

# How does computation emerge?

A League of Legends Story

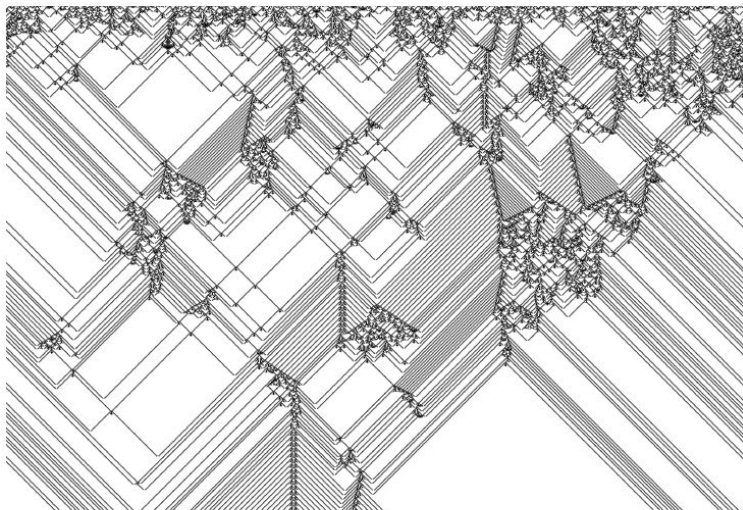


# From toy model to real data

Lessons learned in CAs

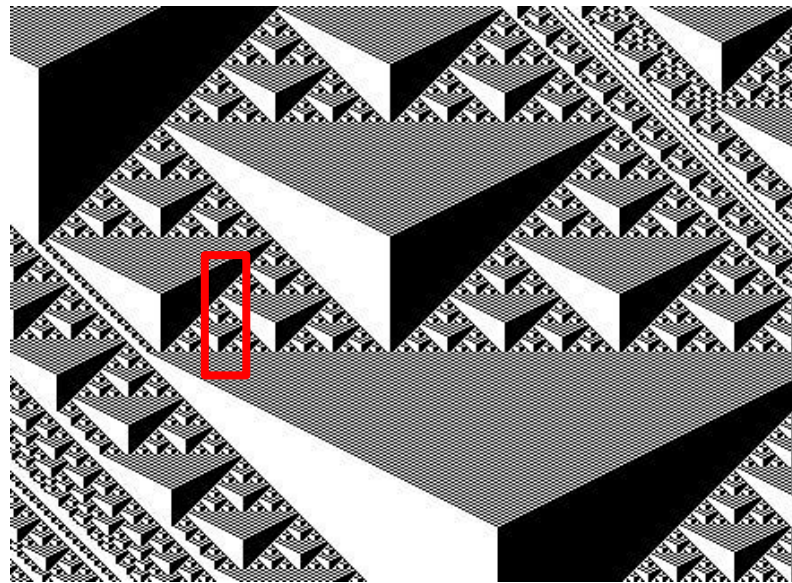
Massive amounts of data generated from complex social interactions

Can we see similar trends in terms of emergent computation?



# Incomplete information

- Only see a small section of a CA trajectory
  - What rule made this knowing some “Phenotype” of CA?
- Know all microstates, don't know level of description
- State dependent CAs? Coarse graining? Coupled systems?



→ Want to know how rules emerge

# Incomplete information

- Only see a small portion of interactions
  - Why was Vayne so strong in Season 3?  
("Phenotype" of social system)
  - What made this happen?
- Some coarse-grained level of description, strongly emergent



→ Could we build CAs to model these 'coarse-grained' dynamics



# To summarize...

How do you infer global rules from limited knowledge of the “phenotype”?

How much information do you need?

How do causal causal structures emerge on multiple levels?







Thank you!