

# Games and Simulations in the social science classroom



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# Serious games and learning

- research on educational games suggests:
  - **moderately positive** effect on learning (compared to conventional methods), but considerable variability
- much depends on simulation design and implementation
  - a **poor simulation implemented well** may have superior learning outcomes over a **good simulation implemented poorly**
  - simulations do not teach themselves
  - importance of debriefs

# Serious games and learning

- 🌐 simulations can:\*
- 🌐 act as intellectual cross-training
- 🌐 promote team-building and networking
- 🌐 motivate and engage
- 🌐 offer insight into issues of process, coordination, interaction that lectures convey poorly
- 🌐 offer insight and empathy into the perspectives and behaviour of others
- 🌐 Kesten Green, “Forecasting in conflict situations” (2002)

\*depending on design and implementation





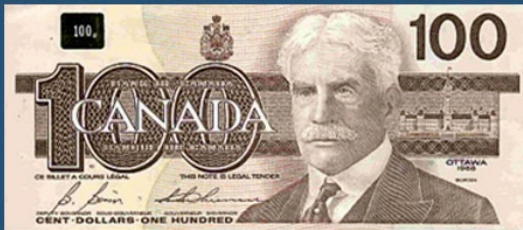
# Quick and simple games

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



POLI 450  
PEACEBUILDING

## a one minute negotiation



POLI 450  
PEACEBUILDING

## a two minute negotiation



# Quick and simple games

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



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**TABLE 2**  
**Breakdown of Defection and Cooperation Choices:**  
**American-Chinese Sample**

	Defect (%)	Cooperate (%)	Total
China	31 (46.3)	36 (53.7)	67
United States	41 (74.5)	14 (25.5)	55
Total	72 (59)	50 (41)	122

(Hemesath and Pomponio 1998)



From: Oosterbeek, Sloof, van de Kuilen (2004).



POLI 450  
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- Similarly, Mintz et al (2006) showed that university students and military officers game crises in demonstrably different ways, despite having a common "national" culture.

**TABLE 1**  
**Differences between Students and Military Commanders in Choosing**  
**"Do Nothing" versus "Do Something" (in Percentages)**

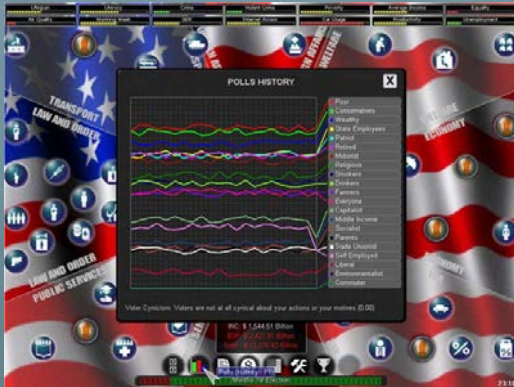
Subject Group	Choice	
	Do Nothing	Do Something
Students	35	65
Military	8	92

- Similarly, economists appear to be more selfish (from lit review by Bauman 2012):
  - Marwell and Ames, 1981 – Economists don't understand fairness like other people...
  - Carter and Irons, 1991 – Economists are different before they become economists...
  - Frank et al, 1993 – Economists more likely than others to freeride...
  - Frank and Shulze, 2000 – Economics students more corrupt than others...
  - Wang et al, 2012 – Economics 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...

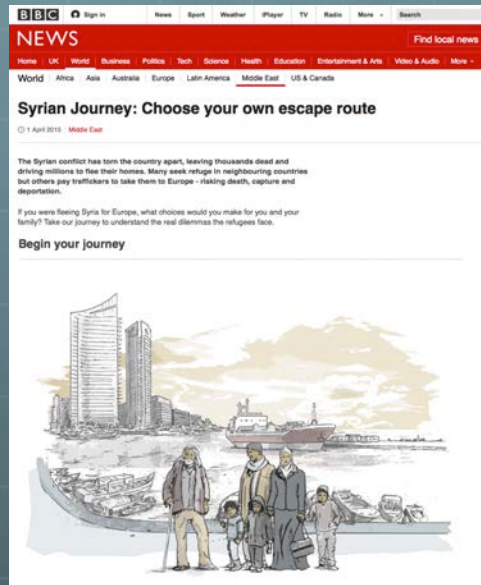
# Commercial games as reading/review assignments

- 🌐 only limited instructor preparation or support required
- 🌐 encourages students to adopt a critical perspective
- 🌐 simulation need not be “high fidelity” (or even accurate)





Democracy 2



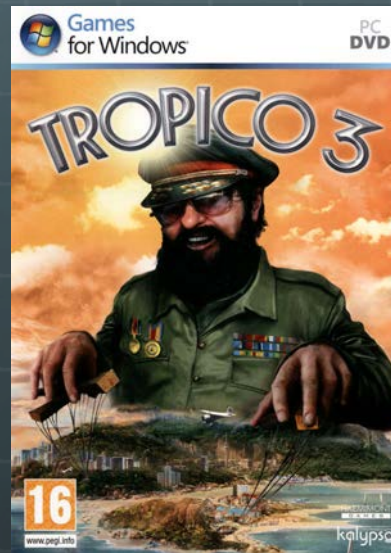
Syrian Journey



Inside the Haiti Earthquake



Masters of the World



Tropico 3



Third World Farmer



Risk



A Distant Plain







# Roleplay and negotiations

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



# The THRESHOLD of DEMOCRACY

Athens in 403 B. C.

Third Edition



Mark C. Carnes • Josiah Ober

*"Reacting to the Past" Series*

# Rousseau, Burke, and Revolution in France, 1791



Mark C. Carnes and Gary Kates

*"Reacting to the Past" Series*

# Defining a Nation

India on the Eve of Independence, 1945




Ainslie T. Embree and Mark C. Carnes

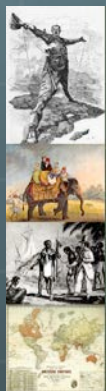
*"Reacting to the Past" Series*

Reacting to the Past series  
<https://reacting.barnard.edu/>



# 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!*



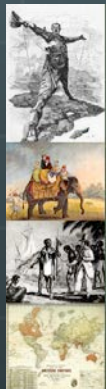
### year one

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



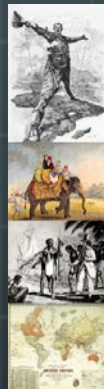
### year three

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



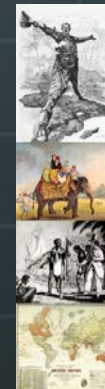
### year four

- colonial rule !
  - 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

- 🌐 highly adaptable, free-play narrative games based on actions/arguments/consequences
- 🌐 extremely easy to set up and run
- 🌐 can simulate almost any multi-actor situation
- 🌐 usually played with 4-7 actors/teams, but could be adapted to larger groups



# Matrix games



ISIS Crisis matrix game



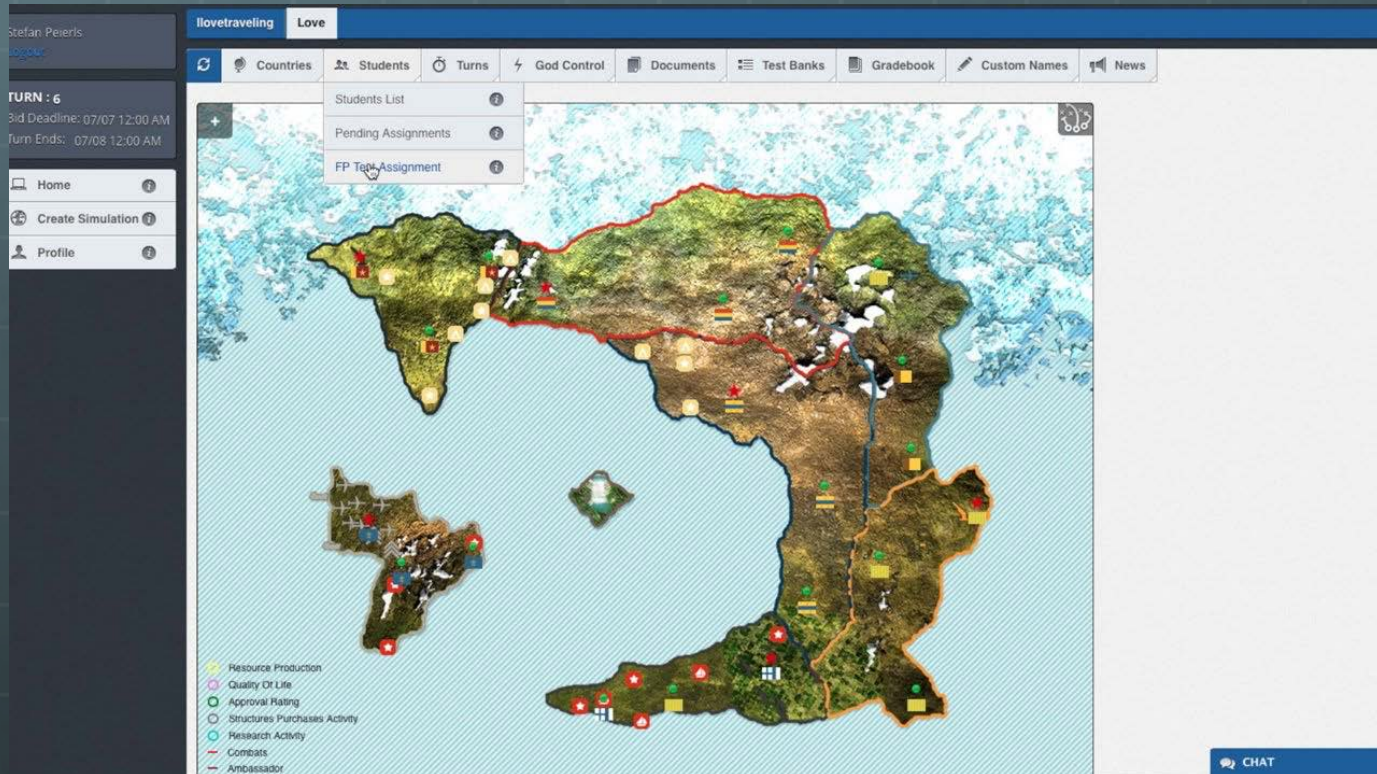
# ISIS CRISIS





# Online digital games

- 🌐 subscription based, roleplaying + embedded game mechanics



# Custom-designed boardgames

- 🌐 time-consuming and challenging to develop, but can be designed-to-purpose
  - 🌐 variants and modifications can also be designed of existing games, with MUCH less work
- 🌐 limited number of players?





Iraq RISK



Afghan Provincial Reconstruction







## A Humanitarian Crisis Game

**Health Cluster Coordination**

If participating in the **Health Cluster**, place one new **medical supply** in any district for each participant in the cluster (including yourself).

**Teamwork**

Retain this card. You may play it at any time (including during another player's turn) to immediately reassign one of your teams to a new location.

Once played, return to the deck.

**Local Self-Help**

Local populations are the most important actors in a humanitarian disaster.

Take 1 **FOOD**, **WATER**, and **SHELTER** from the container and place these in any district(s) (current player may choose which goes where).

**Celebrity Visitors**

High-profile visitors offer publicity but distract from urgent relief activities.

Place 1 team in **MEDIA OUTREACH** box for duration of this turn. Advance the logistics counter at the **AIRPORT** by 1 as a celebrity aircraft takes up much-needed rescue space.

**3272 Persons at risk**

- 2 Medical
- 2 WASH
- 2 Food
- 1 Shelter
- 1 Rescue

**632 Persons at risk**

- 1 Medical
- 1 WASH
- 1 Food
- 1 Shelter

**Squatters**

If no **SHELTER** in this district, add one **SHELTER** and one **SOCIAL UNREST** card.

Remove this card and flip another.

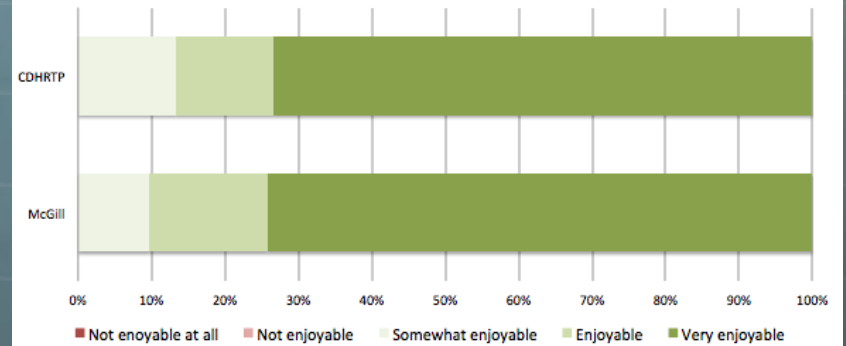
**Needs Assessment**

Players may examine face-down at-risk cards in this district.

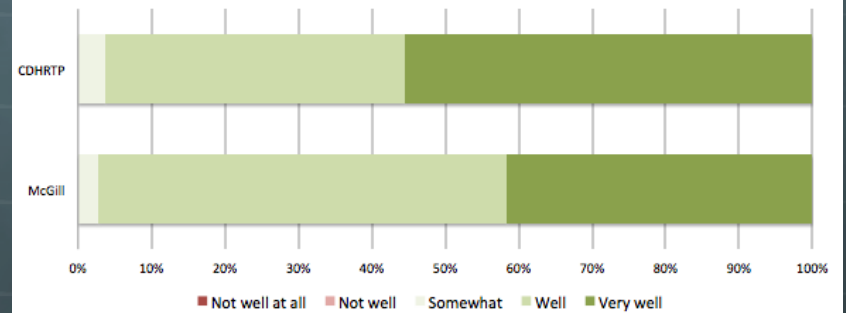




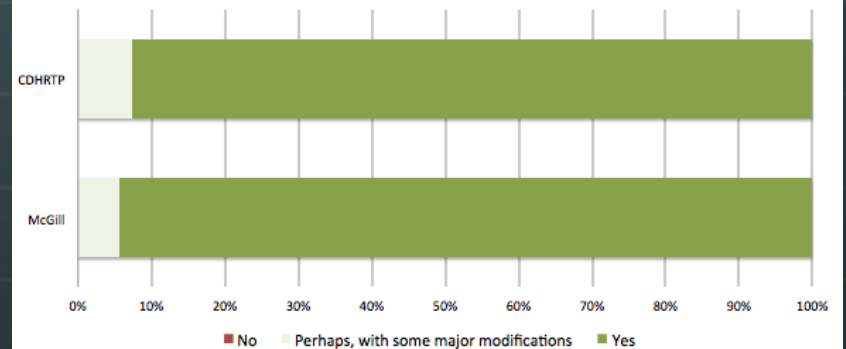
### How enjoyable did you find the game?



### How well did the game illustrate themes relating to humanitarian assistance and coordination?



### Should the game be used in the course again in future years?



# Student-authored games

- research suggests students learn even more when asked to design their own game/simulation
- Druckman and Ebner, “Enhancing Concept Learning: The Simulation Design Experience,” (2010).





# Student-authored games

## Aleppo: The Mother of All Battles

by Tracy, Alexander, Thibault, Louise

ALEPPO

Syrian Family 1: Abu Omar

Syrian Family 2: Haddad Family



Inklewriter



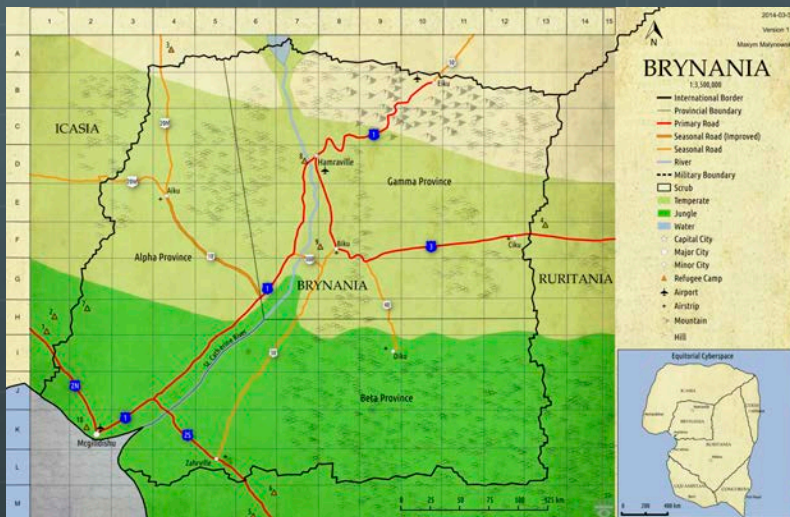
Arab Spring



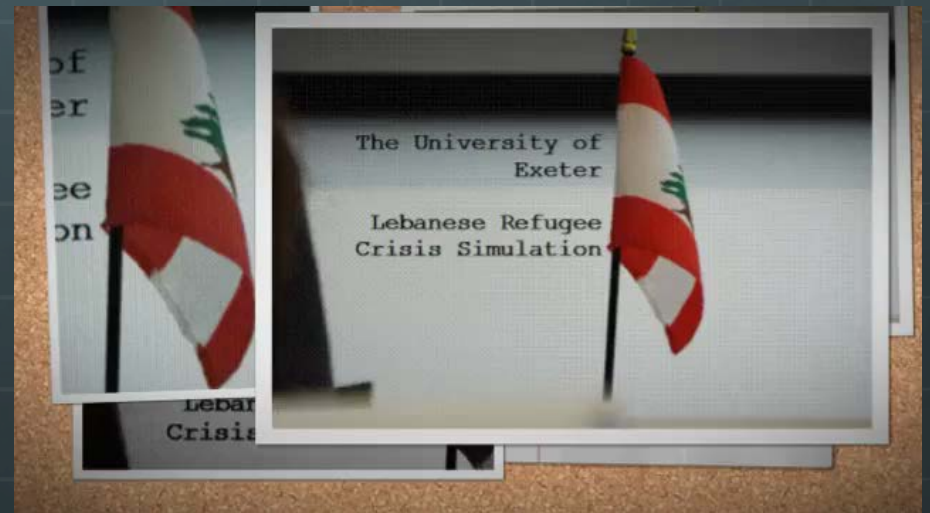
Road to Damascus

# Complex and hybrid games

- 🌐 Role playing games combined with other game mechanics
- 🌐 Can be very large indeed (“MegaGames”)



Brynania



Syrian Refugees in Lebanon



# Best practices

- Start with education 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/background 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

# Best practices

## Assessment




-  game reviews should be graded
-  game designs should be graded
-  preparation and debrief assignments should be graded
-  simulation participation might or might not be graded:
  -  **yes:** rewards students for effort
  -  **no:** distorts game play, may be difficult to assess
  -  **sort of:** optional assignment/bonus or class participation grades



# Other applications

- experimental methodology
- data collection from educational simulations
- games for serious policy analysis
  - Chatham House
    - refugee negotiations
    - compensation modalities
    - normative formulations
  - Exeter
    - UNRWA policy

# Additional resources

-  PAXsims
  -  <http://www.paxsims.org>
-  Active Learning in Political Science
  -  <https://activelearningps.wordpress.com>
-  Gaming Political Science
  -  <http://www.k-state.edu/polsci/gaming/>
-  Play the Past
  -  <http://www.playthepast.org>
-  Inklewriter
  -  <http://www.inklestudios.com/inklewriter/>








# Additional resources

## Journals

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

## Books

-  Philip Sabin, *Simulating War: Studying Conflict Through Simulation Games* (2012)
-  Peter Perla, *The Art of Wargaming* (1990)
-  Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (2004)
-  Mark C. Carnes, *Minds on Fire: How Role-Immersion Games Transform College* (2014)
-  John Curry and Tim Price, *Matrix Games for Modern Wargaming* (2014)