

final review

chandra
jegadish
achyut

15 Jul 2016
IGCS, IIT Madras

chandra

20 May - 20 July

ABM

Lit Review

Built a Model

Surveys

Bypass Lab - Participant

Twitter Feed

Helped with Media

jegadish

18 May - 18 July

ABM

Learnt Netlogo

Built a Model

Surveys

Primary Data Cleaning

Secondary Data Analysis

achyut

10 June - 22 July

ABM

Learnt Netlogo
Helped with Model

Surveys

Primary Data Cleaning

Secondary Data Analysis

abm

ABM helps us understand **Complex Adaptive Systems**

Unlike many other modeling techniques that quantify and then re-create the patterns, agent-based models explore the **causes** of the patterns

Patterns are **emergent properties** from the individual decisions of the agents.

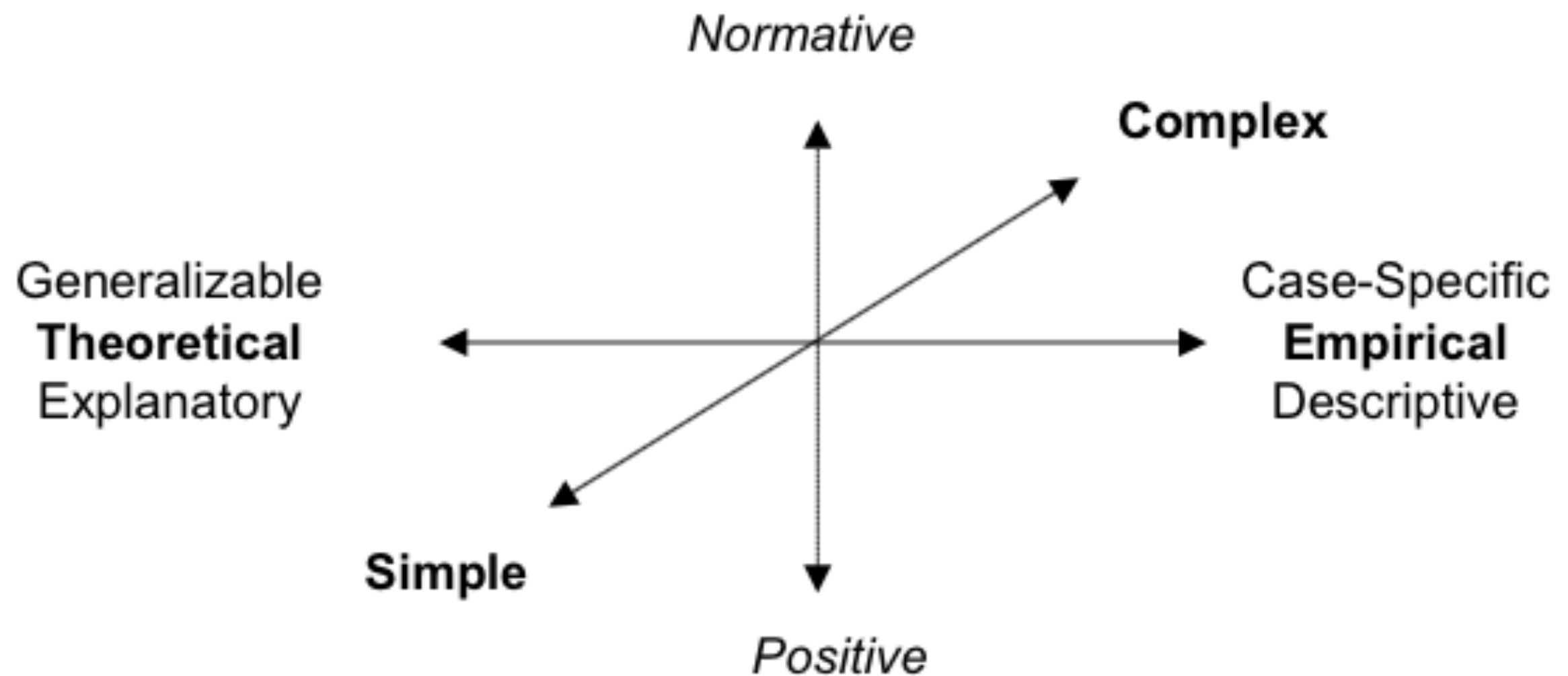


Figure 1. Continua for Categorizing Agent-Based Models

(Aquino et al. 2010)

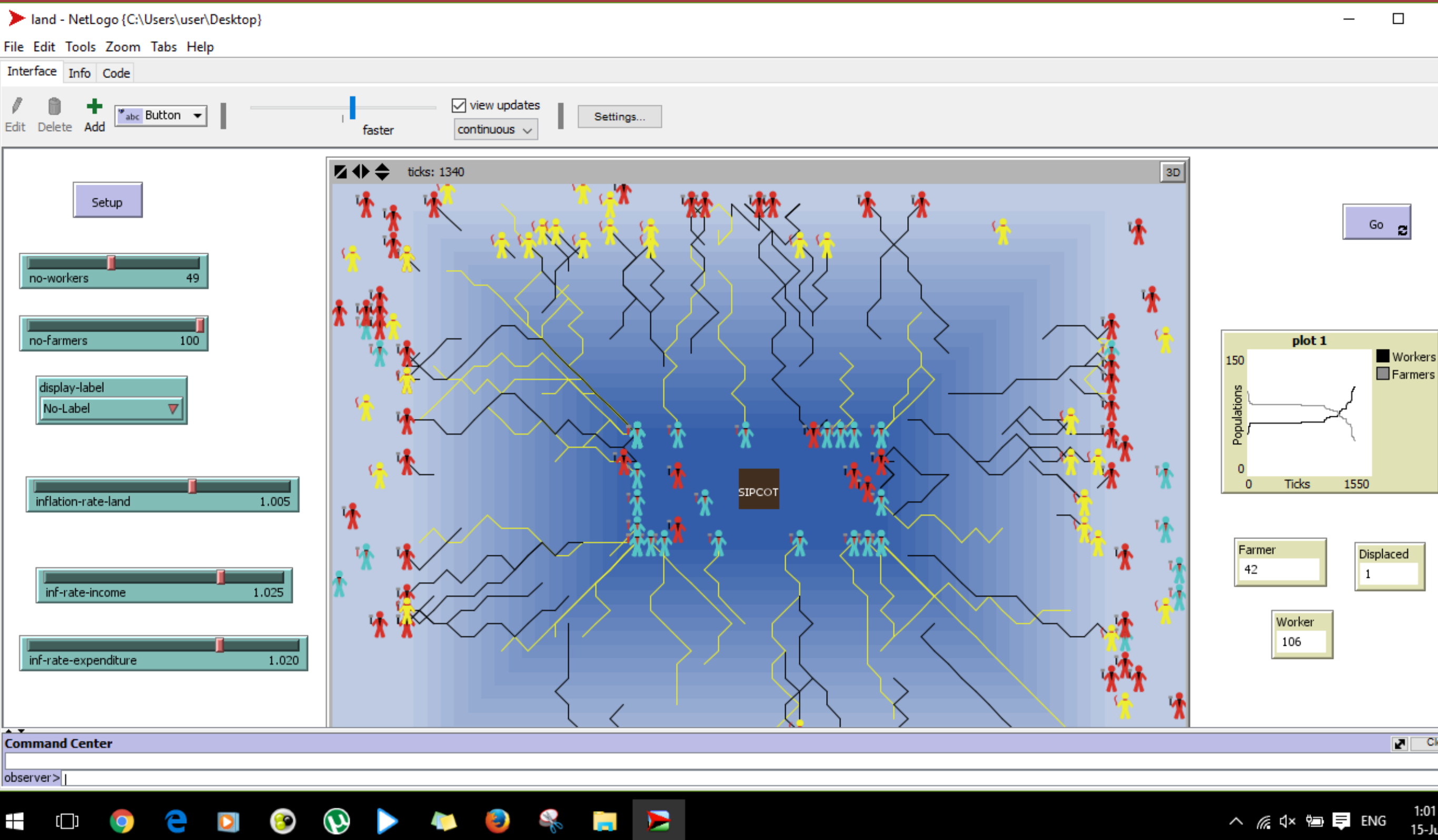
land use change

How do humans & biophysical forces
affect land use & land cover?

What are the environmental & social
impacts of this change?

Complex Process: ABM can help us
understand!

our model



Loosely similar to Valbuena et al. 2010
(An Agent-Based Approach to Model Land Use Change at a Regional Scale)
<http://link.springer.com/article/10.1007/s10980-009-9380-6>

findings

Farmers displaced , land bought out,
industrial zone of SIPCOT continued to
expand
farmers chose to become workers

moving forward

Once I am back in August

We can:

Extend our current model to make it more specific

Apply ABM methods to model SLR

we could use the GIS elevation data and rainwater drainage/ runoff pattern data, that coincide with *eris*, tanks, lakes, wells, to show how sea level rise has unforeseen consequences?
(High priority)

Make a model using **primary survey data**

join us

ABM tutorials on Slack & online

ABM textbook in GURUNATH

Our model's code is on Slack & Github

Presentations on Slack, Dropbox, Github &
Slideshare

making an abm

Consider this:

What is your hypothesis/
research question?

What are types of land-use
and/or land-cover
modifications are you
modeling?

What are your strategies for
understanding model
behaviour?

What are your strategies for
model communication &
dissemination?

THANK YOU!!!