

# Agent Based Modeling for Generative Interactive Narratives



Presented by: <http://www.cs.vt.edu/~mccollum/>

CS 5444 - Agent-Based Modeling and Multi-Agent Systems

Spring 2014 - Virginia Tech

Course Syllabus: <http://www.cs.vt.edu/~mccollum/courses/5444/syllabus.html>

Office Hours: <http://www.cs.vt.edu/~mccollum/>

Office: 3100 CS Building, Room 3100

Phone: (540) 231-5300 ext. 2222

E-mail: [mccollum@vt.edu](mailto:mccollum@vt.edu)

Office hours: MWF 10:00-11:00 AM

Office hours: TTh 10:00-11:00 AM

Office hours: W 1:00-2:00 PM

Office hours: Th 1:00-2:00 PM

Office hours: F 1:00-2:00 PM

Office hours: Th 1:00-2:00 PM

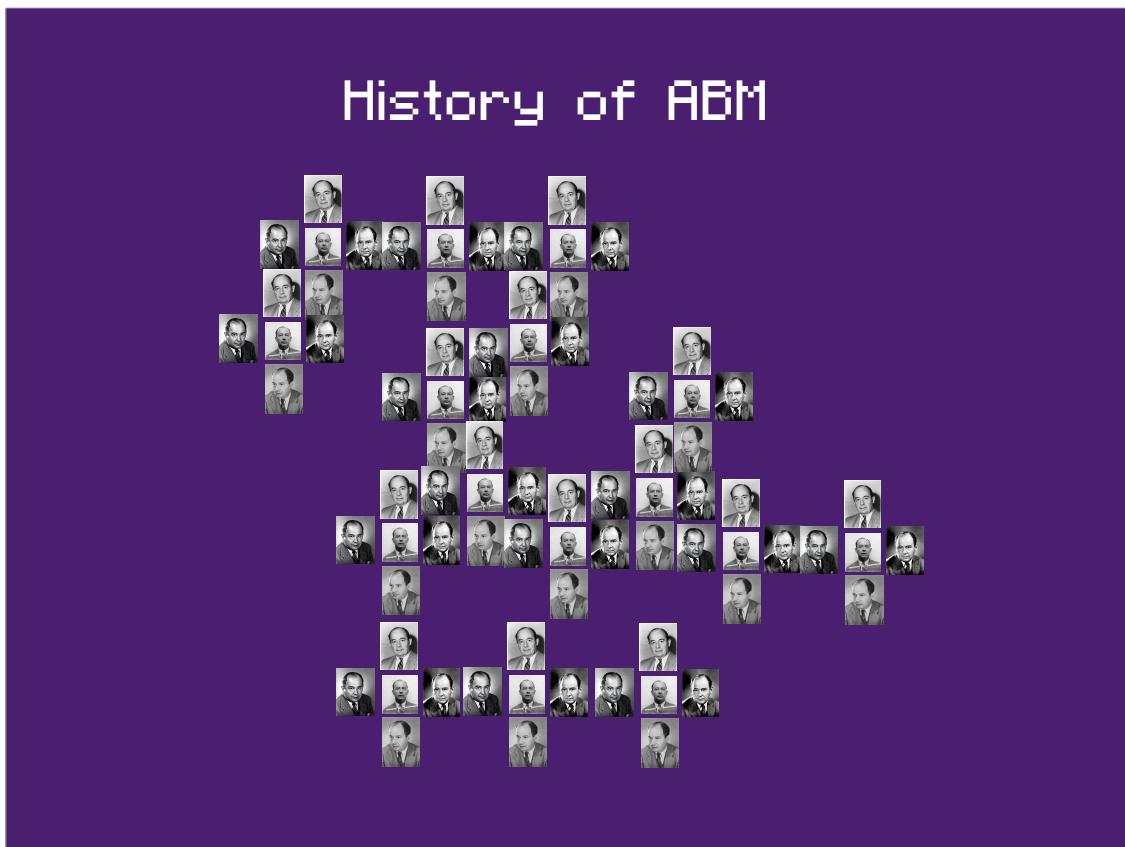
Office hours: F 1:00-2:00 PM

Office hours: Th 1:00-2:00 PM

Office hours: F 1:00-2:00 PM

Office hours: Th 1:00-2:00 PM

Office hours: F 1:00-2:00 PM

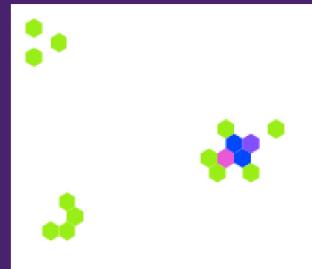
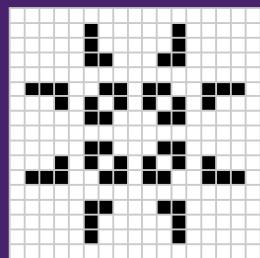


1940s

John Von Neumann – mathematician/physists →  
Von Neumann self replicating machine in a sea of  
spare parts. d → Cellular Automata with Stanislaw  
Ulam, a more mathematically defined model.

Von Neumann neighborhood

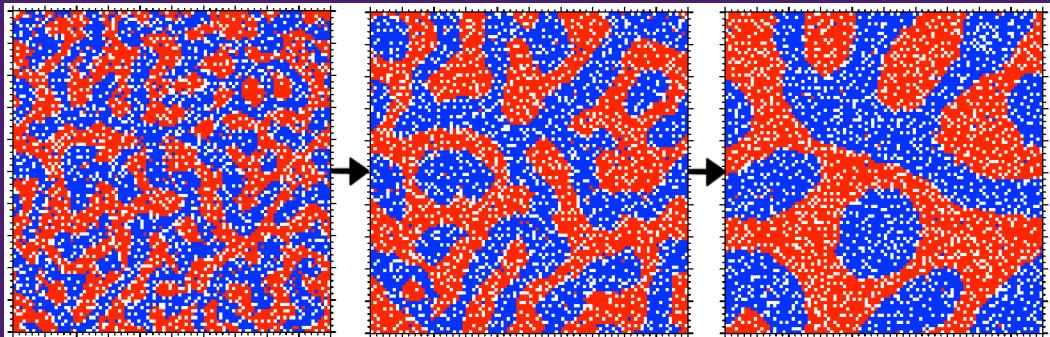
## History of ABM



...>0 <0 ..

1970 - John Conway – Game of Life. Zero play

## History of ABM



Thomas Schelling - 1970

-=Demo Time=-



Demo software: NetLogo

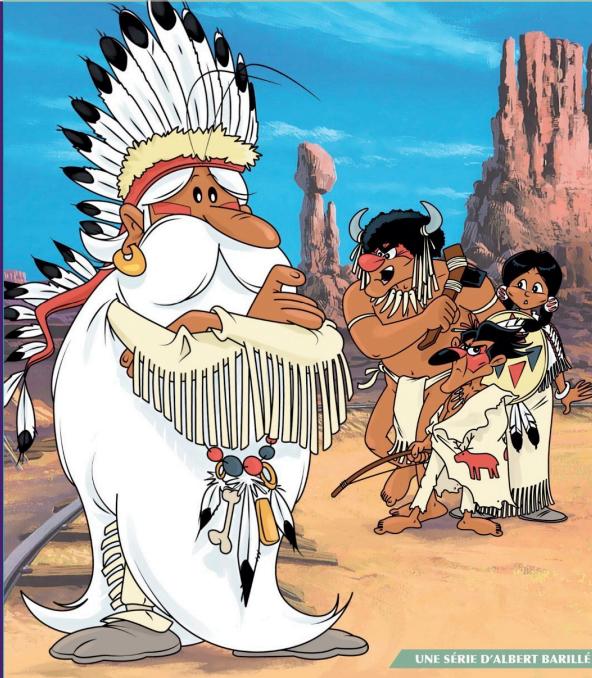
AIDS



## Sugarscape



1996 - Joshua M. Epstein & Robert Axtell in their book *Growing Artificial Societies*.



UNE SÉRIE D'ALBERT BARILLÉ

## Once upon a time...Man

The Artificial Anasazi model is one of the icon models of the agent-based modeling community. The model describes the population dynamics in the Long House Valley in Arizona between 800 and 1350 (Dean et al. 2000; Axtell et al. 2002; Gumerman et al. 2003). It is shown that by simple household rules on choosing locations for farms and settlements archaeological records on the occupation of the Anasazi in Long House Valley can be reproduced. The model analysis also shows that the abandonment of the valley around 1300 cannot be explained solely by environmental variations.

If there is no variance many agents will leave the valley at once when there is a bad year.

# Separation Barrier



## Future?

- When ABM is used for art, it is purely formalistic
- New Media
- Bio-Art

Thanks ☺



Save

Processing page: 11

Cancel