Chaos, Fractals, and the Arts

Ralph Abraham
www.ralph-abraham.org

Porter College 34B, UCSC
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B. The Chaos Revolution

- The codfish disaster

- The implications

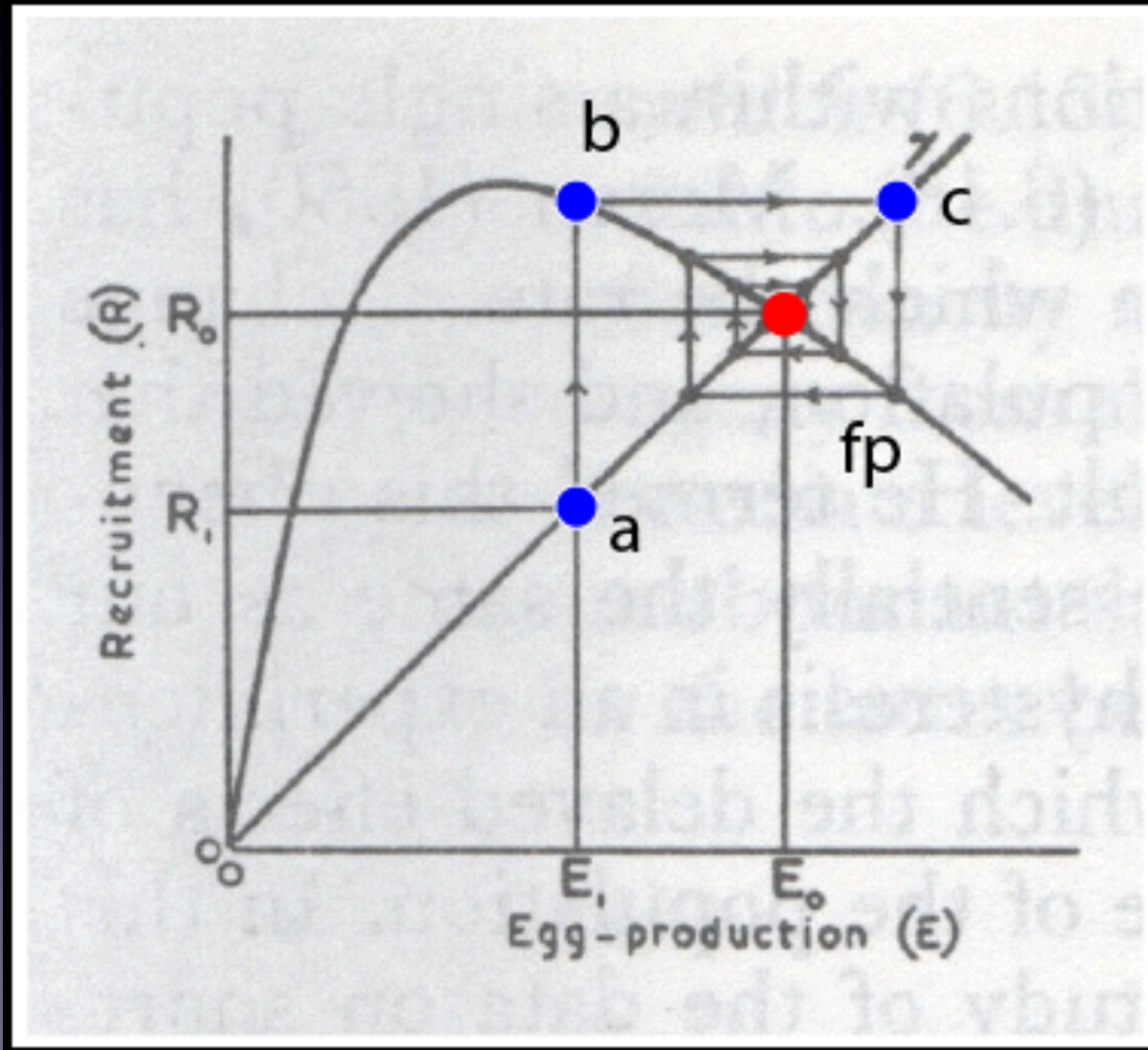# useless arithmetic

Why Environmental Scientists

Can't Predict the Future

Orrin H. Pilkey & Linda Pilkey-Jarvis

One example from our book is the "fig leaf" coverage provided by quantitative modeling in the Grand Banks fishery. The Canadian Grand Banks fishery has been described as the greatest in the world. It provided cod to the Western world for 500 years. In our lifetime, we watched the wild and senseless overfishing lead to the demise of an industry that employed as many as 40,000 people. The models, which many realized were questionable, provided a fig leaf behind which politicians could hide to avoid making the unthinkable decision to halt fishing.
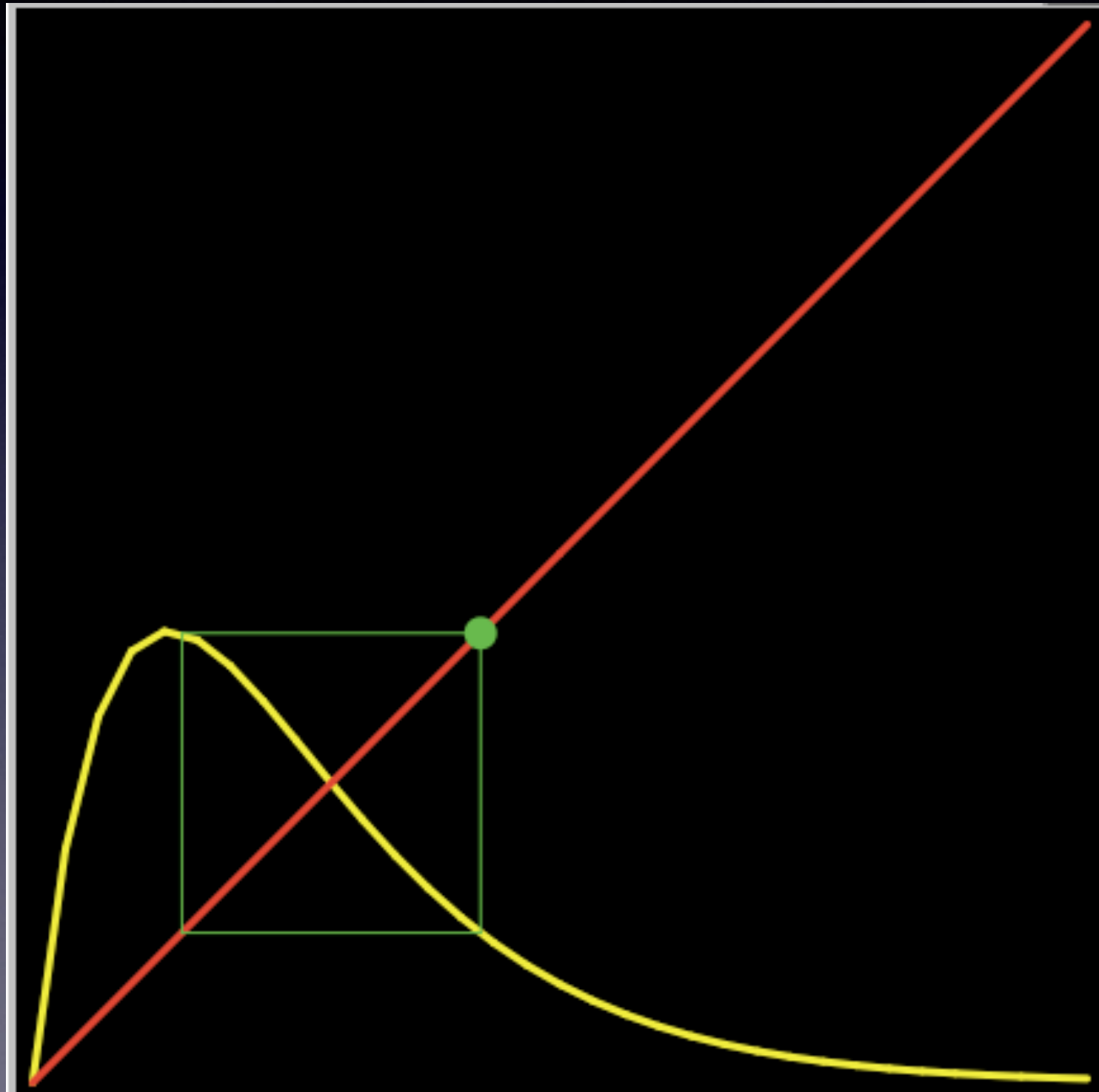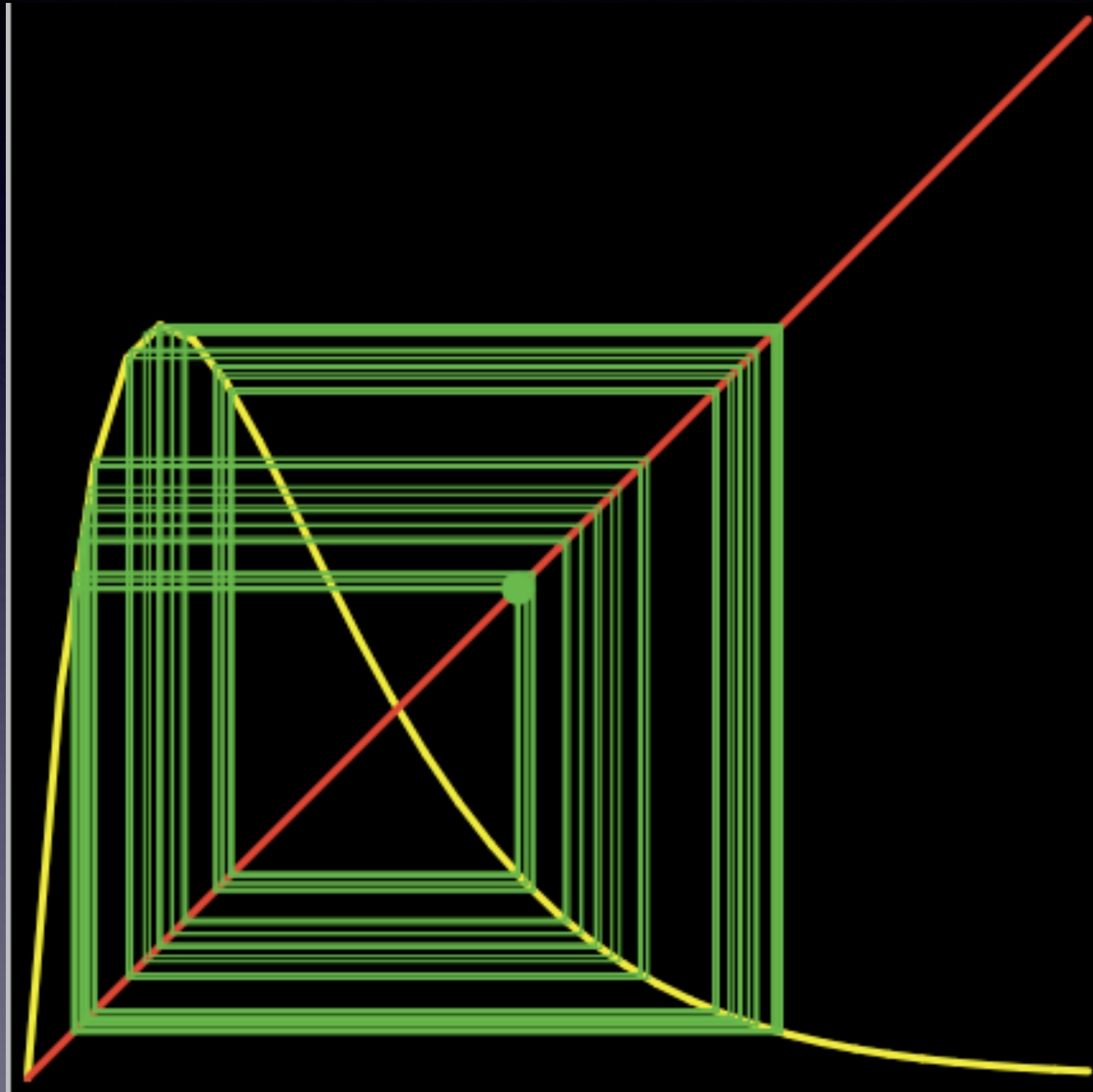
Beverton-Holt Model
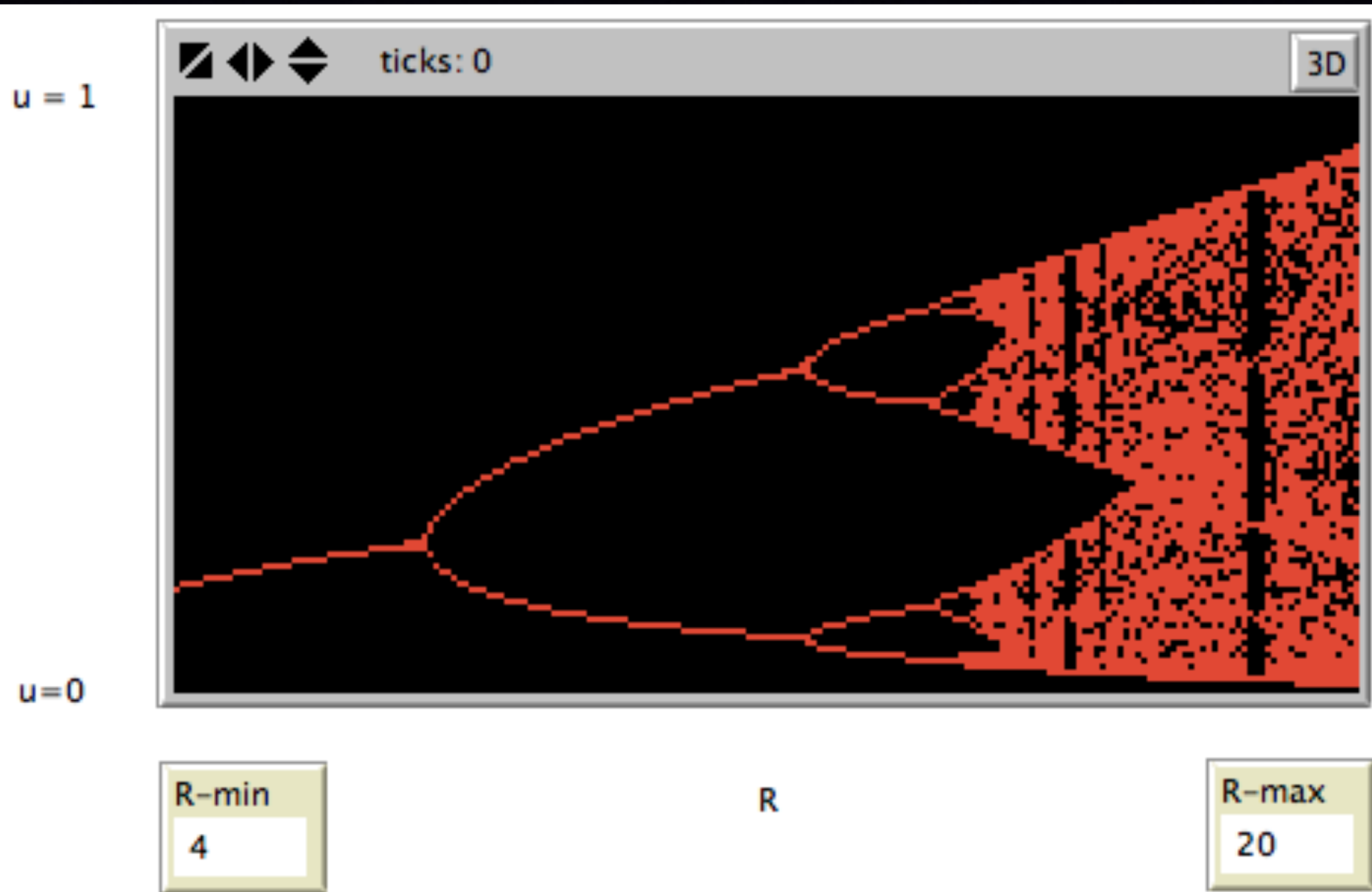
Beverton-Holt, alpha = 6

Beverton-Holt, alpha = 9

Beverton-Holt, alpha = 15

Beverton-Holt, response

Implications

- Predictions fail
    - sensitivity
    - bifurcation

C. NetLogo Programming

- Turtle graphics

Porter 34B 2016 Meeting #3b

The End