



Refining Methodologies

This is about **WAR**gaming – not social media, or food distribution – or twitterwars
"Political power grows out of the barrel of a gun."

This section applies to methods to simulate the application of force to do this:



“There is only one principle of war and that's this. Hit the other fellow, as quickly as you can, as hard as you can, where it hurts him most, when he isn't looking”.
Bill Slims CSM when he was a 2Lt

BI-5





most efficient way

er, or stop fighting because



“Most battles seem to be fought on the side of a hill, in the rain, where 3 maps join and your radios will not work...”





Refining 4 Methodologies

Fog of War and Situational Awareness

**Player level / expertise / knowledge
The orders they can give in the game**

4 Problem Areas

**Who loses - how and why ?
Because that drives competition**

**Move / counter move / player order
Reaction time to events**



The dominant feeling of the battlefield is loneliness.





Fog of War and Situational Awareness

In your game do your players know any or all of these things about the enemy force opposing them ?

- **Who they are** - identity, unit, guards or militia, veteran or green
- **Where they are** - in the town, on the hill, on a road, in a valley, high, low, deep, - is it obvious?
- **What they are up to right now** - resting, eating, planning a big assault with biological weapons, or sitting around Facebooking with their girlfriends...just before they get annihilated in an MLRS strike (Ukraine)
- **When are the enemy going to ...** Attack, withdraw, invade, surrender, defect
- **Why are the enemy doing what they are doing** - what are they trying to achieve ?
[NB This is a huge cheat in most wargames that bears little resemblance to real warfare]
- **How are the enemy doctrinally likely to 'do' these things?** E.g. they always lead with anti tank guns , they try and do a first strike with Air/EW as a precursor to any action, little 'green men' ?

If the answer to any 2 or 3 of these is 'yes' then you are historically incorrect and should probably redesign..



“In battle nothing is ever as good or as bad as the first reports of excited men would have it.”



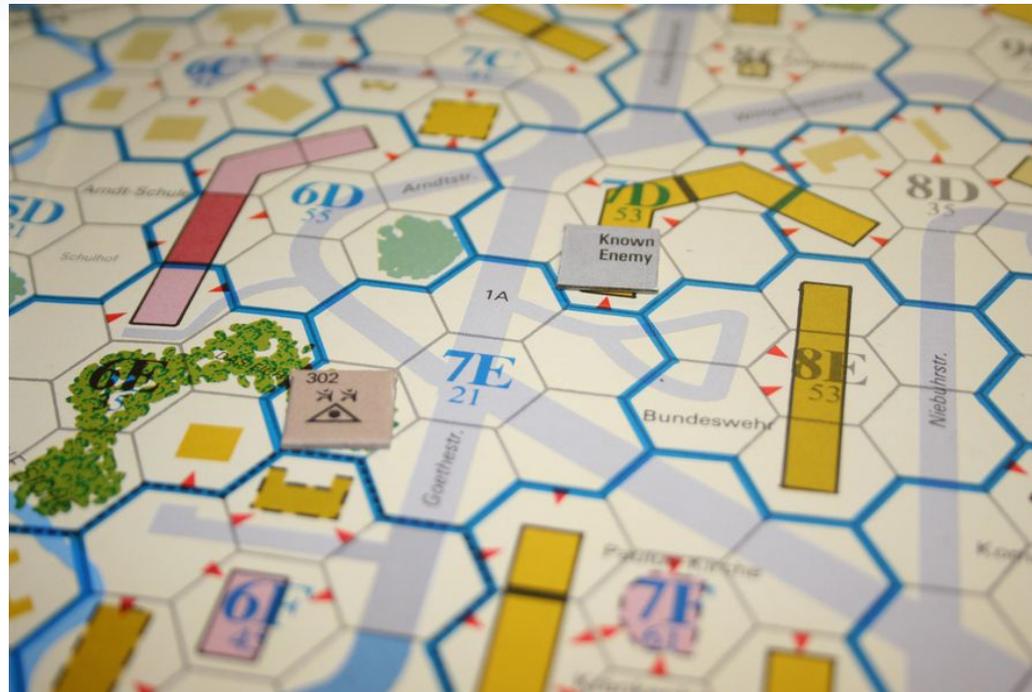


Fog of War and Situational Awareness

July 1944 – Russian moved 3,500 guns and 35,000 vehicles over 410 miles to redeploy (in total surprise) on the northern sector of German Army Group Centre. The sophisticated planning and technical efficiency to do this without German knowledge is staggering, but was part of the Russian 'how we fight' mentality and doctrine



Row upon row of 75-mm cannons before a barrage, Orléans, April 1944.



XX ☐ 7-10									
XX ☐ 7-10									





Refining 4 Methodologies

**Fog of
Situational Awareness**

**Player level / expertise / knowledge
The orders they can give in the game**

4 Problem Areas

**Who loses - how and why ?
Because that drives competition**

**Move / counter move / player order
Reaction time to events**



The dominant feeling of the battlefield is loneliness.





Player level / expertise / knowledge The orders they can give in the game

Are they appropriate ?

What may be the ramifications of either:

- Lack of knowledge or understanding of the military options that could be employed – or
- A game design that allows major decisions to be made that could really situate the game in a truly alternative reality – a Command team at Division level ordering about a company level unit?

What are your players level, expertise and subject matter knowledge ?
Who are they representing in the game? What authority do they have?

Does this line up with the decisions needed in the game?
Not which decision is taken , but are they a set of realistic options...

- if we are not careful we will end up with a game where SACEUR is being portrayed by a grad student – a player or team needs to have a modicum of base knowledge or the game will suffer.
- If they have not got that - what methodology would you employ to mitigate it ...?



When you cannot make up your mind which of two evenly balanced courses of action you should take - choose the bolder.





Player level / expertise / knowledge and the orders they can give in the game

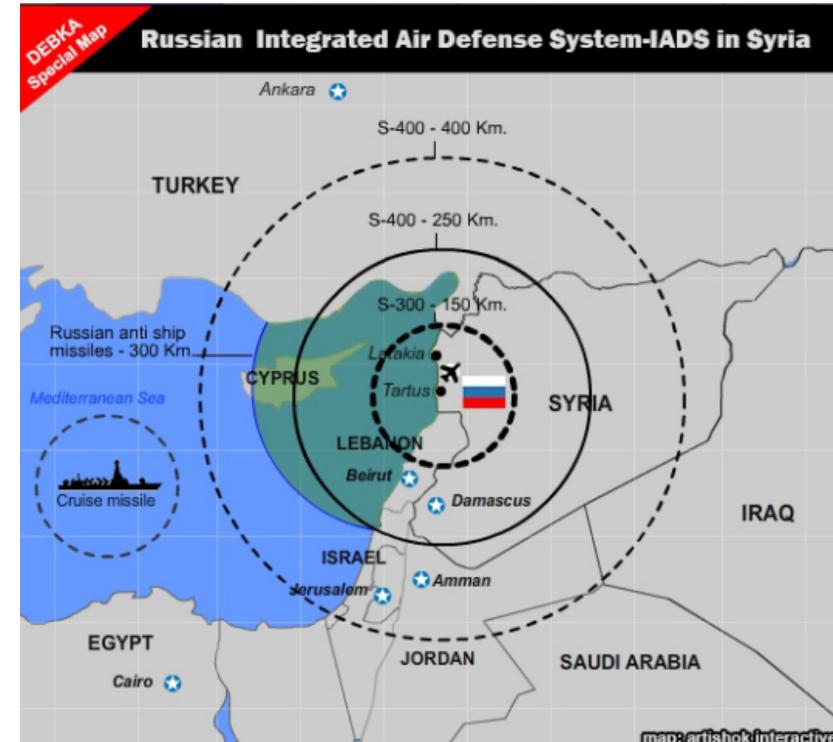
Examples:

1. An RCAF player attempted to both plan and 'order' a large NATO multi nation level SEAD mission against a near peer IADS.

It rapidly became obvious that his plan would be a disaster for the 'game' (and NATO) if executed as planned and an intervention was made to point out some fundamental flaws in the plan - a benefit of a semi-rigid Kriegspiel format.

2. A Blue player Group decided they would cross a 'hard' international border to prosecute a Terrorist bomb making facility - the decision was sensible based on the passage of play and what they knew from the game, but the international diplomatic repercussions would have been immense, as pointed out by Red with great glee.

In both cases the depth of player knowledge was not adequate for the situation



To begin with, Army Headquarters, Burma, was neither organized, manned, nor trained as a mobile headquarters to command fighting formations in the field. It was, in fact, a miniature peacetime War Office on the Delhi-Whitehall model.

Slim, Field-Marshal Viscount William. Defeat Into Victory





Player level / expertise / knowledge and the orders they can give in the game

What can you do about it ?



- Have a number (3?) of pre - scripted 'doctrinally based' plans to hand and get the players to choose from those as a base plan – the game then becomes one of execution and reaction to the enemy
- Get the right level of players and advisors!
- Design so that each of the players are given a specific role, e.g. J2 (Int), J3 (Ops), and give them time to learn the role, level of authority, and necessary facts (if necessary)
- Google 😊
- Give time for players to study and brief their team on their understanding of any constraints – agree what can be overlooked or agreed ahead of time – e.g. no hover tanks – the “*I believe button*”
- Supply your own ‘experts’ on whatever the playtest has shown will be critical – e.g. anticipate the problem ahead of time to support the players
- Skill matrix the players ahead of time – and allocate with the sponsor to ensure no major gaps in knowledge





Refining 4 Methodologies

Fog of War / Situation Awareness

**Player level / knowledge
The orders that are in the game**

4 Problem Areas

**Who loses - how and why ?
Because that drives competition**

**Move / counter move / player order
Reaction time to events**



The dominant feeling of the battlefield is loneliness.

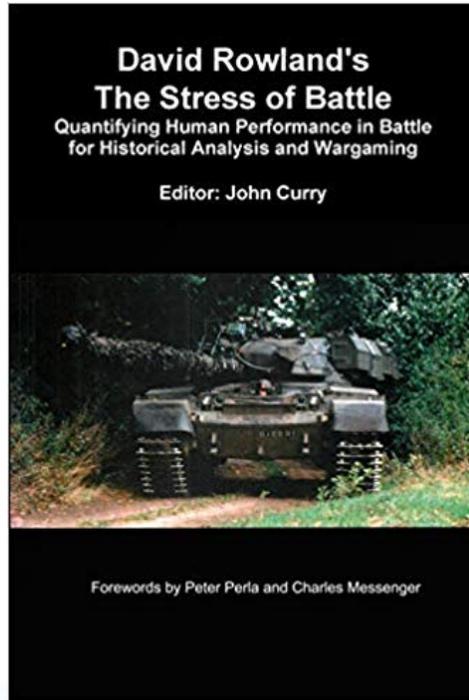




Move / counter move / player order Reaction time to events

What determines the 'time order' of activity in real war ... ? Can we emulate this in a wargame ?

Game theory studies this facet deeply – simultaneous or sequential moves have huge implications for successful strategy



Every gun that is made, every warship launched, every rocket fired, signifies in the final sense a theft from those who hunger and are not fed, those who are cold and are not clothed.

Dwight D. Eisenhower





Hard scientific data from

- Shock
- Surprise
- Chance positioning /
- Weather

...can really drastically affect
sometimes a long time

How many games allow for
fuel/ammo/energy?



...in invasion of Lebanon, is that:

...for a period of time –

...they simply run out of

Extreme changes in battle behaviour were identified in a number of cases. One involved a charge by elements of an Austrian lancer regiment during the 1866 Battle of Custoza, in which the Austrians decisively defeated the Italians. Exactly 103 men took part in the charge against an advancing Italian infantry brigade, 5,000 men strong, and scattered it. Having broken through one regiment, the lancers made for the commander and his staff, wounding the former and his deputy and depriving the brigade of its leadership at the critical juncture. It was the decisive moment in the battle.





Move / counter move / player order Reaction time to events

How is it done now ? A ton of mechanisms largely developed in the 1980's onwards

- Move sequence based on unit, e.g. 'Fast Movers' go last
- C2 oriented – e.g. faster OODA loop goes first – if modelled
- Logistics based – e.g. supplied units can keep going for longer until they run out of 'stuff' – then the other side gets to go
- 'Higher Quality' chooses to 'move and fight' or 'fight and move' guards units
- Overrunning attacks can 'go again'
- Breakthrough units (often armour) get an 'exploit' phase to 'go again'
- Random chit pull or Choice by player e.g. Air phase, Surface phase or Sub Surface phase – Card draw or bid
- Command Points bidding – I 'use up' something to gain 'first punch'
- Initiative is based on some determining factor, e.g. energy in air games, C4ISR in Naval games, surprise attacker in ground games
- Very difficult to represent in simulations as most of the real factors are actually more 'human factors' e.g. fatigue, psychological stance,
- Human in the loop or AI driven sequences in sims are often predicated on one or more of the above





Move / counter move / player order Reaction time to events

When designing a game the choice of player order, sequence of play and the simulation of time, shock and inertia and morale are very rarely given as much of a priority. Suggestion: Look at **similar** historic situations in your scenario and look back at the factors that made one side able to run rings around the other.



tactically surprised

- *'The Far East Air Force lost fully half its planes in the first 45-minute attack'*
- *"Only submarines were left to contest Japanese naval superiority, and the commanders of these, conditioned by pre-war doctrine that held the fleet submarine to be a scouting vessel more vulnerable to air and anti-submarine attack than it actually was, proved unequal to the task"*
- *Land combat units withdrew to defend key cities, leaving more landing areas uncovered, which in turn, allowed flanking and infiltration*

1? MacArthur's command indecision and silly C2
initially well warned before Pearl Harbour – but still



Refining 4 Methodologies

**Fog of War
Situation Awareness**

**Player level of knowledge
The orders to give in the game**

4 Problem Areas

**Who loses - how and why ?
Because that drives competition**

**Move / count player order
Reaction to player order**



The dominant feeling of the battlefield is loneliness.





**Who loses - how and why -
because that drives
competition**



At the heart of any wargame is **the competition** – between 2 or more sides –

Game theory demands that a game has to have rules (outcomes of actions), sides (rational actors!) and a determination of winning (utility)....

The Utility – the *determination of success* is at the heart of any wargame – McCarty Little put it best –

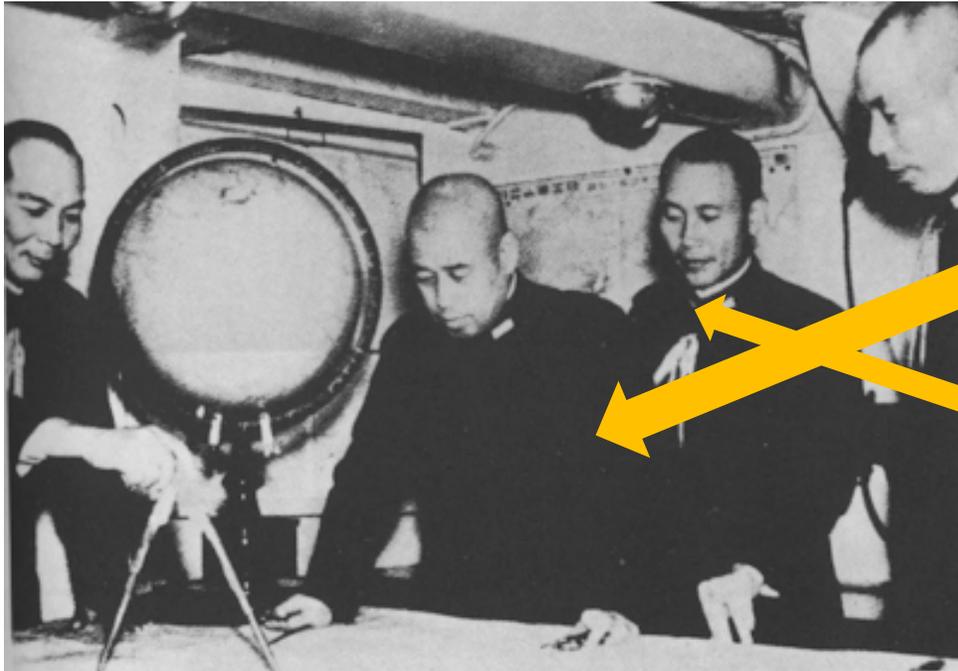
“Now the great secret of its power lies in the existence of the enemy—a live, vicious enemy—in the next room waiting feverishly to take advantage of any of our mistakes, ever ready to puncture any visionary scheme, to haul us down to Earth.” -- William McCarty Little, 1887

Competition can only be useful if it is measurable in some way and therefore drives player actions and strategy.





**Who loses - how and why -
because that drives
competition**



Now, remind me do we win if we sink all of their carriers, but lose all of ours ?

Or if we only lose 1 of ours and sink all of theirs ?

How many aircraft and pilots do we lose before dropping a victory point?

Mmmmh, not sure boss , let me check with the umpire

Go and throw yourself off the bridge after you report back, how can I make a plan if I don't know what the victory conditions are !!



Vot ver the Victory conditions again ?

So think

- ❖ Witho
- ❖ Avoid
- ❖ the g
- ❖ Objec
- Barba
- chos
- ❖ Be ca
- analy

shows that
the end of

the Bulge,
have been

really clever





Refining 4 Methodologies

**Fog of War and
Situational Awareness**

**Player level / expertise / knowledge
The orders they can give in the game**

4 Problem
Areas

**Who loses , how and why ?
Because that drives competition**

**Move / counter move / player order
Reaction time to events**

The soldier may comfort himself with the thought that, whatever the result, he has done his duty faithfully and steadfastly, but the commander has failed in his duty if he has not won victory—for that is his duty.

Slim, Field-Marshal Viscount William. Defeat Into Victory





Armies do not win wars by means of a few bodies of super-soldiers but by the average quality of their standard units.

Anything, *whatever short cuts to victory it may promise*, which thus weakens the army spirit, is dangerous.

Commanders who have used these special forces have found, as we did in Burma, that they have another grave disadvantage- they can be employed actively for only restricted periods.

Then they demand to be taken out of the battle to recuperate, while normal formations are expected to have no such limitations to their employment.

In Burma, *the time spent in action with the enemy by special forces was only a fraction* of that endured by the normal divisions, and it must be remembered that *risk is danger multiplied by time*

Sixteen months before, in the Sudan, I had learnt a sharp lesson on the necessity for the headquarters of the **land forces and of the air forces supporting them to be together.**



[Field Marshal William Joseph Slim, 1st Viscount Slim, KG, GCB, GCMG, GCVO, GBE, DSO, MC, KStJ](#) (6 August 1891 – 14 December 1970)

