

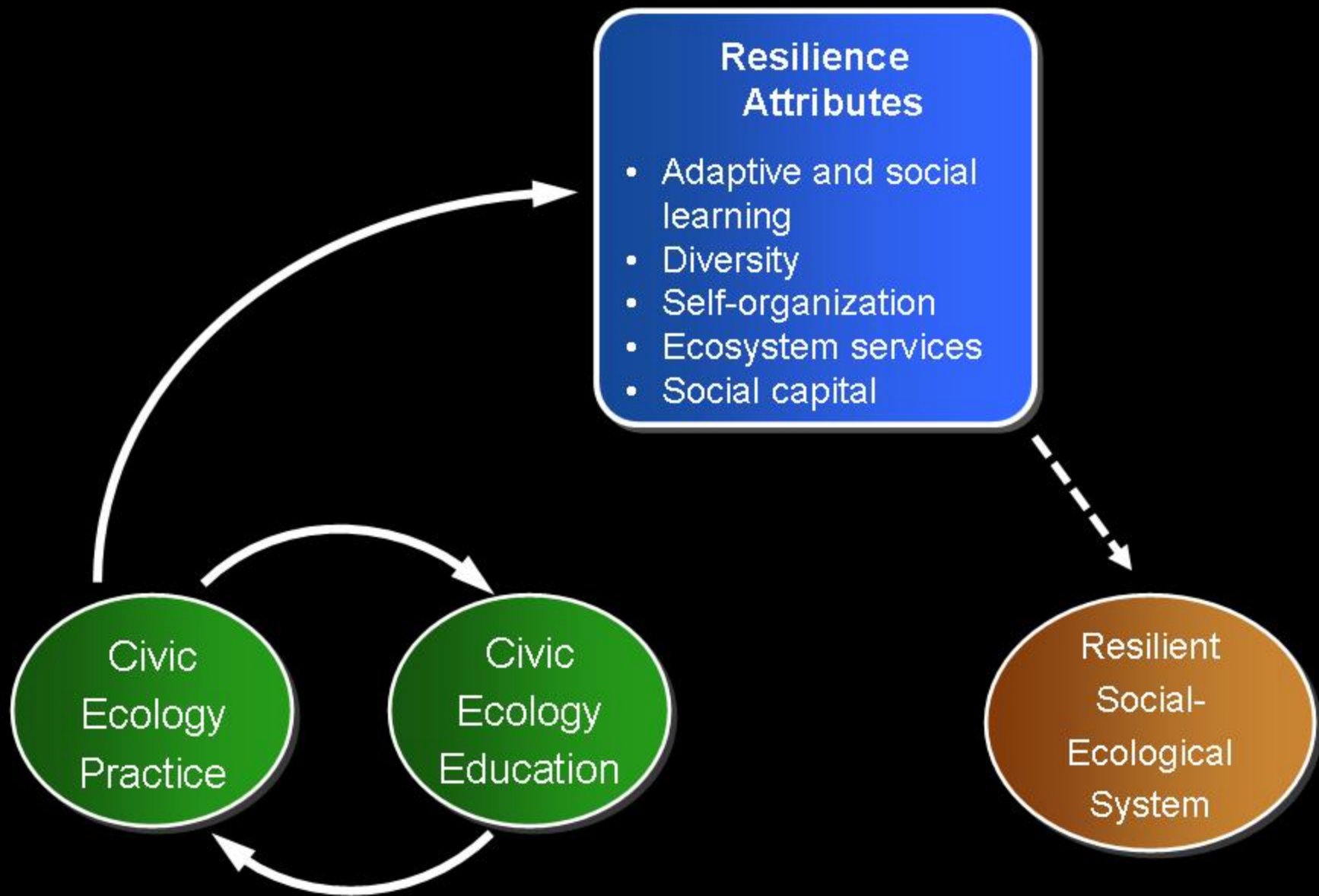


# Towards an Ecology of Environmental Education: Feedback Loops, EE, and Resilience

*World Environmental Education Congress, Montreal  
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&  
Marianne E. Krasny

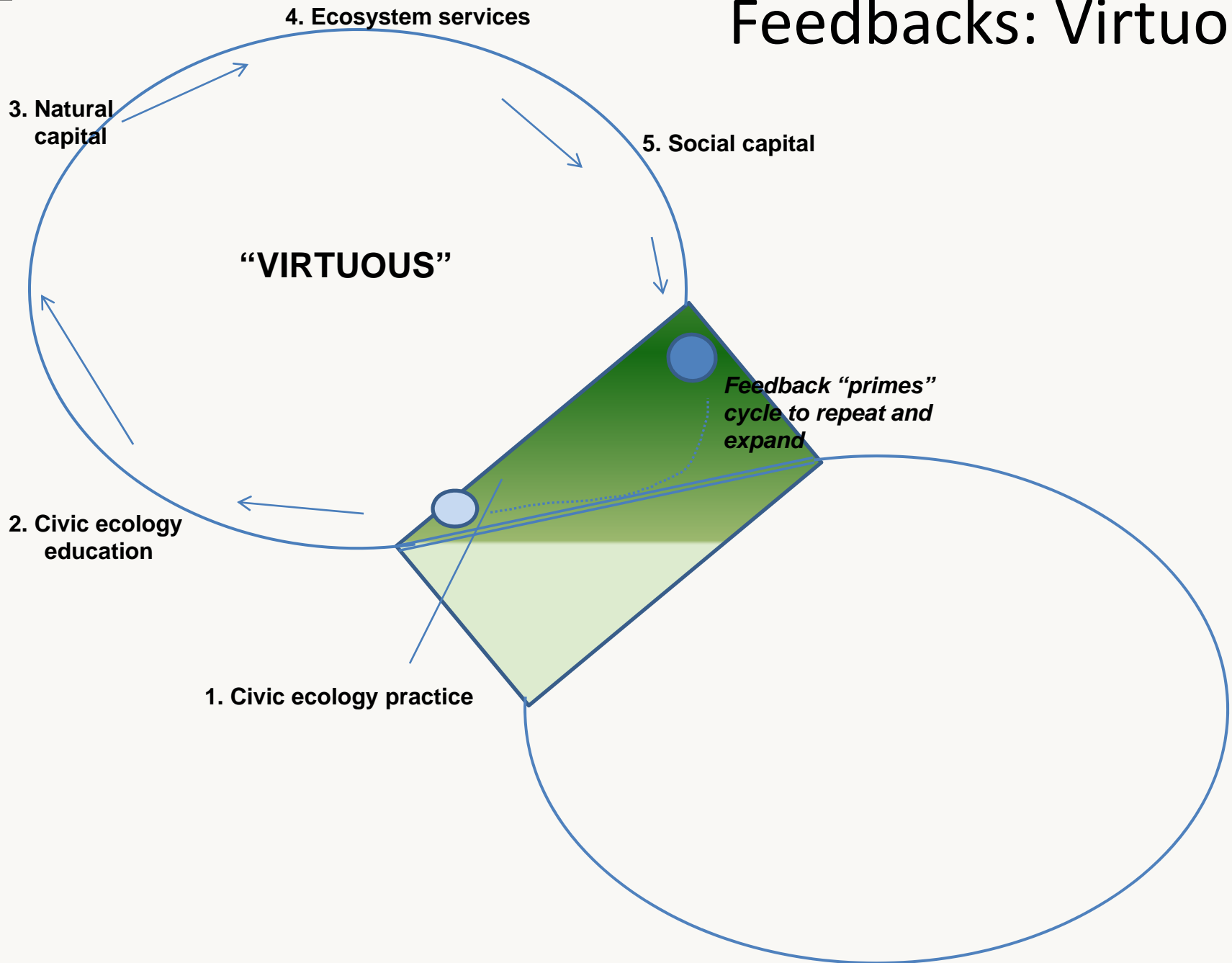
*Cornell University  
Department of Natural Resources*



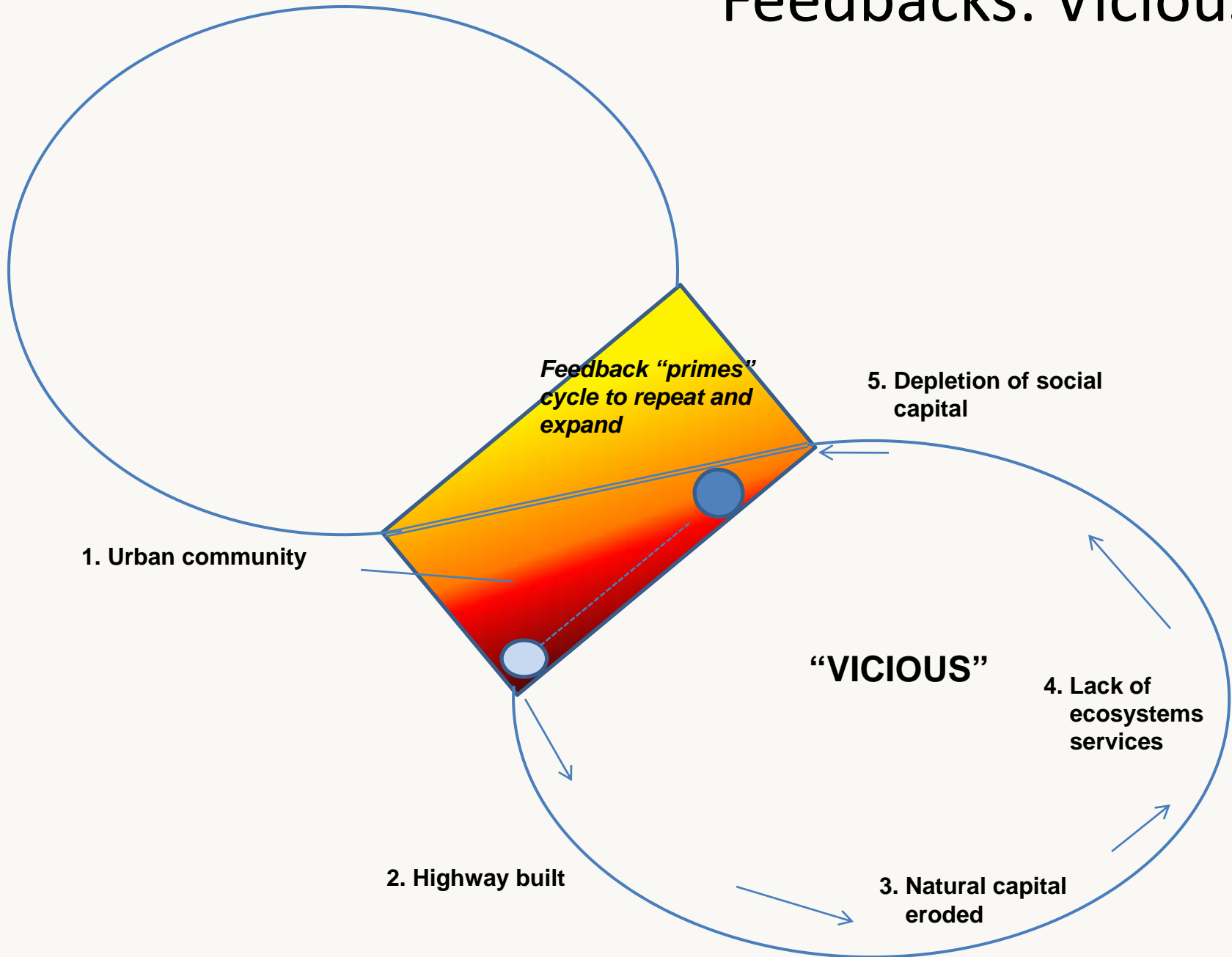
Folke et al. 2002  
Walker & Salt 2006  
Krasny & Tidball 2009



# Feedbacks: Virtuous

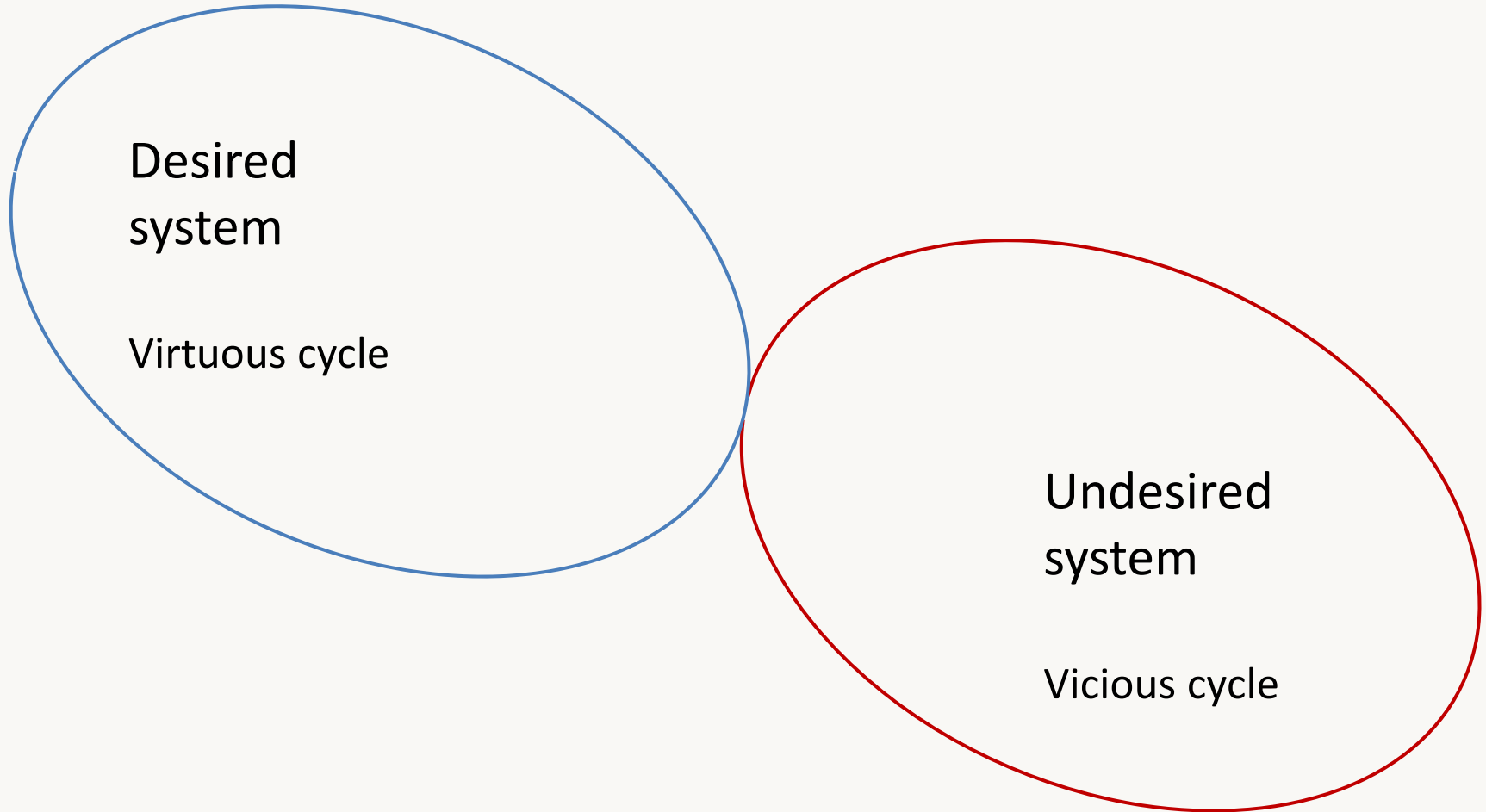


# Feedbacks: Vicious



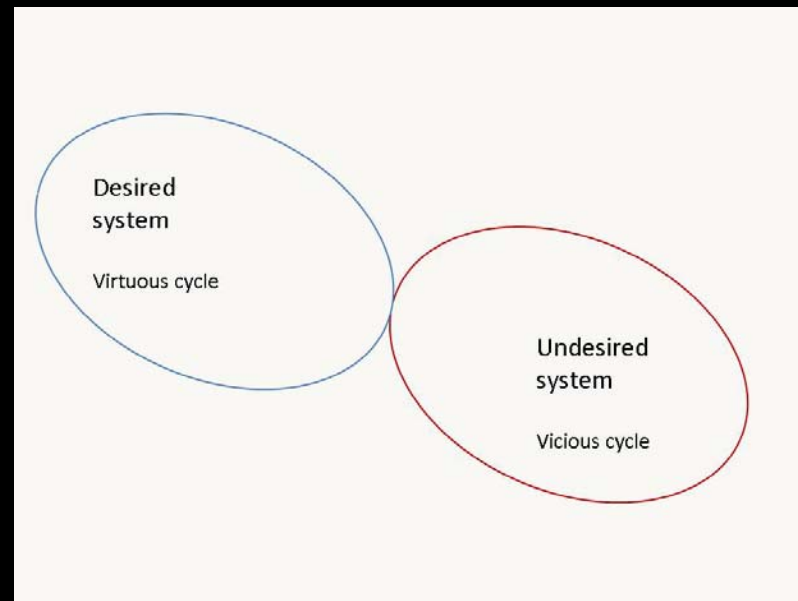


# Virtuous and Vicious Cycles Can be Resilient



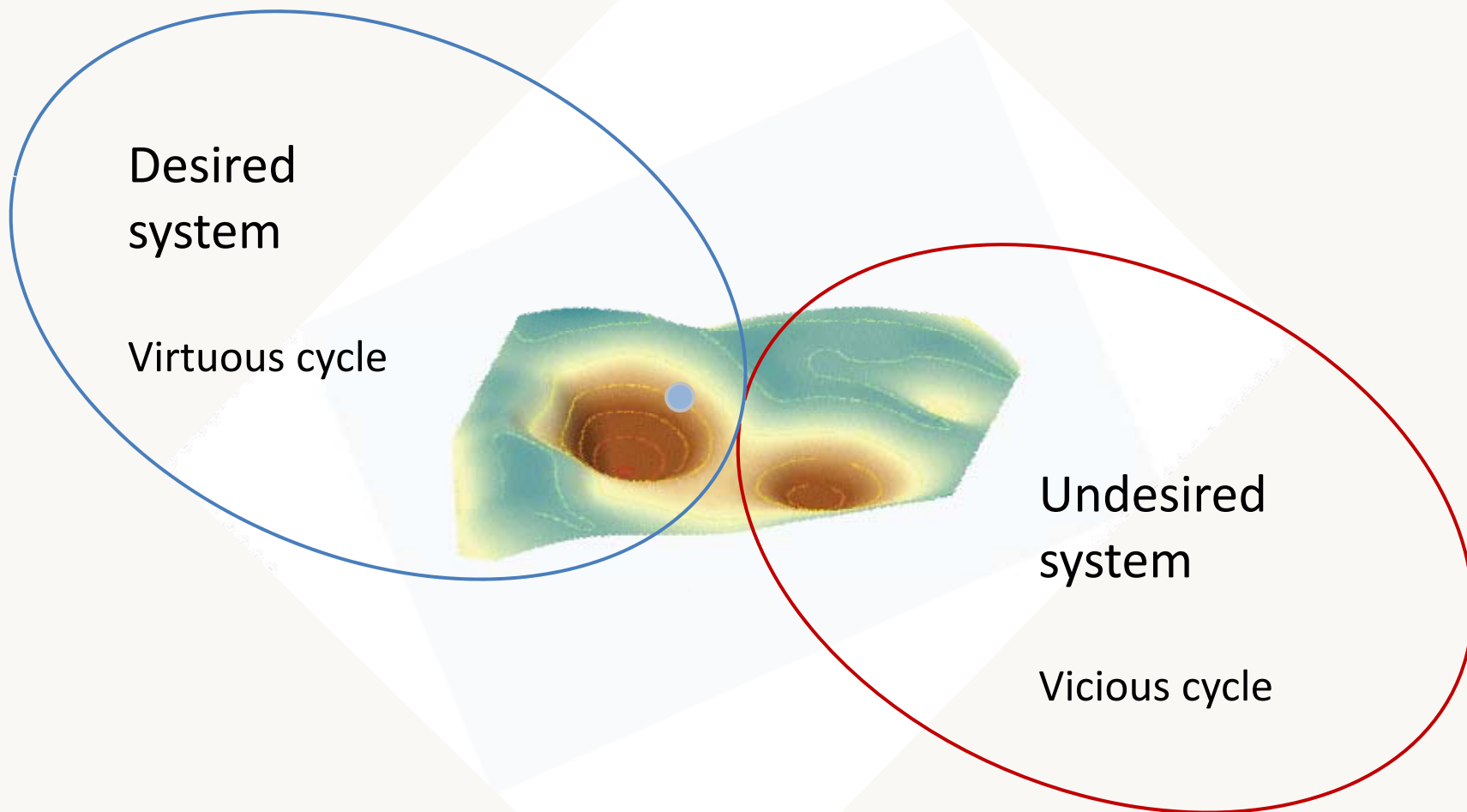


# How can EE Help in Managing a System for a Desirable Resilient State?



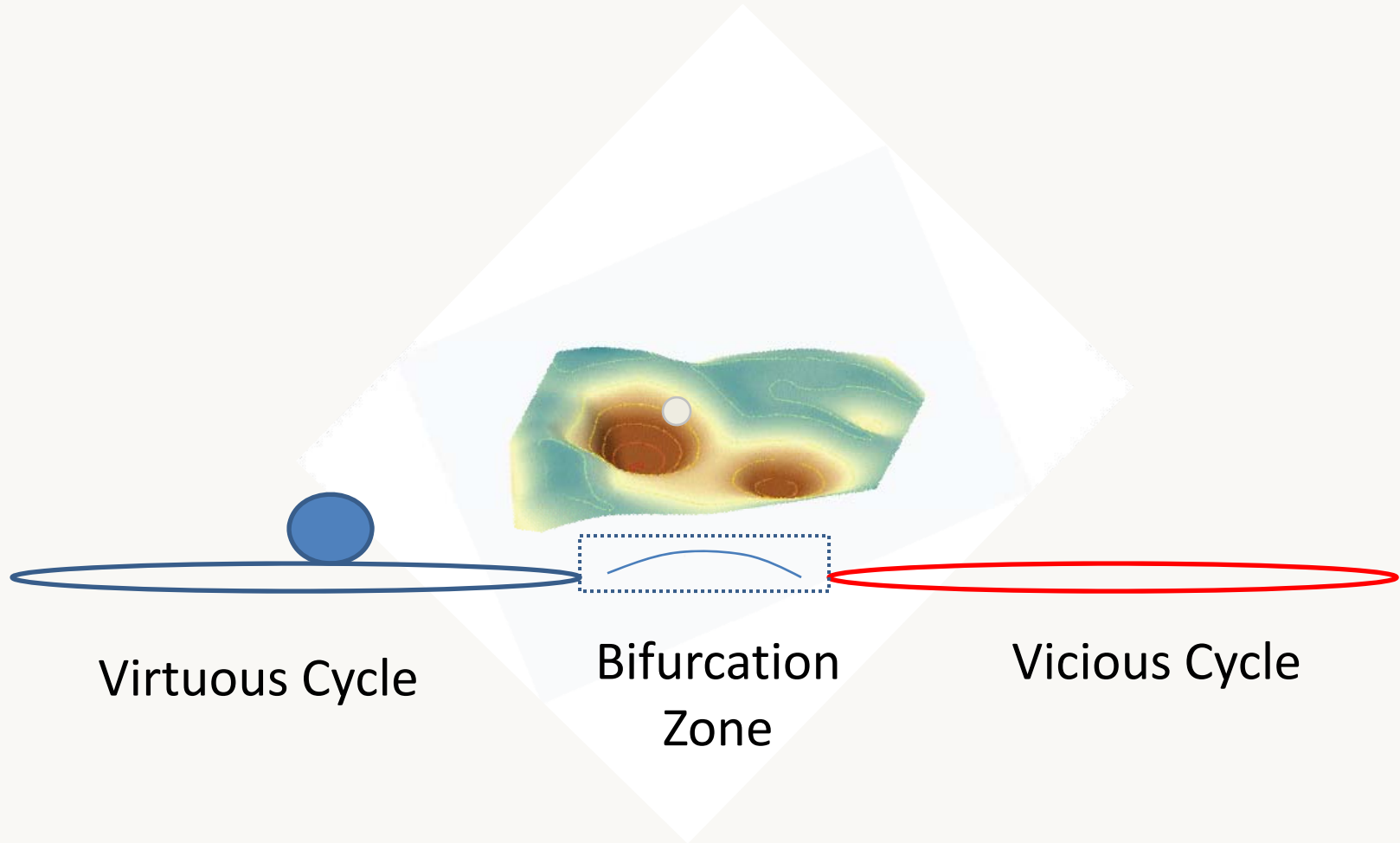


# Virtuous and Vicious Cycles Can be Resilient





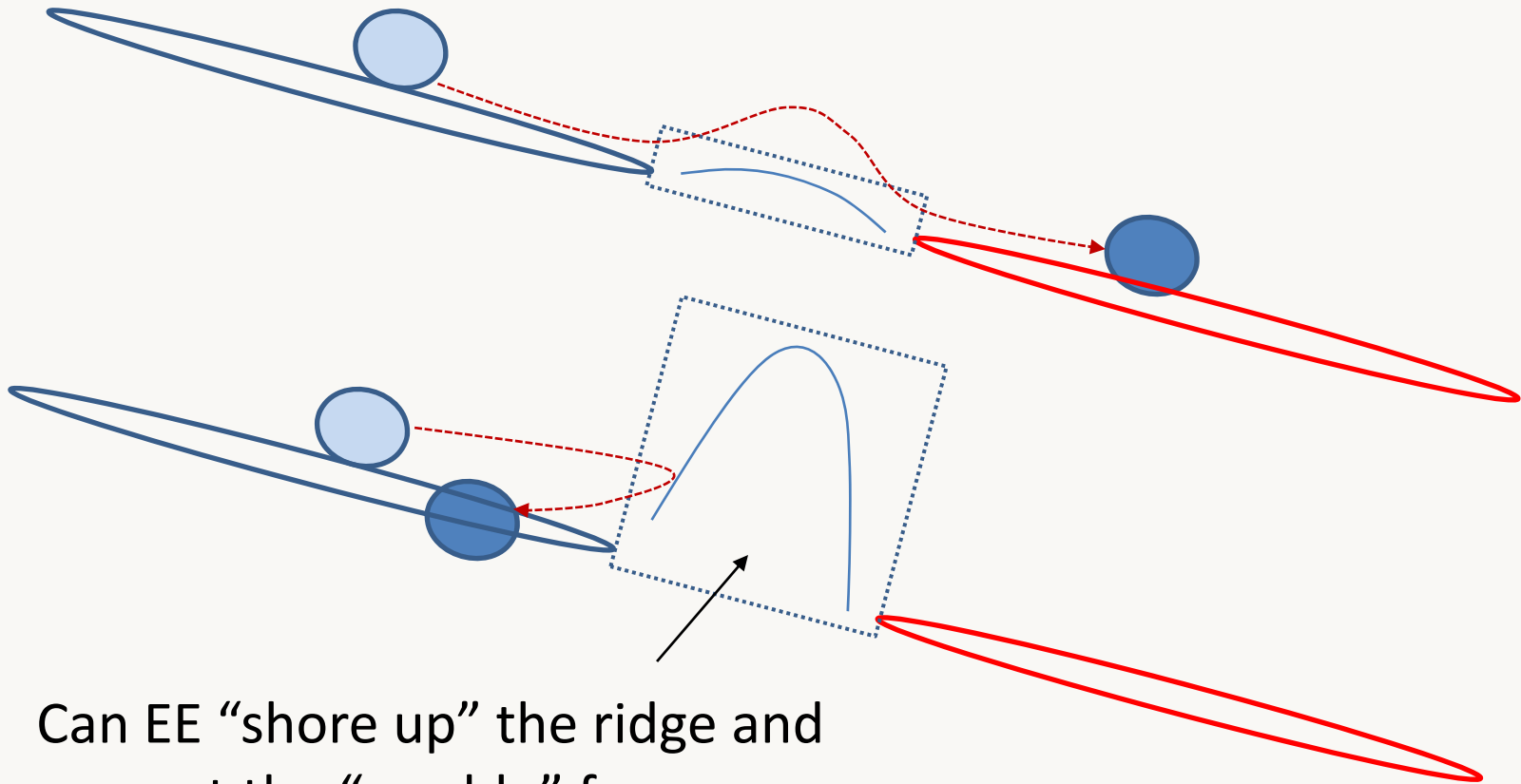
# Bifurcation Zones and Resilient Cycles





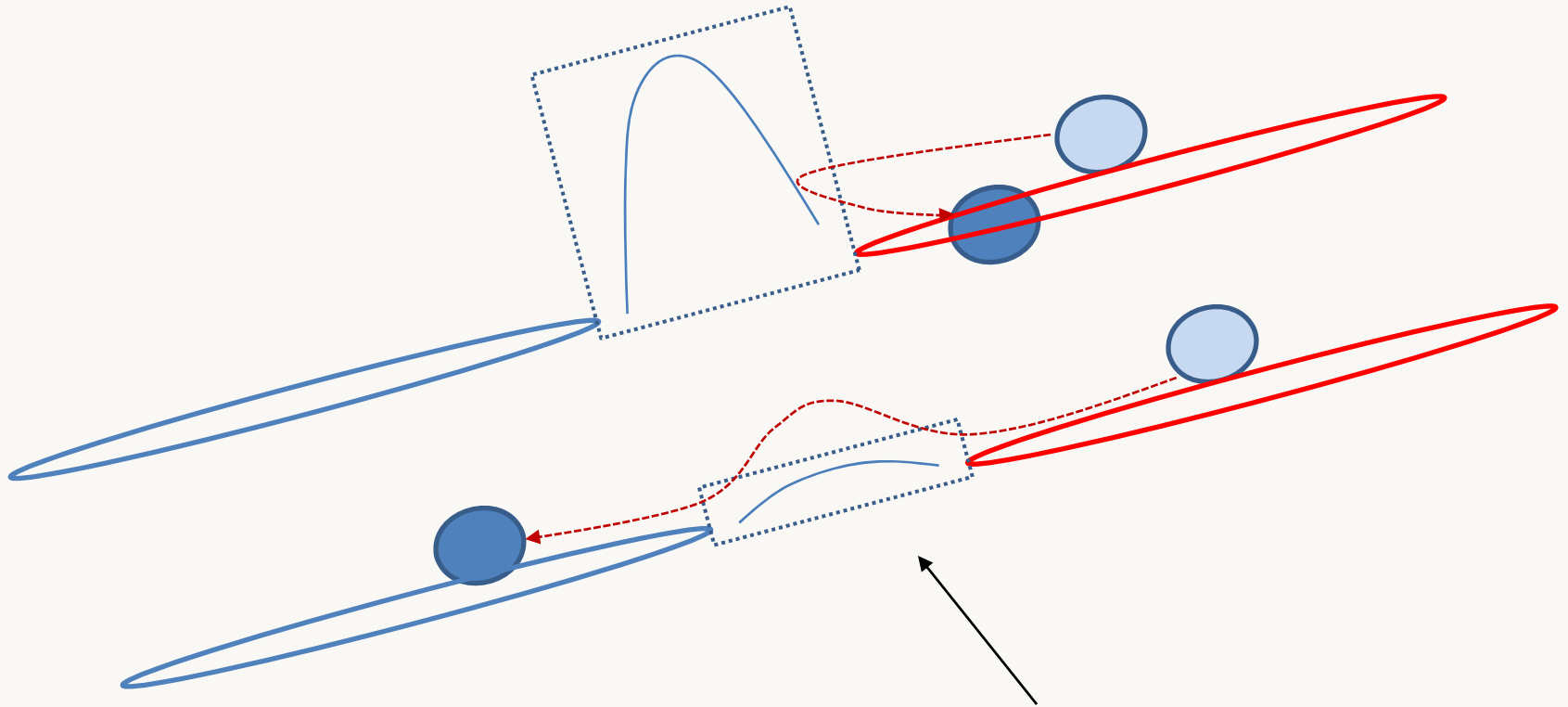


# EE, Bifurcation Zone, and Resilience



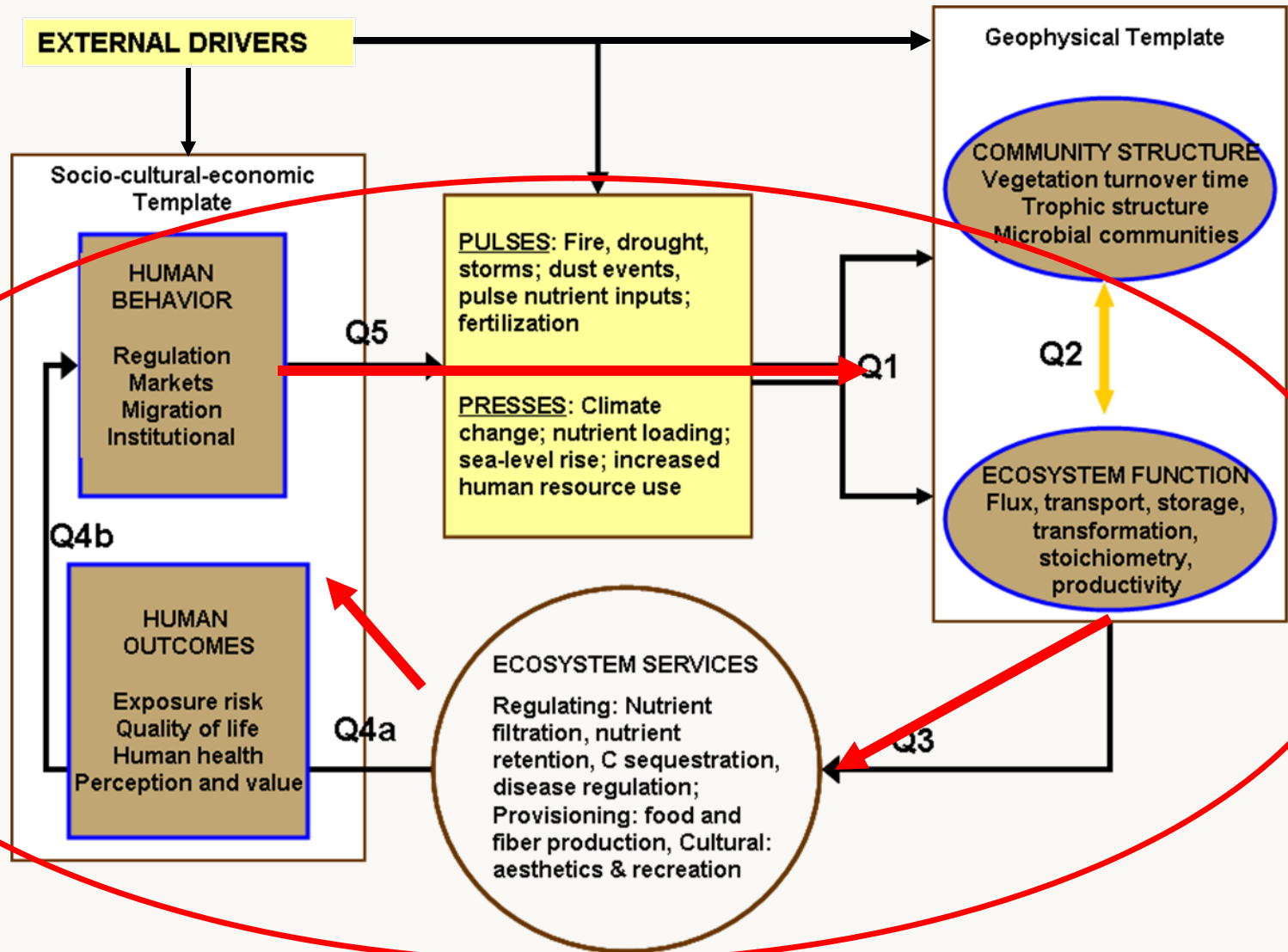
Can EE “shore up” the ridge and prevent the “marble” from crossing into the vicious state?

# EE, Bifurcation Zone, and Resilience

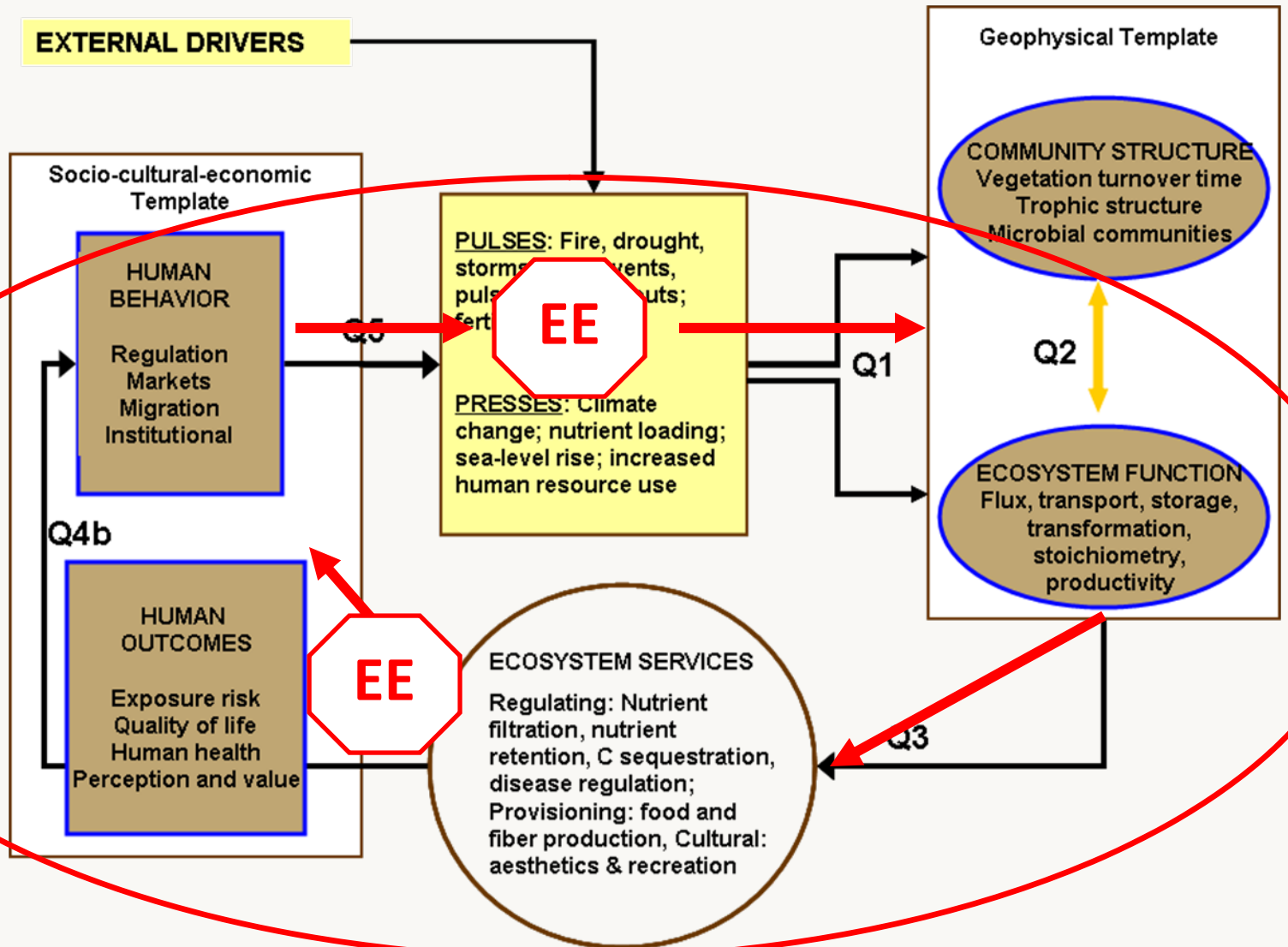


Can EE “diminish” the ridge and help the “marble” cross from the vicious into the virtuous state?

# Feedback Loop between Social and Ecological Systems



# EE Role in Feedback Loop?



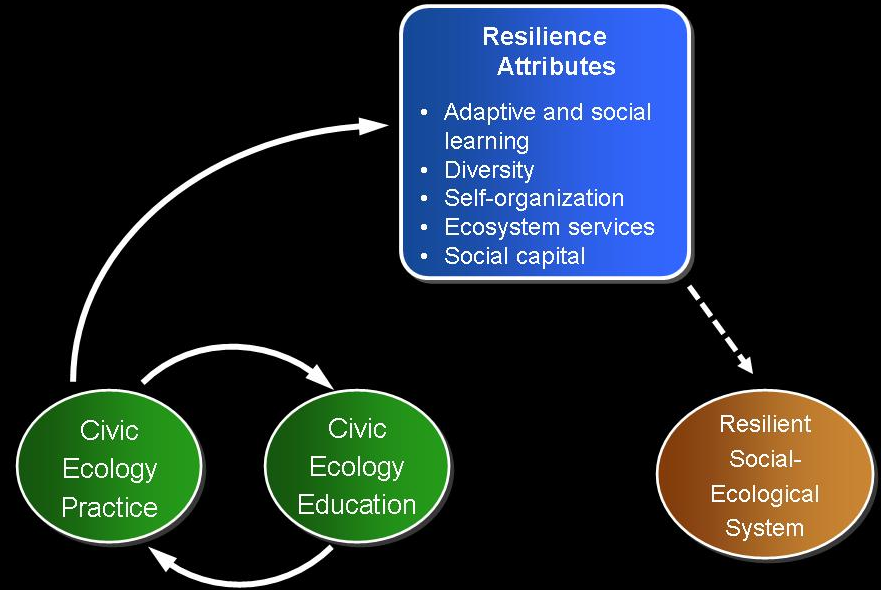


# Conclusions

- EE may become part of feedback loops in social-ecological systems.
- An “ecology of EE” explains how EE relates to other parts of the social-ecological system.
- An “ecology of EE” helps us:
  - to theorize the role of EE in fostering desirable resilience.
  - eventually to better manage social-ecological systems for resilience.

# Recap

- Resilience: capacity of system to respond to and to grow from disturbance.
- Civic ecology practices can help confer resilience.
- EE can be situated in and enhance civic ecology practices.
- Thus, EE may help confer resilience.



Folke et al. 2002  
Walker & Salt 2006  
Krasny & Tidball 2009