

Defence Academy of the United Kingdom

Effects

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... :-)

"Effects"

METRO.co.uk

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What are "Effects"?

- 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...

How Normal Simulations Model Effects

- Rules.
- Triggers.
- Pre-Sets (decided beforehand).
- Example: If you bomb the Mosque, the local people will hate you. Hate = Protests, roadside IEDs and Shootings.
- Simple Rule-based behaviours.

The Fallacy of a single unified model.

Lists of factors

- +1 for digging a well.
- +1 for medical inoculations.
- +1 for Flaming Pigs¹.
- +1 for Dancing Pigs².
- Very often single sided.
- Very often hidden in a Black Box.
- Need to be calibrated.
- Can't account for General Butt Naked³.

Context Reaction Repeatabiliy Irrationality

The Wisdom of Crowds

Groups can be better at estimation than individuals.

- Diversity of opinion.
- Decentralisation of expertise.
- Independence of thought.
- Aggregation of the result.
- Best predictions come from conflict or contest.
- Too much communication can make the group less intelligent.

Stupid Crowds

- Homogeneity of opinion.
- Centralisation of decisions and a formal hierarchy.
- Divisions and compartmentalisation.
- Imitation based on previous decisions.
- Emotionality and peer pressure.
- Group Think'



Role Play - Predicting the Outcome of Conflict

- The roles that people play affect their behaviour.
 - "Cost Analyst" vs "Market Analyst"
- When predicting outcomes in conflict it is necessary to make predictions in a chain.
 - "Action, reaction, counter-action, etc."
- Experts predict what should happen.
- Role Play predicts what will happen.

How good are we at forecasting how others will behave in conflicts?



What we would expect from random chance ?



Using judgment is often WORSE then guessing !



Using Game Theory fares no better..



But a role play achieves substantially better forecasts



How to get the best out of Role Play

- Assign the roles before reading the scenario.
- Player roles should be typecast.
- Players should act as they think the subject would.
- Briefings need to be accurate but succinct (1 page).
- Environment and materials affect the game.
- Base predictions on a number of games.
- Smaller numbers are better than large games.
- They are better for large changes or unusual events.

Matrix Games

Matrix Games for Modern

Wargaming Developments in Professional and Educational Wargames Innovations in Wargaming Volume 2

ohn Curry and Tim Price MBE





John Curry and Tim Price MBE



The Matrix Games Handbook Professional Applications from Education to Analysis and Wargaming

Edited by John Curry, Chris Engle and Peter Perla



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What is a Matrix Game?

- A free-form game system concentrating on "effects".
- Invented by Chris Engle in the USA in about 1988.
- The origin of the name...
- Used worldwide.
- Can deal with qualitative issues that are hard to measure.



Matrix Games

Use verbal "arguments" to advance the players position in the game.

Use dice (if necessary) if there is a risk of failure in order to drive the game forwards.

Generate an evolving narrative of the conflict for further discussion and analysis.

Elements of Matrix Games

- The Arguments
- Reasonable assumptions.
- Established facts.
- Scale, Time and Events (a "couple of weeks").
- Adjudication and dice.
- Narrative.
- Arguing about other players.
- Some arguments will have graduated effects.

Important things to Remember

- You only get to make one action per turn.
- This is an adversarial wargame, so:
 - No "deep dives" (make a note and move on).
 - No extended back-and-forth debates.
- Live with the consequences of earlier decisions, so:
 - Turns need to be fast.
 - Minimum of 6 turns in the game.
- You are generating a narrative.

Example



Your principals are:

1. Strong Leadership.

- 2. The absolute power of the State.
- 3. Clear Social Order.
- 4. Survival of the fittest.

Democracy is just pandering to the ignorant and uninformed, what is needed is an ethnically pure strong Leader with a clear vision and the power to get things done. Inferior people and foreigners need to know their place in society. Black Banner

Your principals are:

- 1. Destruction of Western secular capitalism.
- 2. Establishment of a Religious Caliphate.
- 3. Eradication of false beliefs.
- 4. Protection of Women from Western influence.

You are dedicated to the overthrow of the traditional Western governments in favour of a land with strict adherence to Religious Law, governed by worthy scholars, where women know their place and rejoice!



NU LUDDITE MOVEMENT

Your principals are:

- 1. Automation is Evil.
- 2. Use nothing that cannot be made locally.
- 3. Electronics are the seeds of Oppression.
- 4. Simplicity is virtuous.

The headlong rush of technology is the blame for psychological disorders, social alienation, loss of community, unemployment, economic and political inequality. The simpler way is the best way, now and for the future.



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WAR PLAN TANGERINE

A Matrix Game of a State Visit by Tim Price

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MagGCK MATRIX GAME CONSTRUCTION KIT

BRYNEN • MOUAT • FISHER

- "Boxed set" for Matrix game design.
- Rules, guidance, components (lots of components).
- On-Demand manufacture in USA (GameCrafter).
- "Reassuringly expensive"...
- https://www.thegamecrafter.com/games/magck-matrix-game-construction-kit



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2 Infantry (20)

Intelligiant Taxa

address, man 1

Standard Infantry. Multiple images can be used to differentiate quality (4)





The Conclusion

- Humans are better at modelling humans than computers (even across cultures).
- A proper opposition generates an action / reaction feedback loop that produces insights vastly more powerful (and accurate) than a single opinion, however well informed.

http://knowledge.wharton.upenn.edu/article/forecasting-in-conflicts-how-to-predict-what-your-opponent-will-do/

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Major Tom Mouat MBE

MSc PGCE psc ato sim SO2 DS Simulation and Modelling

Technology School

Defence Academy of the United Kingdom Shrivenham, Swindon, Wiltshire, SN6 8LA

- Tel: +44(0)1793 784136
- Mil: 96161 4136
- Email: tmouat.cmt@defenceacademy.mod.uk