

Gaming Foreign Policy

Serious Games in Support of Training and Analysis

Rex Brynen

*Department of Political Science, McGill University
senior editor, PAXsims*

about me

- 🌐 Professor, Department of Political Science, McGill University
- 🌐 Middle East politics and security
- 🌐 humanitarian, peace, and stabilization operations
- 🌐 intelligence analysis
- 🌐 serious (political-military) gaming
- 🌐 Policy Staff, Department of Foreign Affairs; Intelligence Assessment Secretariat, Privy Council Office; Senior Nonresident Fellow, Atlantic Council; consultant to World Bank, UN agencies, others
- 🌐 Senior editor, PAXsims (<http://www.paxsims.org>)



things we'll be covering

- 🌐 **Why** game?
- 🌐 **What** types of games might be appropriate?
 - 🌐 The presentation will draw on own experience of analytical and educational serious gaming.
- 🌐 **How** should one use games in the classroom (or for analysis)?

why game?

- 🌐 **Games can be effective educational and training tools.**
 - 🌐 **motivated engagement with material**
 - 🌐 **effective learning**
 - 🌐 not a silver bullet, however: research on educational games suggests a **moderately positive** effect on learning (compared to conventional methods), but considerable variability
 - 🌐 **help bridge theory and practice**
 - 🌐 offer insight into issues of process, coordination, interaction that lectures convey poorly
 - 🌐 **intellectual cross-training**

why game?

- 🌐 Games can offer analytical insight.
- 🌐 empathy/alternative perspectives
- 🌐 adversary responses
- 🌐 second and third order effects
- 🌐 explore alternatives
- 🌐 crowdsourcing method (generating collective insight)
- 🌐 adjunct to other methods
- 🌐 Networking and team-building

“Mid-term wargaming will focus on the development of new capabilities as well as operational and organizational concepts... with an eye to incorporating innovative approaches or technologies into the future force and identifying potential portfolio offsets.”

In order to “effectively pursue an innovative... strategy avoid operational and technological surprise, and make the best of limited resources, we need to reinvigorate, institutionalize, and systematize wargaming

Gaming “across different time horizons will also serve a crucial educational function by bringing together different groups of defense professionals to think critically about future challenges.”

“When done right, wargames spur innovation and provide a mechanism for addressing emerging challenges, exploiting new technologies, and shaping the further security environment. The can potentially make the difference between wise and unwise investment trajectories and make our forces more successful in future conflicts”

digital games

- **URBANsim**
 - developed by USC ICT for US Army to teach COIN
- **weaknesses**
 - development time and costs
 - lack of flexibility (changes need recoding or modding)
 - “black boxing” of causal relationships
- **strengths**
 - built-in tutorials and feedback
 - standardized training
 - data collection

quick and simple games

- 1 minute negotiation (ultimatum game)
- 2 minute negotiation



a one minute negotiation





a two minute negotiation



quick and simple games

- 🌐 take up little class time, yet can be linked to considerable experimental research

TABLE 3
Breakdown of Ethical and Cooperation Choices
American Choice Sample

	Offer No.	Cooperate No.	Total
Offer	20,048 (5)	38,121 (7)	58,169
Cooperate	41,742 (1)	24,281 (1)	66,023
Total	61,790	62,402	124,192

(Hershey and Pomponio 1998)

From: Oosterbeek, Sloof, van de Kullen (2004)

TABLE 1
Differences between Business and Military Communities in Choosing
"The Noting" versus "No Answering" in Prisoner's Dilemma

	No Noting	Chose	No Answering
Business Group	14	14	28
Military	5	14	19

Similarly, Mintz et al (2006) showed that university students and military officers game crises in demonstrably different ways, despite having a common "national" culture.

Similarly, economists appear to be more selfish (from lit review by Bauman 2012):

- Moretti and Ales, 1991 - Economists don't understand fairness like other people...
- Carter and Ivers, 1991 - Economists are different before they become economists...
- Frank et al, 1993 - Economists look likier than others to be kinder...
- Frank and Shulze, 2000 - Economics students more corrupt than others...
- Wang et al, 2012 - Economists students kept more in Dictator Game, economics education associated with more positive attitudes to greed and toward one's own greedy behavior...
- Bauman and Rose, 2011 - Economics students contribute less to social programs...

roleplay and negotiations

- 🌐 variable length and degree of background preparation
- 🌐 in-person and/or digital interaction
- 🌐 some premade simulations available

ICONS Project

seminar games

- 🌐 **Fall of Tripoli**
 - 🌐 scenario-based examination of post-Qaddafi governance challenges prepared for Libyan NTC (Benghazi, July 2011)
- 🌐 **weaknesses**
 - 🌐 limited to 2-3 “moves”
 - 🌐 limits adversarial effects
 - 🌐 little or no noise, fog, or friction
- 🌐 **strengths**
 - 🌐 easy to organize and run (essentially, a facilitated seminar discussion)
 - 🌐 familiar to many participants

boardgames

- 🌐 **AFTERSHOCK: A Humanitarian Crisis Game**
 - 🌐 educational boardgame for university and professional audiences on multilateral humanitarian assistance/disaster relief operations
- 🌐 **weaknesses**
 - 🌐 limited complexity
 - 🌐 “gaminess” may be off-putting to some participants
 - 🌐 significant playtesting required for V&V
- 🌐 **strengths**
 - 🌐 easily modified
 - 🌐 simplicity/parsimony may be a strength

a “game show”

- In larger classes, games can be played before an audience.

The Impact of Colonial Incorporation into the Global Capitalist System on Pre-Colonial Subsistence Agriculture!

year one

- one land produces three grain
- one artisan produces six pots
- a family consumes five grain

year three

- the Portuguese trader introduces castles
- seed costs \$1 per land (half price this year)
- sells for \$4 per unit (more than grain)

year four

- colonial rule I
 - missionaries provide medical care (\$2) and education (\$2)
 - irrigation/mechanization (\$15, increases yield to 4/land)
 - appointment of local magistrate
 - registration of land
 - taxation (\$3 per year)

year five

- prices down
 - due to a slump in world cotton prices, cotton earns only \$2/unit this year

year six

- prices up
 - due to a rise in world cotton prices, cotton earns \$6/unit this year

matrix games

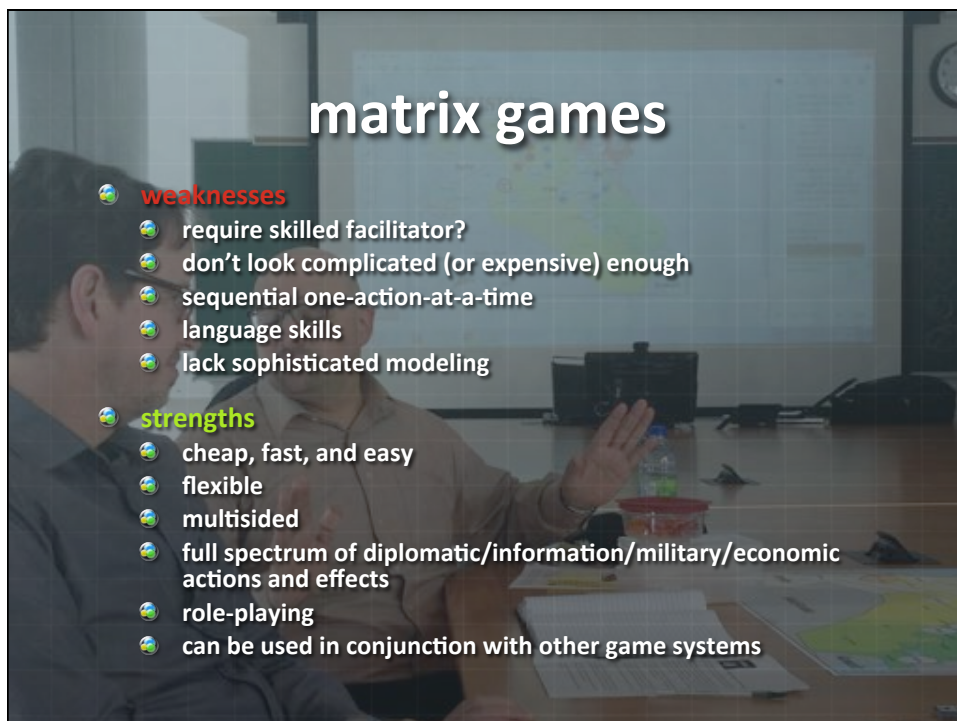
- matrix games* are narrative-based game with no rigid rules
- in turn, each player declares:
 - an action
 - the outcome/effect of that action (if successful)
 - reasons why they will be successful
- other players (+SME) identify other arguments for/against success
- outcome is then determined
 - umpire adjudication
 - balance of arguments
 - adjusted stochastic determination (dice + modifiers)
- game is adjusted, and next player takes turn

*which involve no actual matrix



matrix games

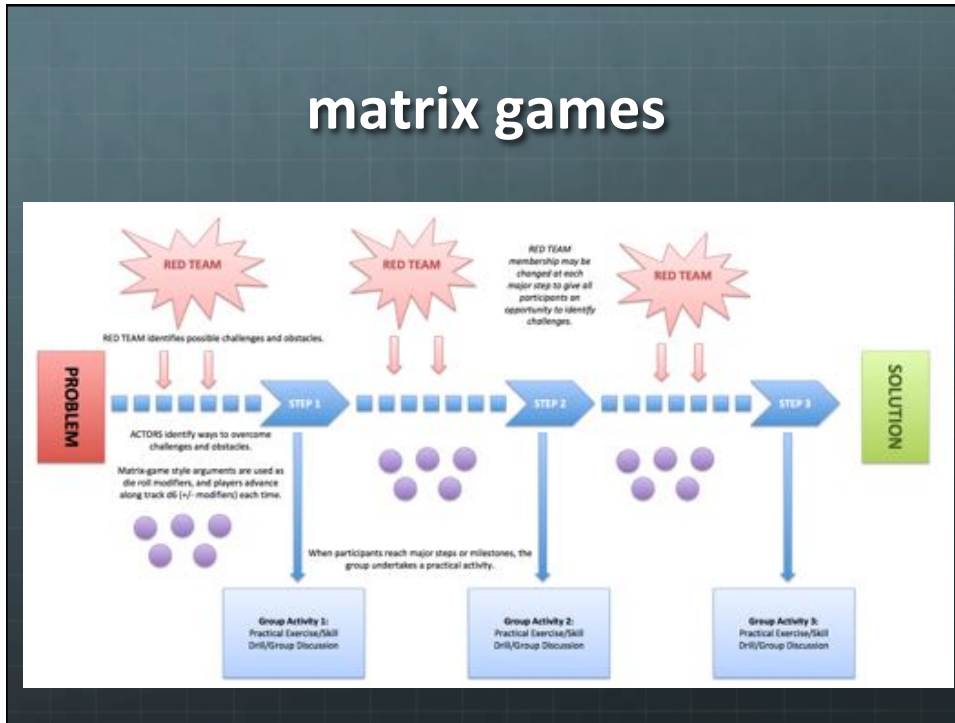
- ISIS Crisis
- multi-sided pol-mil matrix game
- examines counter-ISIS challenges, with emphasis on Iraq
- developed with Major Tom Mouat (Defence Academy of the UK), based on matrix game approach first developed by Chris Engle



matrix games

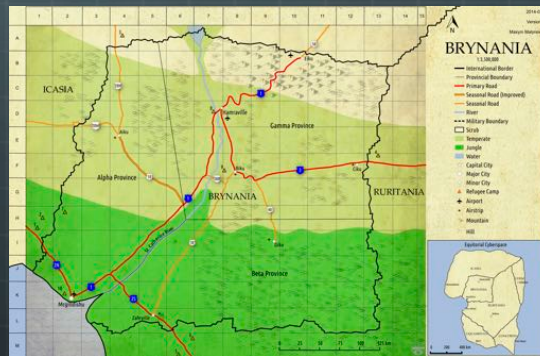
- weaknesses**
 - require skilled facilitator?
 - don't look complicated (or expensive) enough
 - sequential one-action-at-a-time
 - language skills
 - lack sophisticated modeling
- strengths**
 - cheap, fast, and easy
 - flexible
 - multisided
 - full spectrum of diplomatic/information/military/economic actions and effects
 - role-playing
 - can be used in conjunction with other game systems

matrix games



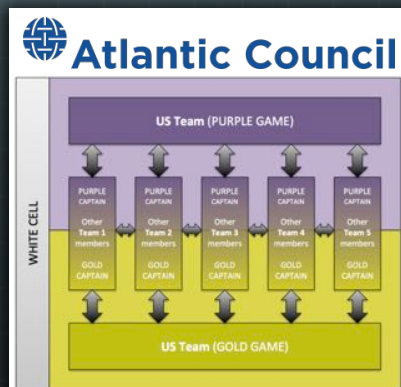
hybrid games

- 🌐 Brynania
- 🌐 large (100+) week long role-play simulation of complex peace operation for university students



hybrid games

- US Engagement in the Middle East (2016)
- Atlantic Council Middle East to develop game exploring the impact of greater US engagement/disengagement on Middle East
- focus on crisis stability: can US effectively deter challengers, support (and restrain) allies, build coalitions, mediate and resolve disputes?
- two **simultaneous, semi-linked** games



hybrid games

- Palestinian refugee negotiation simulation (2009)
- FCO-supported Chatham House policy analysis project
- UNRWA policy simulation (2013)
- policy analysis for UNRWA CG
- Palestinian refugee workshops (2014)
- US DoS/FCO-supported Chatham House policy analysis project in support of Kerry negotiations
- Syrian Refugees in Lebanon simulation (2014-15)
- educational simulation for Exeter University and McGill University

The screenshot shows a WordPress blog post on the PAXsims website. The header includes navigation links: Home, About PAXsims, AFTERSHOOT, Research Bibliography, Review Policy, Reviews, and a search bar. The main content area features a large banner with the PAXsims logo and tagline: 'SIMULATIONS • CONFLICT, PEACEBUILDING AND DEVELOPMENT • TRAINING AND EDUCATION'. Below the banner is the article title 'Dstl wargaming trip report (or, I visited Portsmouth West and all I got was this lousy mug)' by Rex Brynen, published on 02/08/2016. The article text begins with 'Last month I visited the UK for a week of discussions on professional wargaming...'. A photograph of the Dstl building is included. A sidebar on the right contains an RSS feed icon, a 'PAXsims' logo, and a 'Recent Posts' section with a thumbnail for 'PaxSims Conf New'.

Dstl trip report:
<https://paxsims.wordpress.com/2016/08/02/dstl-wargaming-trip-report-or-i-visited-portsdown-west-and-all-i-got-was-this-lousy-mug/>

Best practices

- 🌐 Start with educational objectives: what are you trying to do?
- 🌐 Consider constraints (time, space, participants) and trade-offs.
- 🌐 Integrate with course curriculum, either to identify issues for further examination or to highlight/explore material already covered.
- 🌐 Think about atmospherics and student engagement.
- 🌐 Start simple (as a neophyte simulation user).
- 🌐 Keep it simple (as a game designer).
- 🌐 Plagiarize! (as a game designer).
- 🌐 Make use of free technology (email, blogs, course software, Facebook, Twitter, Skype).

Best practices

Prebriefing

- what should students expect?
 - ... although some surprises are fine
- how should students prepare?
 - preparation/backgrounder assignments

Best practices

Debriefing

- what should student know about what happened?
 - in some games, players may not be aware of all that transpired
- what should students learn from the experience?
- what should students **NOT** learn?
 - learning from “bad” games
- debrief/reflection assignments
 - student feedback can help to refine the game design or implementation

Additional resources

- 
PAXsims

<http://www.paxsims.org>
- 
Active Learning in Political Science

<http://activelearningps.com>
- 
Gaming Political Science

<http://www.k-state.edu/polsci/gaming/>



Additional resources

- 
Journals
- 
PS: Political Science and Politics
- 
International Studies Perspectives
- 
Simulation & Gaming



Additional resources

🌐 Books





- 🌐 Peter Perla, *The Art of Wargaming* (1990)
- 🌐 Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (2004)
- 🌐 Philip Sabin, *Simulating War: Studying Conflict Through Simulation Games* (2012)
- 🌐 Mark C. Carnes, *Minds on Fire: How Role-Immersion Games Transform College* (2014)
- 🌐 John Curry and Tim Price, *Matrix Games for Modern Wargaming* (2014)
- 🌐 Natasha Gill, *Inside the Box: Using Integrative Simulations to Teach Conflict, Negotiation and Mediation* (2015)
- 🌐 Pat Harrigan and Matthew Kirschenbaum, *Zones of Control: Perspectives on Wargaming* (MIT Press, forthcoming 2016)



ISIS Crisis (Iraq edition)

- 🌐 Six players/teams + optional SME

1. ISIS
2. Kurds
3. Iraqi government
4. Sunni opposition
5. Iran
6. United States
7. SME (unrepresented players and effects)
8. Human rights/mass atrocity prevention community

 <p>Kurdish Regional Government</p> <p>LIMITED HORIZONS. Kurdish politicians are largely focused on Kurdistan.</p> <p>Ongoing effect: Any actions outside Kurdish-majority areas suffer a -1 penalty.</p>	 <p>Islamic State (of Iraq and the Levant)</p> <p>SUNNI SYMPATHIES. You enjoy a "home court" advantage in Sunni-majority areas.</p> <p>Ongoing effect: All actions taking place in Sunni-majority areas gain a +1 bonus. Actions taking place in Shiite or Kurdish-majority areas suffer a -1 penalty, however.</p>
 <p>Iran</p> <p>HEGEMONIC NEIGHBOUR? Iranian involvement in Iraq only deepens Sunni suspicions.</p> <p>Ongoing effect: Any unsuccessful direct actions by Iran against Sunni opposition or ISIL provides that actor with a +1 bonus on their next action.</p>	 <p>Iraqi Government</p> <p>PATRONAGE AND CORRUPTION. Government actions are hampered by corruption, political infighting, patronage, and weak institutions.</p> <p>Ongoing effect: All actions suffer a -1 penalty.</p>

 <p>United States</p> <p>POLITICAL CONSTRAINTS. No one at home is eager to get sucked back into the Iraqi quagmire.</p> <p>Ongoing effect: Suffer -1 penalty to all actions that involve use of US military ground forces.</p>	 <p>Iraqi Government</p> <p>MILITARY SHORTCOMINGS. Despite billions in weapons and training, the Iraqi armed forces are poorly organized and led, and riddled with patronage and corruption.</p> <p>Ongoing effect: All military actions outside of Baghdad and Shiite areas suffer a -1 penalty.</p>
 <p>Sunni opposition</p> <p>FEAR AND LOATHING. Sunnis might fear ISIL, but they might loathe the Shiite-dominated central government even more.</p> <p>Ongoing effect: Any actions taken directly against ISIL suffer a -2 penalty. Actions taken against non-ISIL actors in Sunni-majority areas gain a +1 bonus.</p>	<p>The Enduring Curse of Unforeseen Consequences and Second Order Effects</p> <p>ONGOING EFFECT: Whenever a double is rolled, ISIL may take an immediate action. This action must pertain to the immediately prior action for which the double was rolled.</p>

matrix game variations

- 🌐 multi-level game
 - 🌐 larger teams (4-6), with players assigned roles and individual goals
 - 🌐 group decision-making rules
 - 🌐 individual interaction limits
- 🌐 multiple COAs, select one
 - 🌐 generates larger number of possible action
 - 🌐 enables analysis of roads-not-taken
- 🌐 multiple actions per team in different (diplomatic, military, economic, other) domains
 - 🌐 all-of-government
 - 🌐 reduce kinetic bias

matrix game variations

- 🌐 distributed and asynchronous games
 - 🌐 play by email, skype, messaging, etc
- 🌐 linked games
 - 🌐 for example, simultaneous Syria and Iraq games
- 🌐 matrix games embedded in more conventional wargames
 - 🌐 RCAT