	7000	7000	7000
6000	6000	6000	6000
5000	5000	5000	5000
4000	4000	4000	4000
3000	3000	3000	3000
2000	2000	2000	2000
1000	1000	1000	1000
0	0	0	0





Thanks

Twitter / Bluesky: @fredserval
Email: fredserval@gmail.com

