Once and future Kriegsspiel

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Connections UK

Peter P. Perla

3 September 2013

Why are we here?

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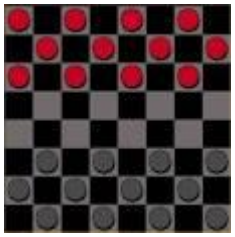
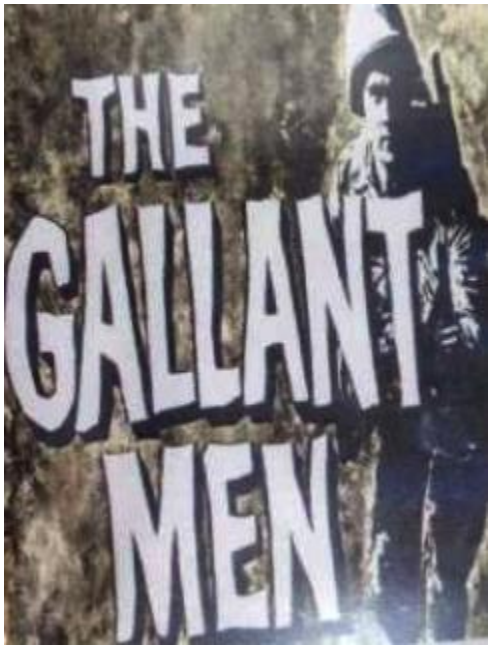
- We (most of us) are wargamers.
- We believe that wargaming is important for the military today and in the future.
- We believe that the potential of wargaming is not yet realized.
- We believe that connecting new ideas across nations, people, and military communities is the way ahead.

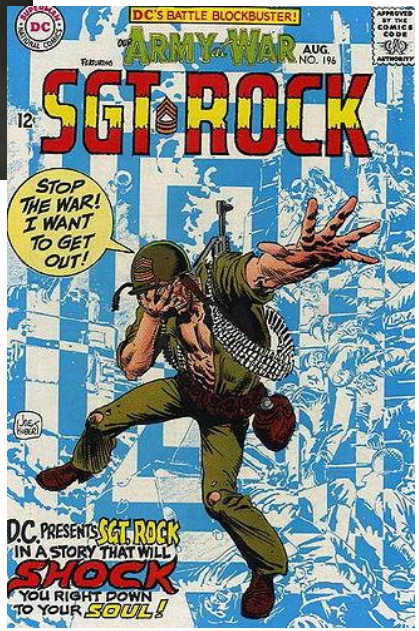
Trajectory of a wargamer (1)



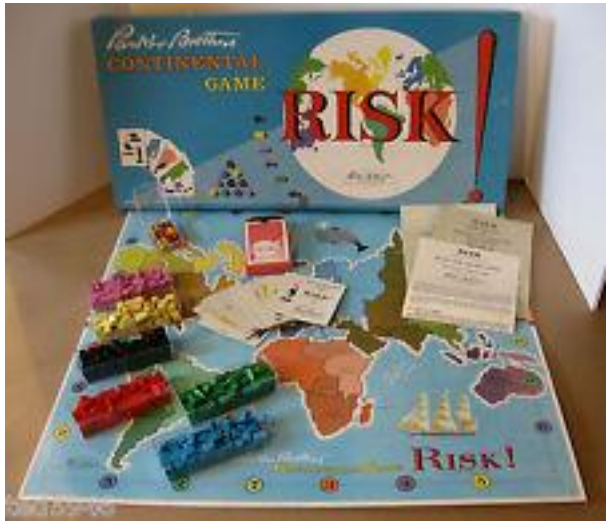
Trajectory of a wargamer (2)



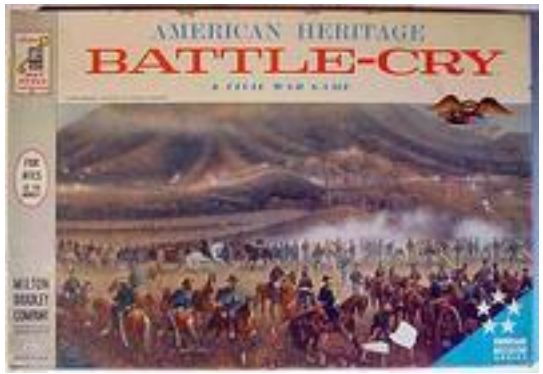
Trajectory of a wargamer (3)

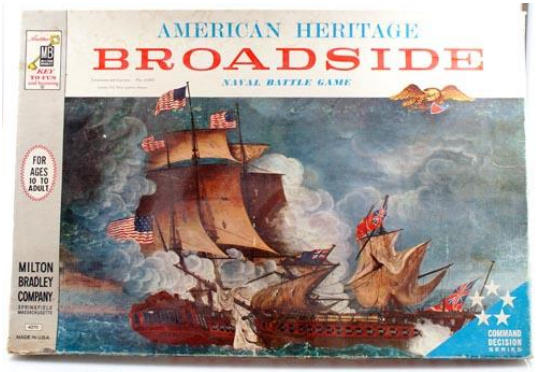


Trajectory of a wargamer (4)



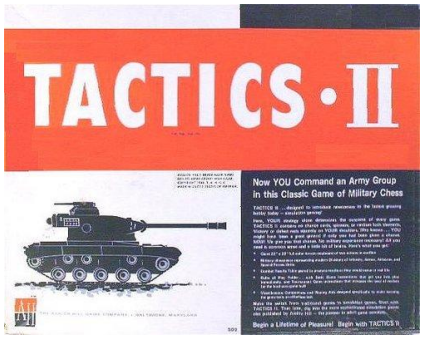
The Gateway Drugs

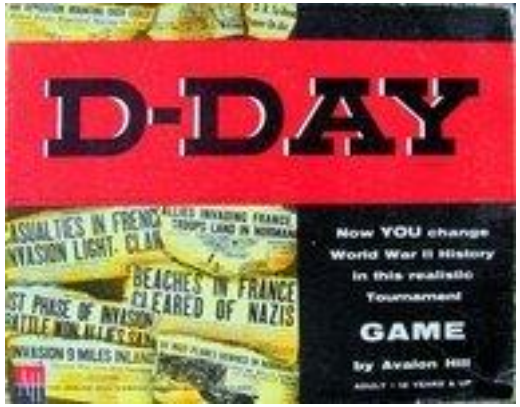




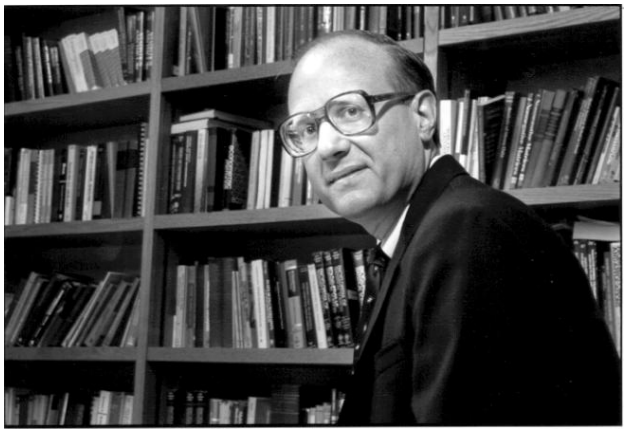
Trajectory of a wargamer (5)

The Hard Stuff



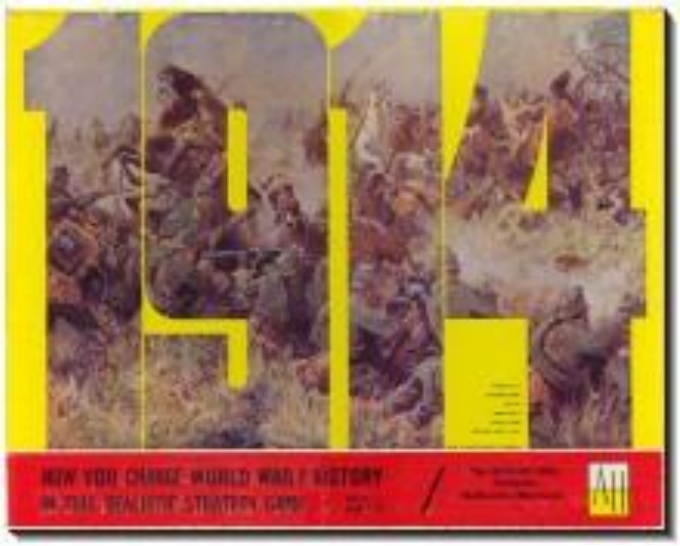


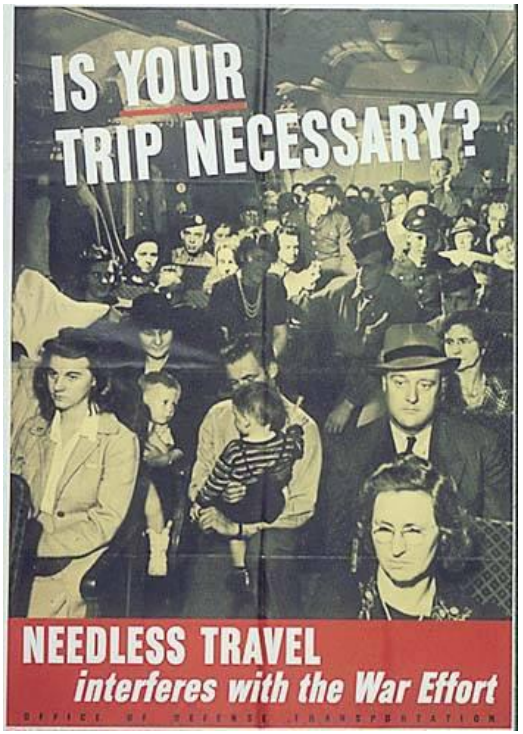
Trajectory of a wargamer (6)



The Lord Professor of Statistics, Carnegie-Mellon University

Vs.





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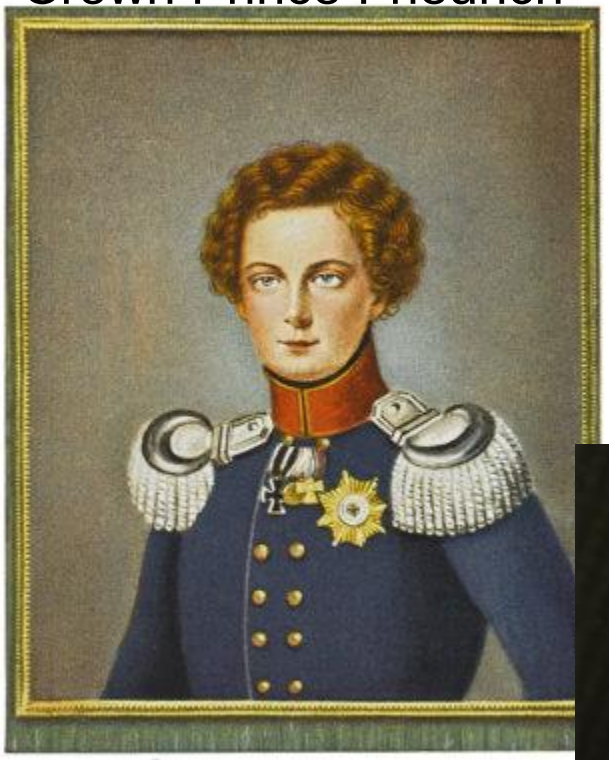
How did this happen

Wargaming trajectory: launch

Crown Prince Friedrich



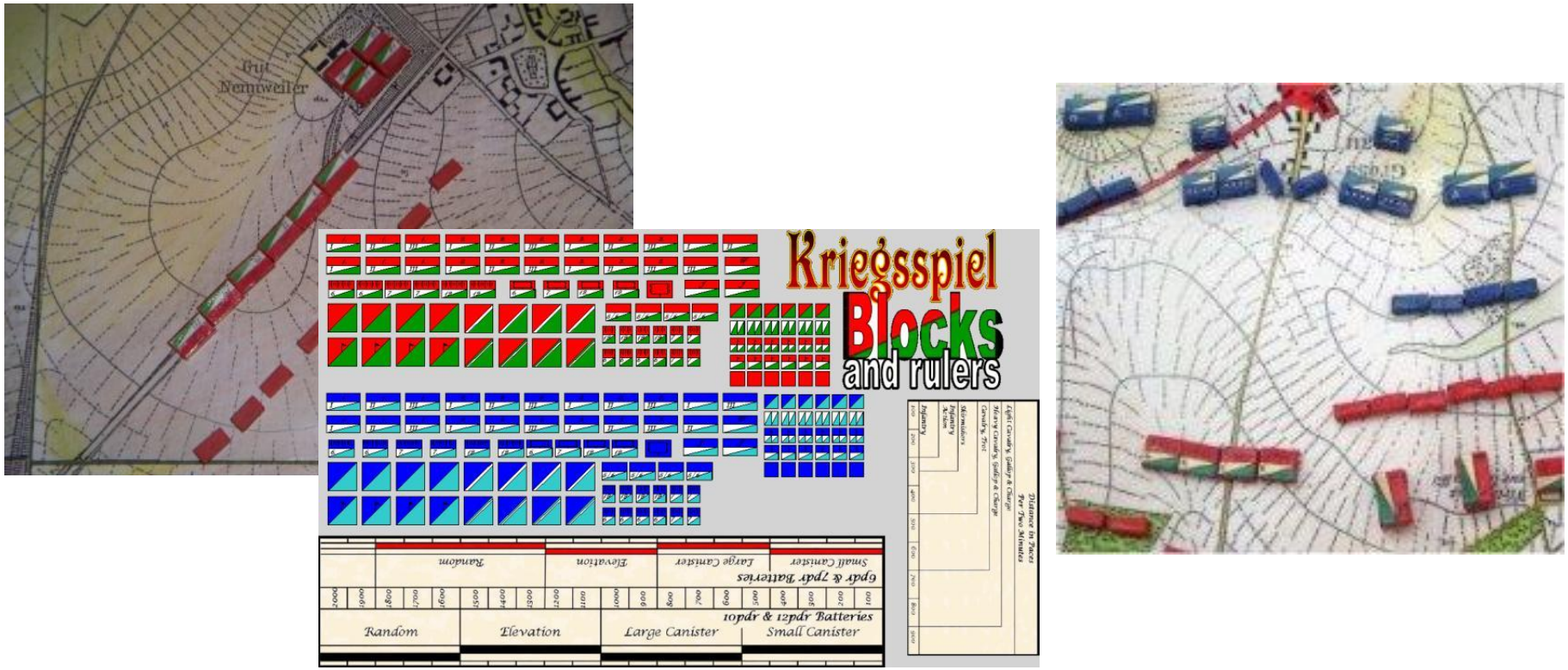
Prince Wilhelm

King Friedrich Wilhelm III

1812 *Kriegsspiel* (Berlin)

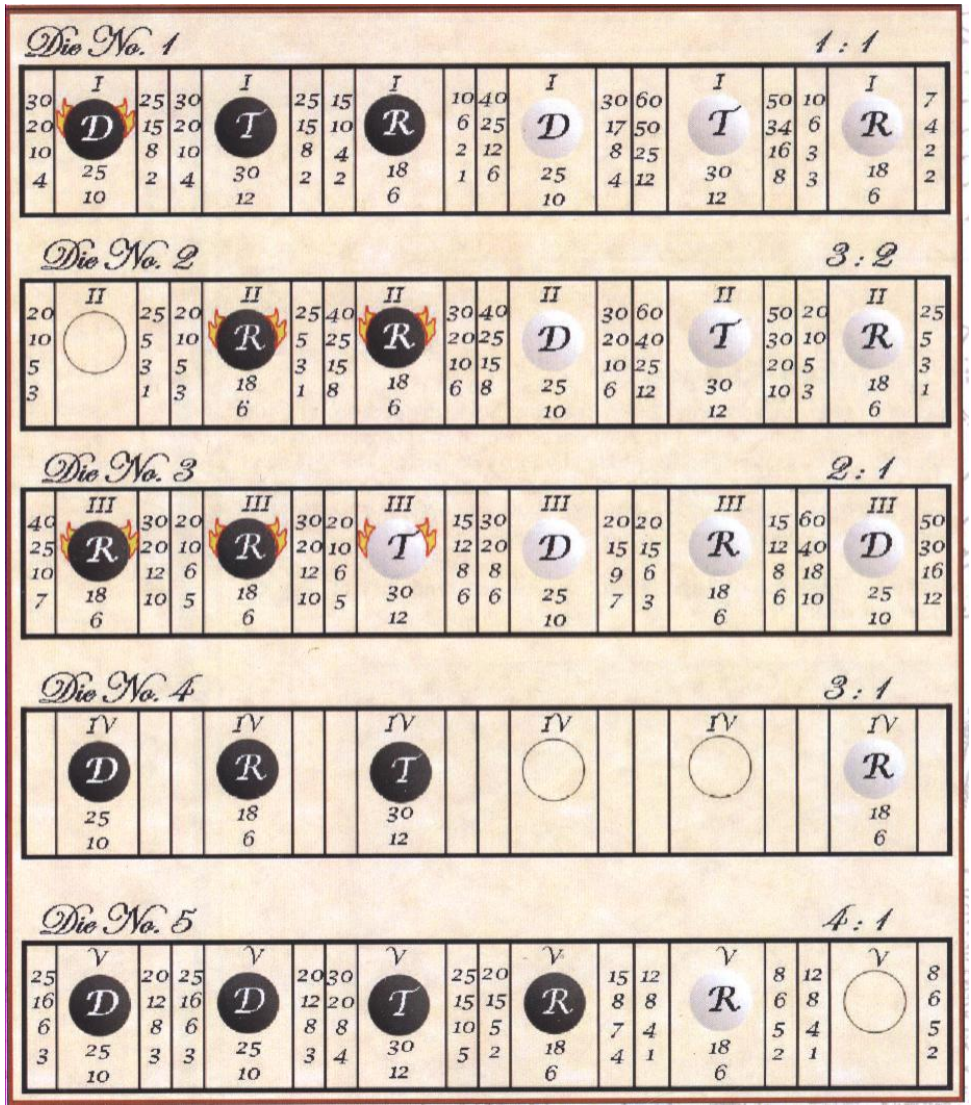
1812 *Kriegsspiel* (Berlin)

1824 *Kriegsspiel* (reproduction)



Instructions for the Representation of Tactical Maneuvers under the Guise of a Wargame

Reisswitz's special dice



Kriegsspiel—the origins of OR

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- Leutnant von Reisswitz based his model on operational experience and on data from field experiments.
- He modified test data to account for real-world conditions and uncertainty.
- He triggered a process of scientific analysis and modifications to the model and its data, one that continues today.

Reisswitz and von Muffling

- “Gentlemen, Herr von Reisswitz is going to show us something new.”
- “You mean we are to play for an hour on a map! Very well. Show us a division with the troops.”
- “This is not a game! This is training for war! I must recommend it to the whole army.”

What von Muffling saw

- The game takes place in the minds of the players.
- The instrumentality is not the game.
- Failure to make the game “entertaining and fascinating” could lead to what Reisswitz called, “a merely painfully embarrassing experience.”

Rigid Kriegsspiel, 1828

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Zeitschrift

für

Kunst, Wissenschaft und Geschichte

des Krieges.

Dreizehnter Band.

Viertes bis sechstes Heft.

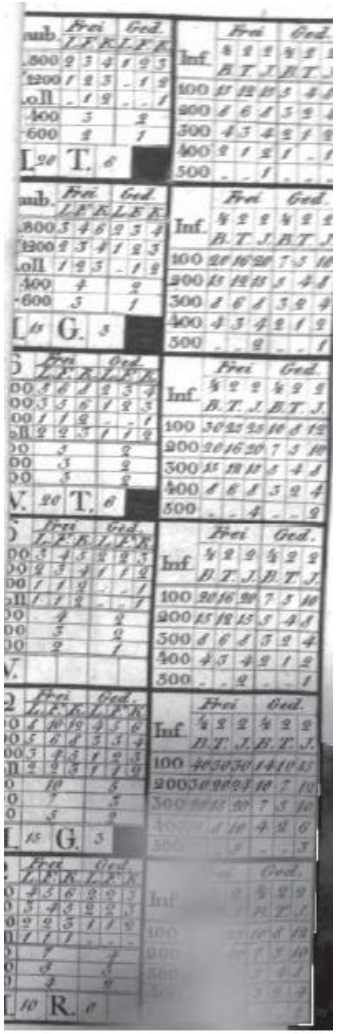
Redaktoren:

C. v. Decker, F. v. Eichacy, L. Bleffon.

Berlin, Posen und Bromberg

bei Ernst Siegfried M.

1828.



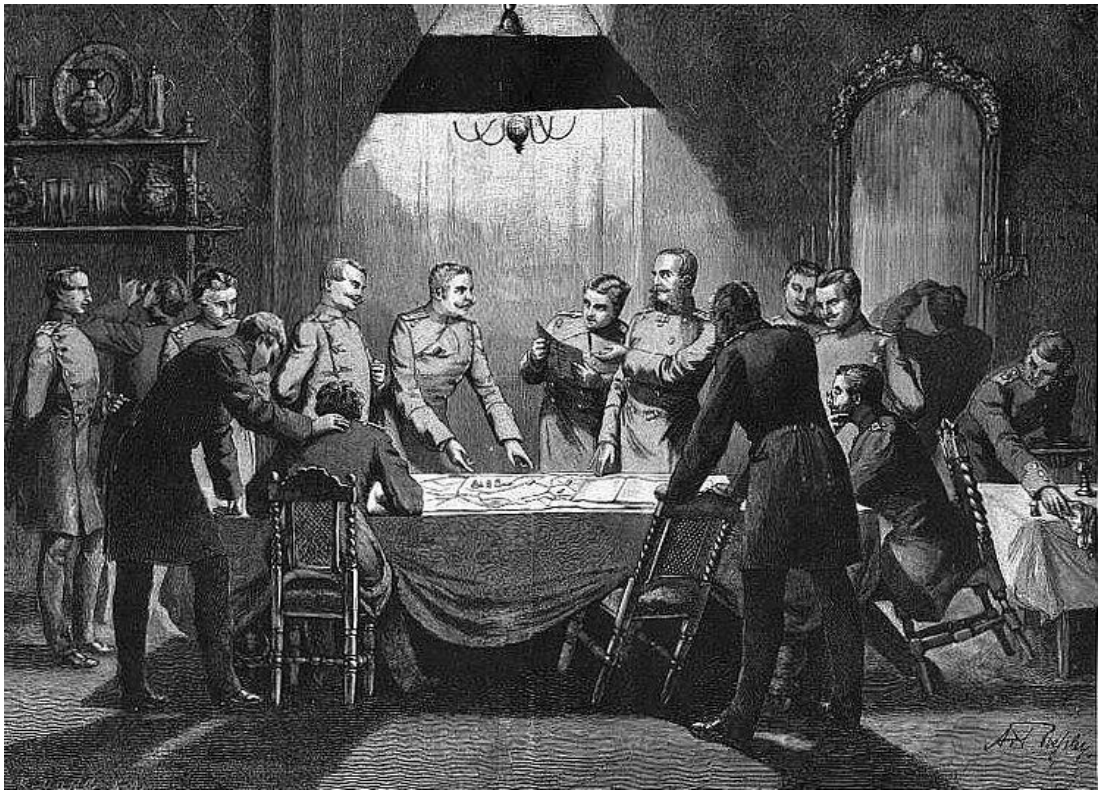
E. Tabelle für die Marschweiten.

Größte Marschweite während eines Zuges.	Ebene und 5°.	10°.	15°.	20°.	Lichter Wald.	Steile Höhen, dicht. Wald, Gebüsche, Gärten u. sumpf. Wiesen.
	Schr.	Schr	Schr.	Schr.	Schr.	Schr.
Infanterie, Fuß-Artillerie und Trains	200	150	100	50	150	—
Infanterie beim Angriff, die 2 letzten Züge	250	150	100	—	—	—
Tirailleurs	200	150	100	100	150	100
dito im Trabe *)	300	200	150	—	—	—
Artillerie im Trabe	600	—	—	—	—	—
Kavallerie u. Reitende Artillerie im Schritt	200	150	100	50	150	—
dito im Trabe	600	400	300	200	—	—
dito im Galop	800	600	400	—	—	—
dito beim Angriff	900	700	—	—	—	—

Adjutan
nanz

Das Defilee hinter sich.	Es verlieren Points (25 = 2 Gesch.).					
	½ Reit. Batt.			1 Reit. Batt.		
Schritte	R.	G.	T.	R.	G.	T.
800	—	1	2	1	2	4
700	1	3	4	3	6	9
600	3	6	9	6	12	18
500	4	9	12	9	18	25
400	6	12	17	12	25	37
300	7	15	22	15	31	45
200	9	18	27	18	37	54
100	10	21	32	21	45	64
dicht daran	12	25	37	25	50	75

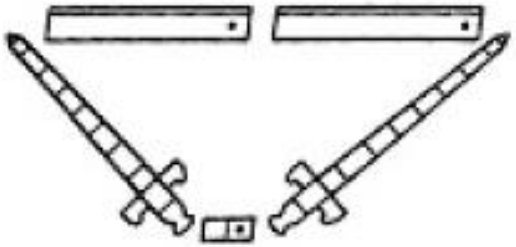
Player—Operator dichotomy



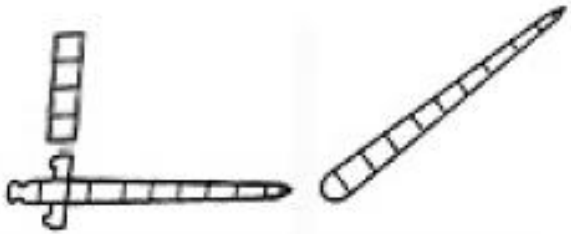
Officers conducting a Kriegsspiel. Wood engraving after a drawing by Adalbert von Rößler, ca. 1884
This is a wood engraving based on a drawing by german painter and illustrator Adalbert von Rößler (1853-1922), showing a group of prussian officers conducting a Kriegsspiel.

From http://bitzkrieg.net/archive/tag/kriegsspiel

Livermore's equipment



Two Infantry Companies Deploy



Infantry Walk Two Minutes and Fire Five Minutes

Figure 3. Examples of the equipment for Livermore's game.

Realism vs. playability

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- War = realism = physics and the domain of models
- Game = playability = psychology and the domain of players

. . . and players are people

Realism vs. playability?

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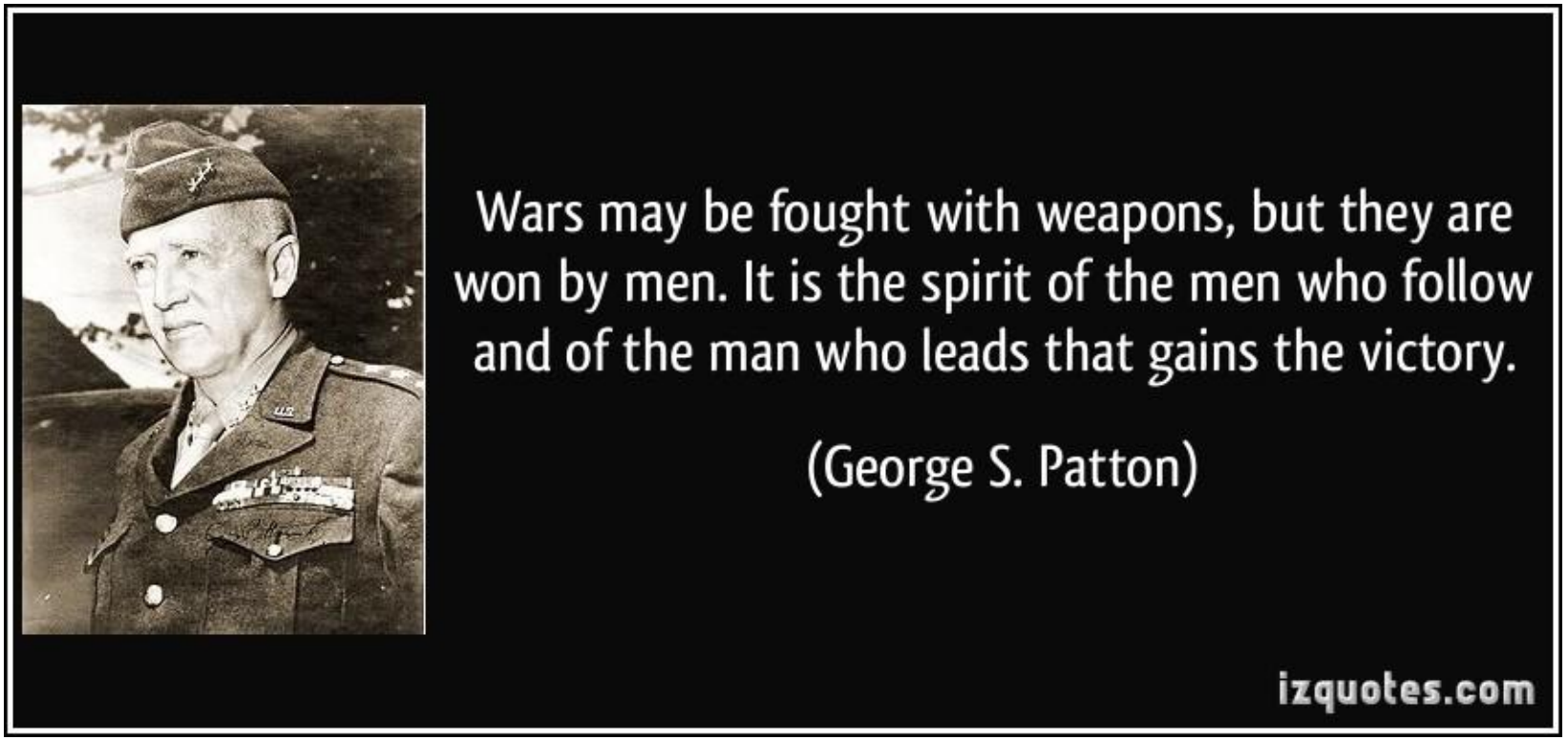
- War = realism = physics and the domain of models
- Game = playability = psychology and the domain of players
- Wargame (one word) = recognition that war is a human activity using physical tools to affect psychology

Or, as Patton would say



Quoted from *The Cavalry Journal*, September 1933

If wargames are so good

- Why isn't the military clamoring for more and more of them? (NOT 1st-person shooters.)
- And why is it that when we give a nice simple wargame to a military audience, they have such trouble understanding it?

To schema or not to schema

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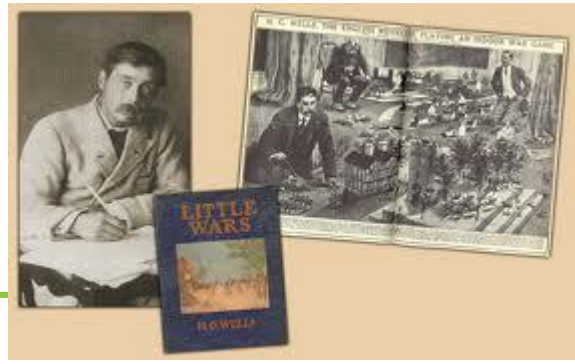
LUDOLOGY with Ryan Sturm & Geoff Engelstein

- Schema: organized pattern of thought or behavior; a mental structure of preconceived ideas, a framework representing some aspect of the world, or a system of organizing and perceiving new information.
- Influence attention and the absorption of new knowledge.
- People can organize new perceptions into schemas quickly.

Struggle of schemas

From overthemonterainbow.blogspot.com

Wells's *Little Wars*



Kriegspiel [in] the British Army, is a very dull and unsatisfactory exercise, lacking in realism, … and the unexpected, obsessed by the umpire at every turn, and of very doubtful value in waking up the imagination, which should be its chief function.

. . . they will find it advisable to . . . make the game work itself, and to keep the need for umpire's decisions at a minimum. . . . Things should happen, and not be decided. . .

. . . the nearer that Kriegspiel approaches to an actual small model of war, **not only in its appearance but in its emotional and intellectual tests, the better it will serve its purpose of trial and education**.

From Wells to Sabin

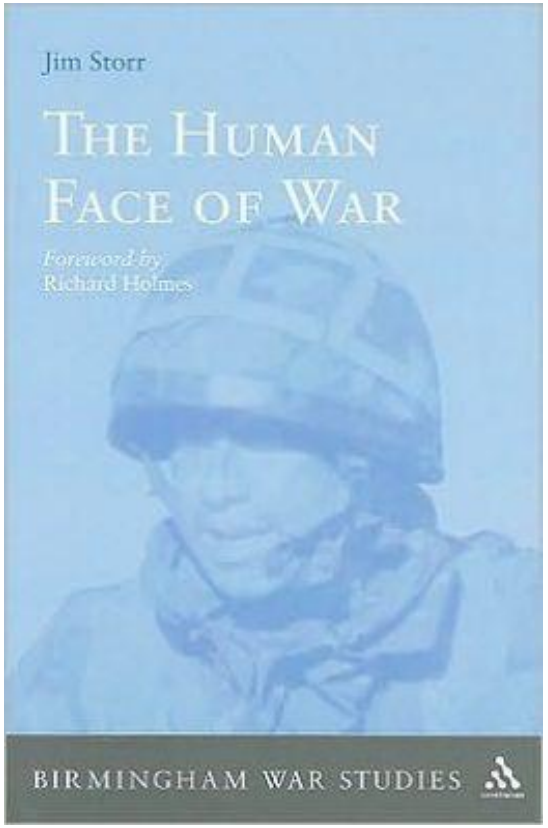
Yahoo Simulating War post 31 July

"I have come to believe that simulations don't work as educational tools, let alone as simulations, if the players don't know what is specifically being recreated for them, what they are pretending to do in relationship to reality/history." **Schema!**

Mid-course guidance

- Wargames can help develop fundamental concepts.
- Wargamers must find better ways to help the military understand the games by drawing on the military's existing schema to get them to grasp not only how to play the games but how to use the games.
- Initial success of von Reisswitz's game resulted from his ability to do that.
- Later Umpires/Gamers (*operating* the game) failed to connect the Players (making the decisions) to the system, losing Wells's emotional/intellectual test .
- How shall we fix this?

From Patton to Storr



- "Critically, military theory should not be a case of 'this is the right course of action' but rather 'doing this will probably have beneficial outcome.'"
- Pragmatism and empiricism: what works based on experience.
- Organization of military system
- **"The key problems [of command] are human, cultural and institutional."**
- Learning from experience is critical.

Experience: real & synthetic

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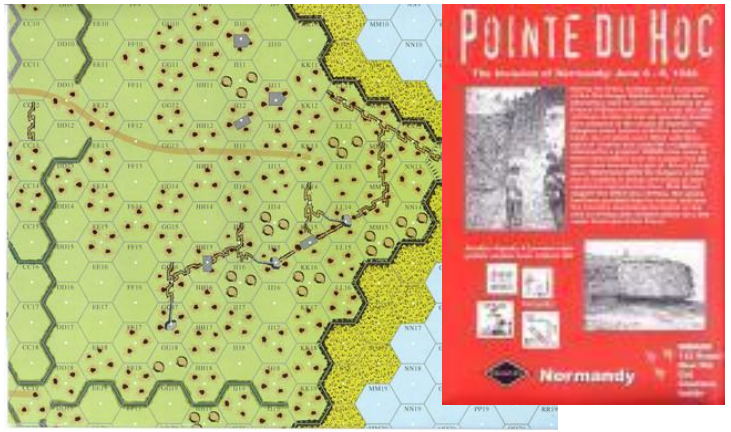
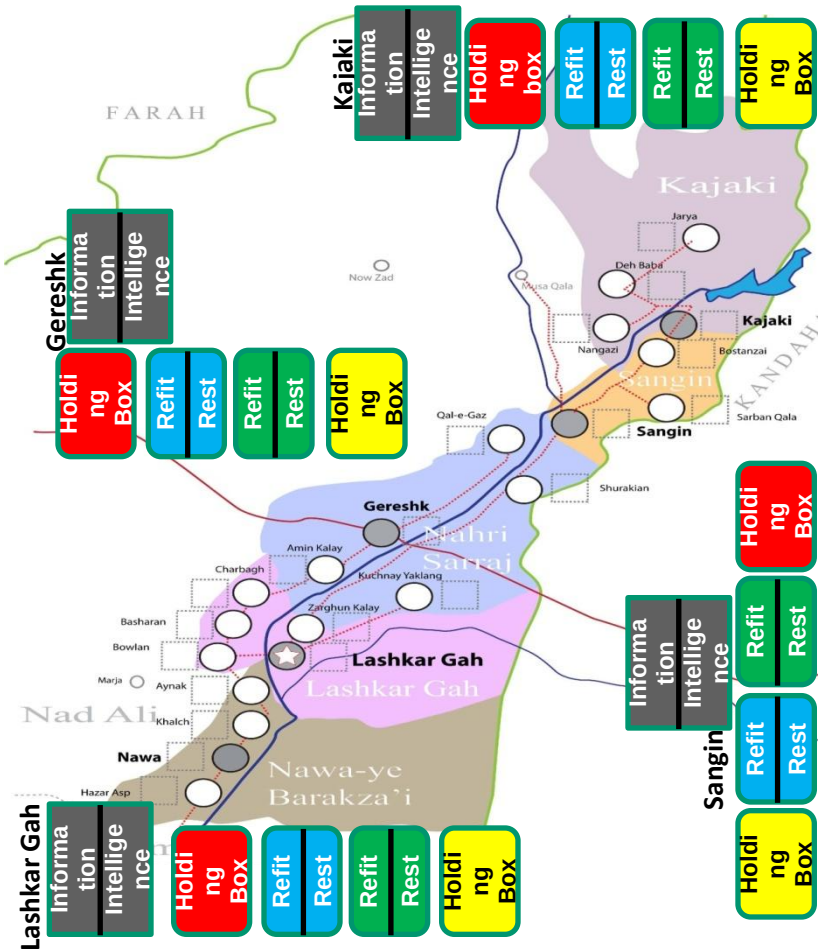
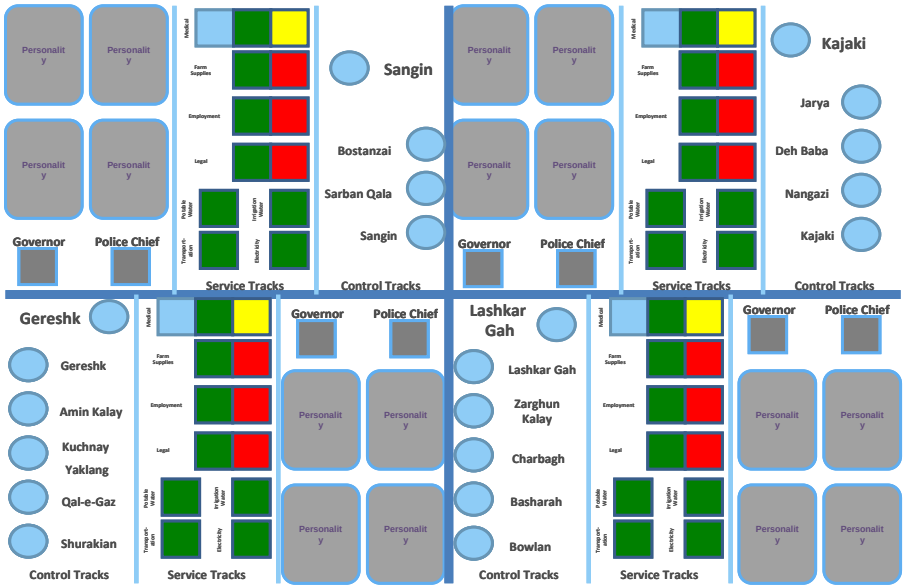


CNA's OWA part of IW TWG





Complexity or chaos?

OWA draft leadership game

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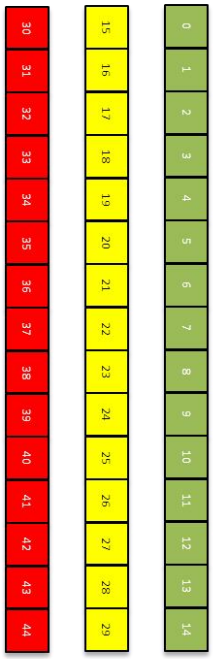
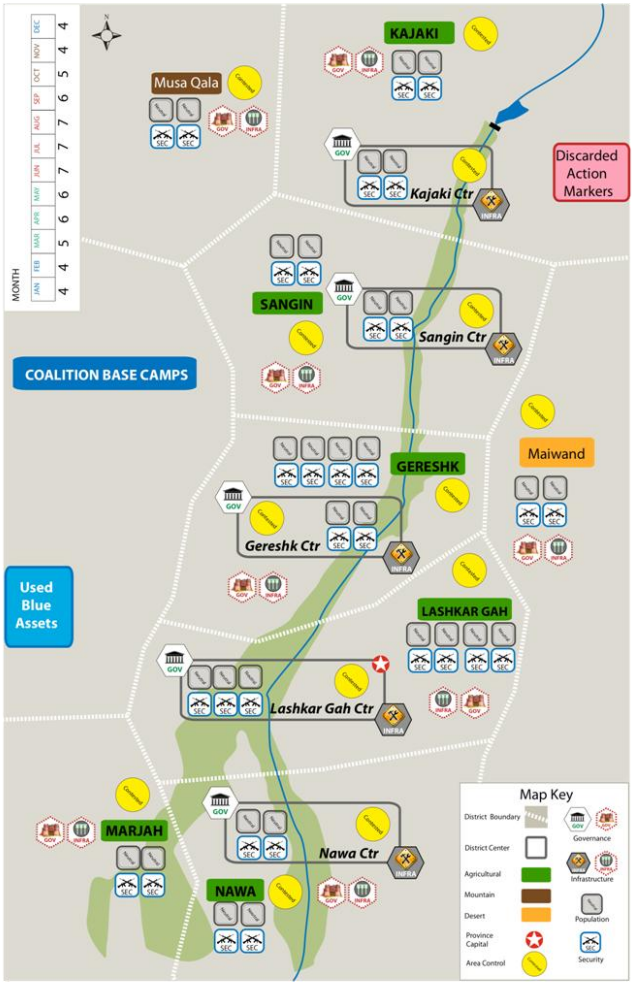
Table Set Up

Blue Asset Pool

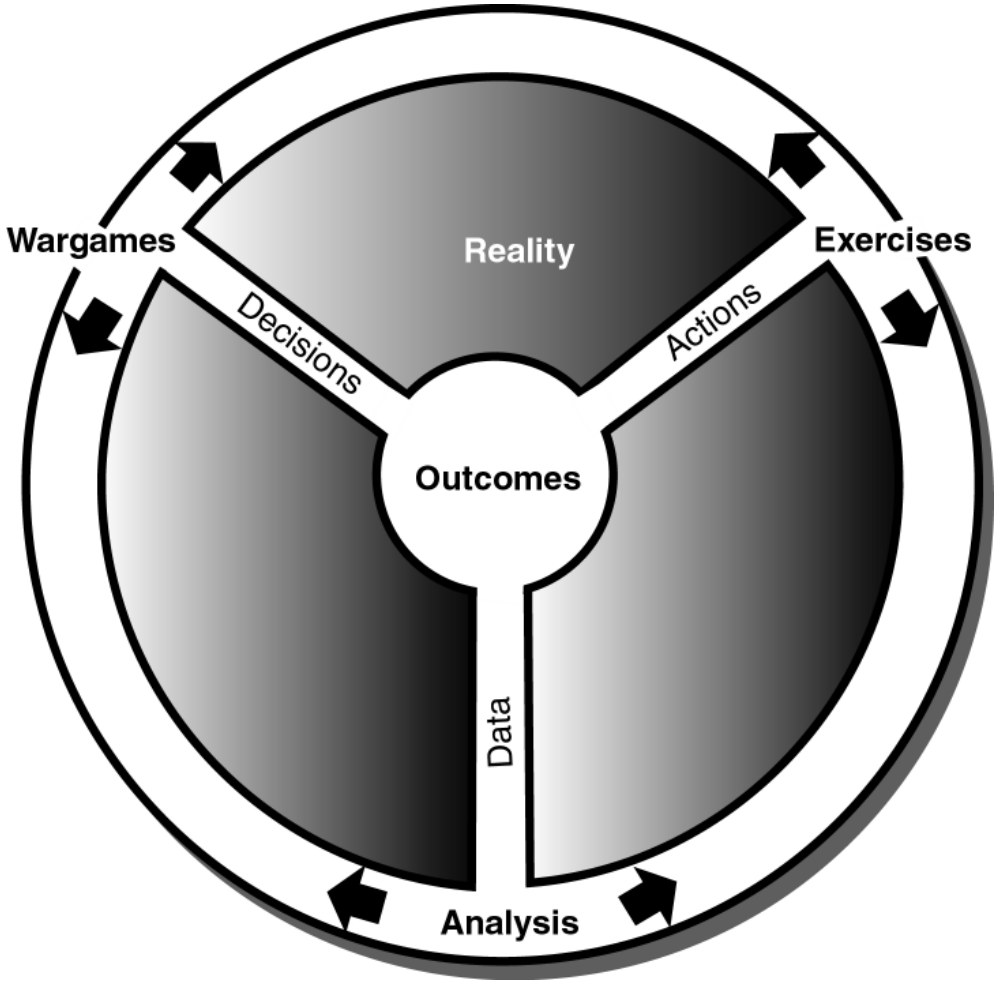
Blue Casualty Track





Red Action Pool

Hitting the target

- Can’t spend 50 (or 5) years making soldiers into wargamers.
- Must make games that engage emotionally and intellectually.
- Games must draw on real schema.
- Complexity is not the issue—player recognition of reality in the game is.

Research, analysis, action