

# Environmental

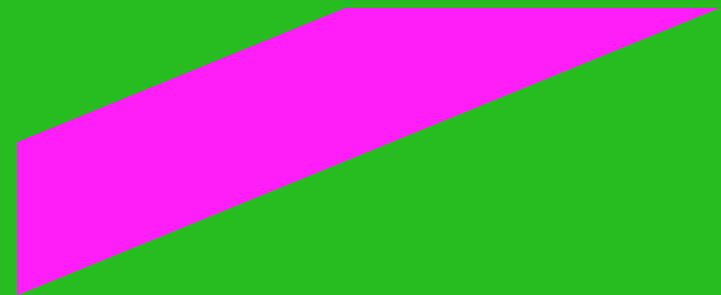
# Determinism



# Environmental

# *Determinism*

The idea that our environment determines all aspects of social and economic development, including migratory patterns, methods of subsistence, and family structure.



**Colder**



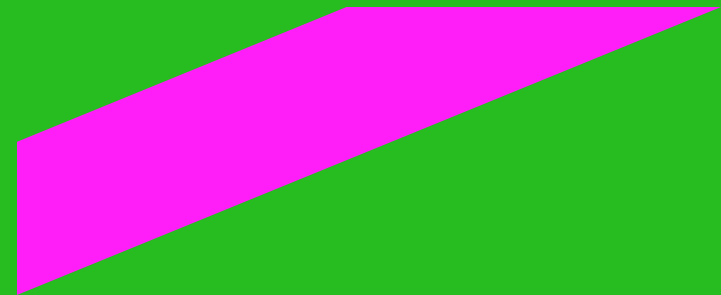
**Warmer**



# Environmental

# *Determinism*

Populations that develop in less hospitable environments end up being “more advanced” because they face greater obstacles to subsistence and survival?

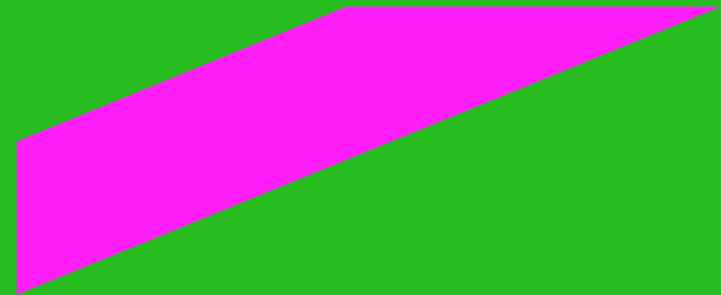


# Environmental

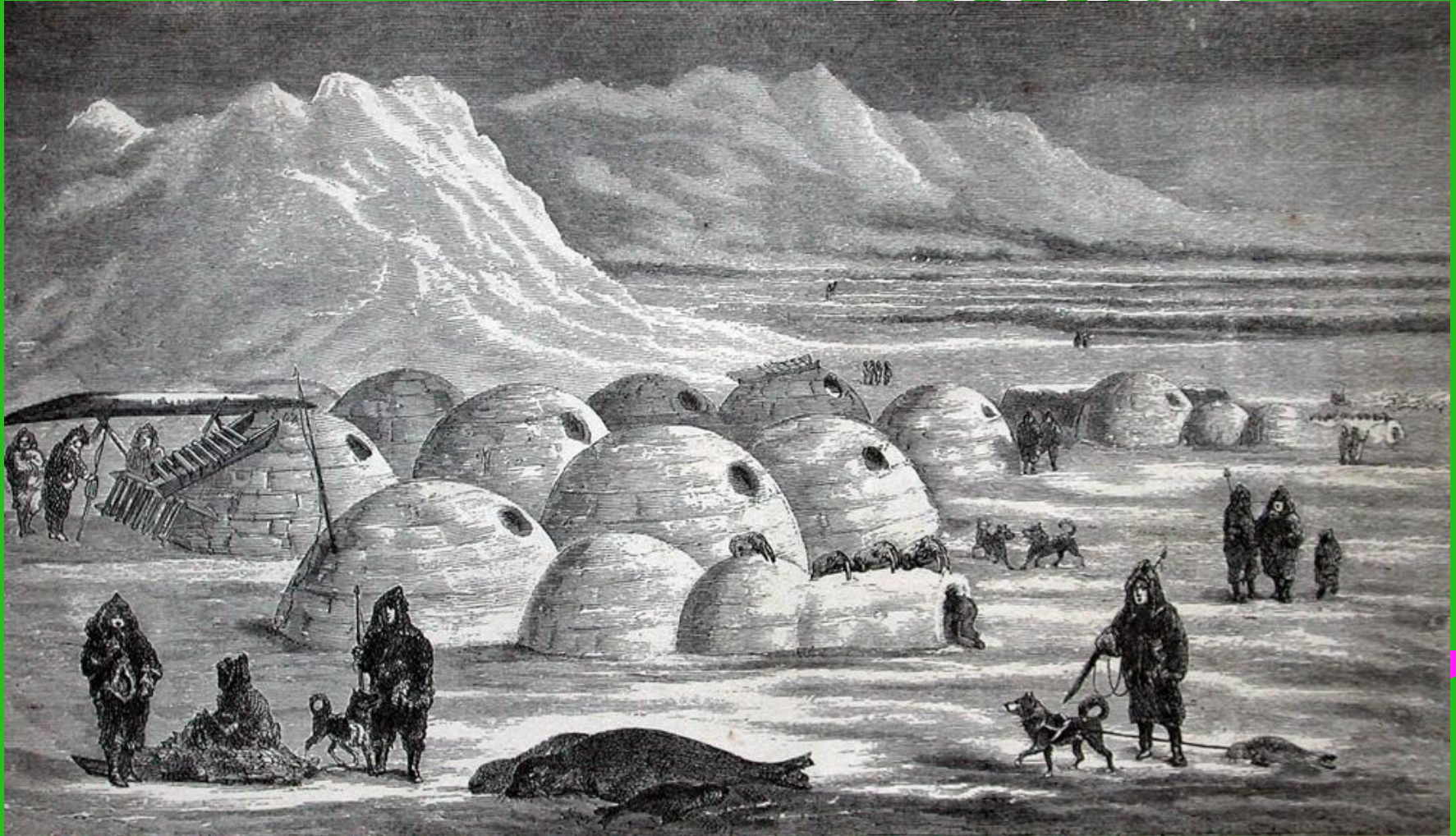
# Determinism

Populations that live in less hospitable environments are “more advanced” because they have overcome obstacles to subsistence and survival?

**NO!**



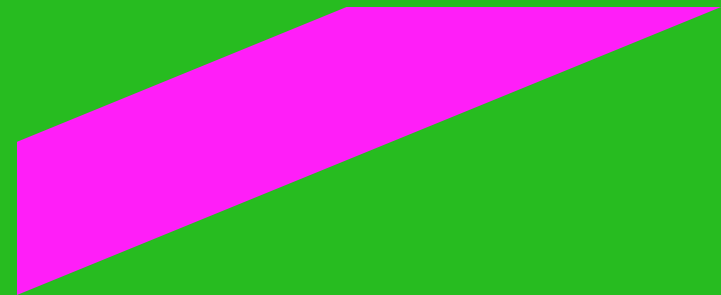
# Environmental Determinism



# Environmental

# *Determinism*

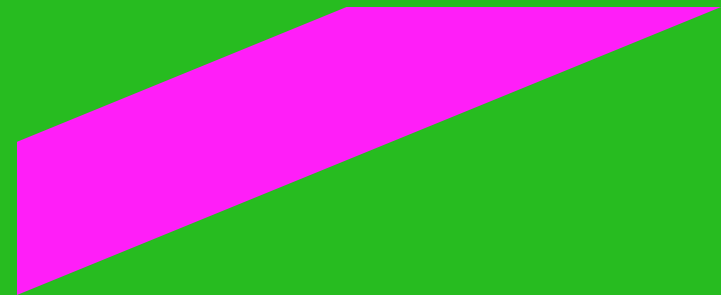
Based on the geographic area of your birth and upbringing you are more adapted to certain activities and jobs than others?



# Environmental Determinism

Based on the area of your birth and upbringing, are you adapted to certain activities more than others?

**NO!**

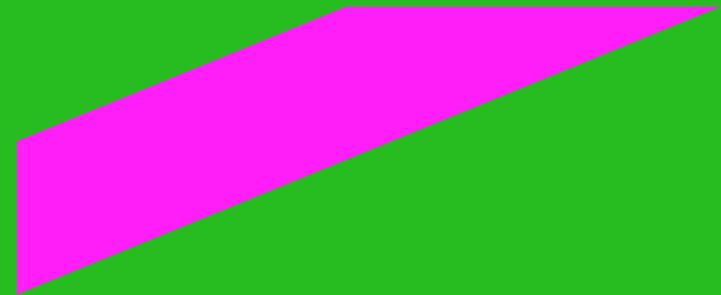




# Environmental

# *Determinism*

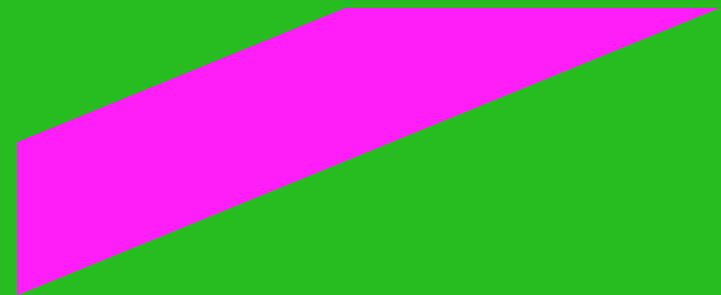
True: People from different communities around the globe have different skills, but this is the result social, economic, religious, political, historical, and ENVIRONMENTAL factors working together.



# Environmental

# *Determinism*

**NOTHING** can be reduced simply  
to its **ENVIRONMENTAL**  
dimensions.




# Environmental

# *Determinism*

Does the Northern European agricultural subsistence strategy work everywhere?

Does European socio-economic organization work everywhere?



# Environmental

# Determinism

Does the Northern European  
agricultural subsistence strategy  
work

**Of course not!**

Does European socio-economic  
organization work everywhere?

# Environmental

# *Determinism*

Colonialism was the effort to shape the world in the model of Western Europe.

Populations were forcibly made to conform to European ideas of social organization and trade.

# Environmental Determinism



**COLLAPSE**

**COLLAPSE**

**COLLAPSE**

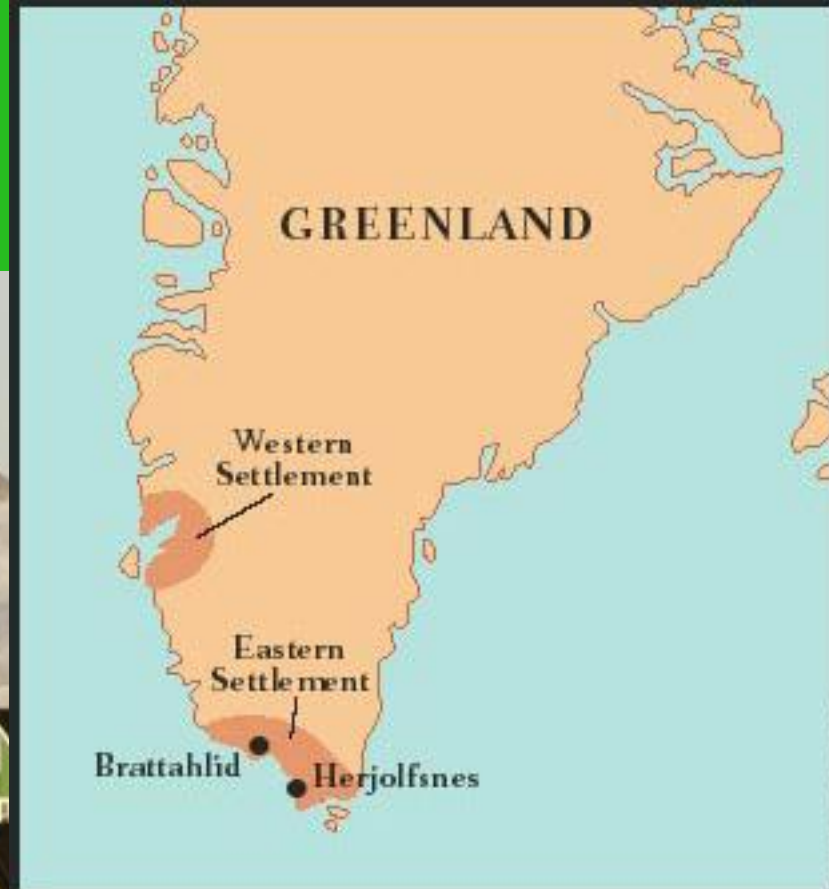
**COLLAPSE**

# GREENLAND

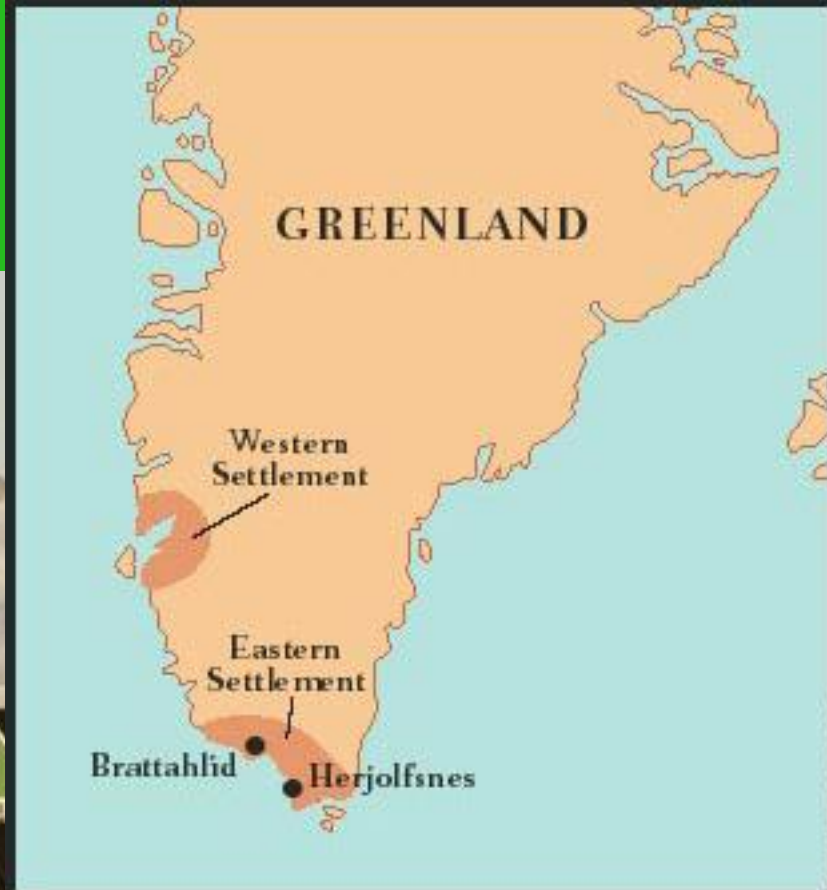




# GREENLAND



# GREENLAND



LYNDA D'AMICO

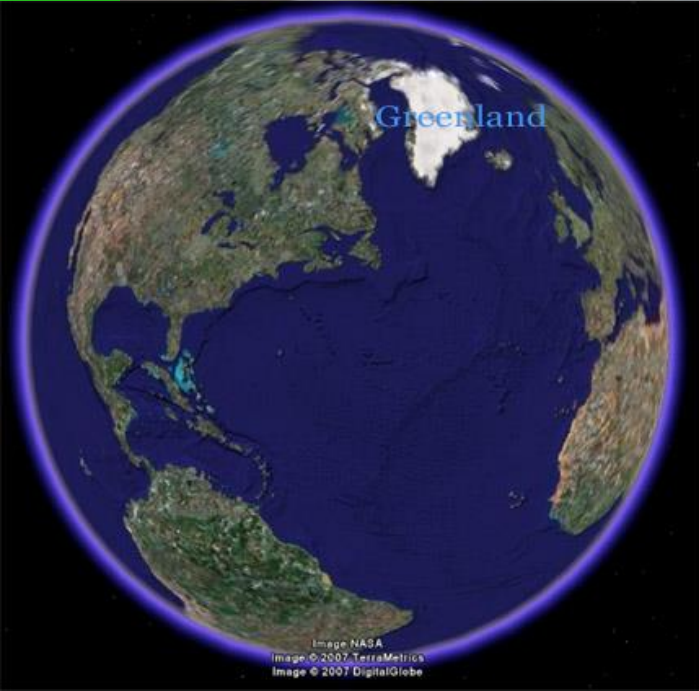
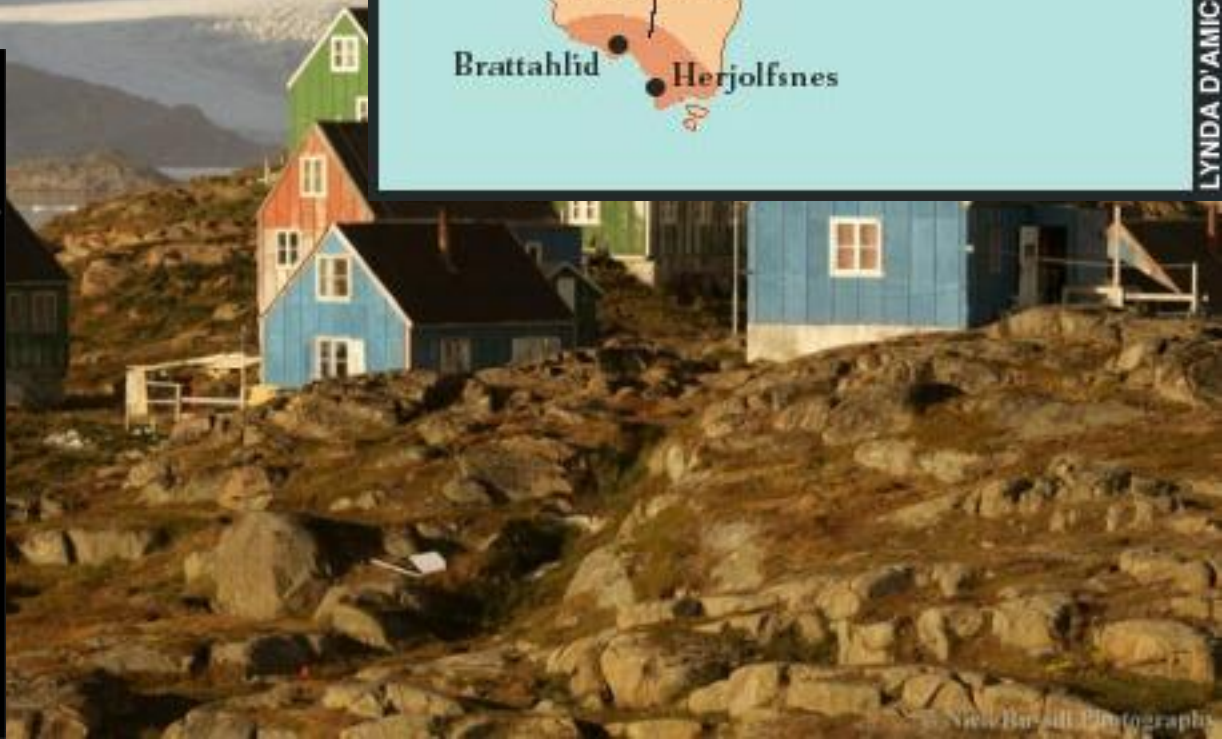


Image NASA  
Image © 2007 TerraMetrics  
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www.horvathphotography.com

# GREENLAND



**Collapse OR Migration**



Image NASA  
Image © 2007 TerraMetrics  
Image © 2007 DigitalGlobe



LYNDA D'AMICO

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# GREENLAND

What is “marginality”?

Is marginality universal?

Was Greenland a marginal environment?

For the Europeans, yes.  
But not for the  
Greenlanders.



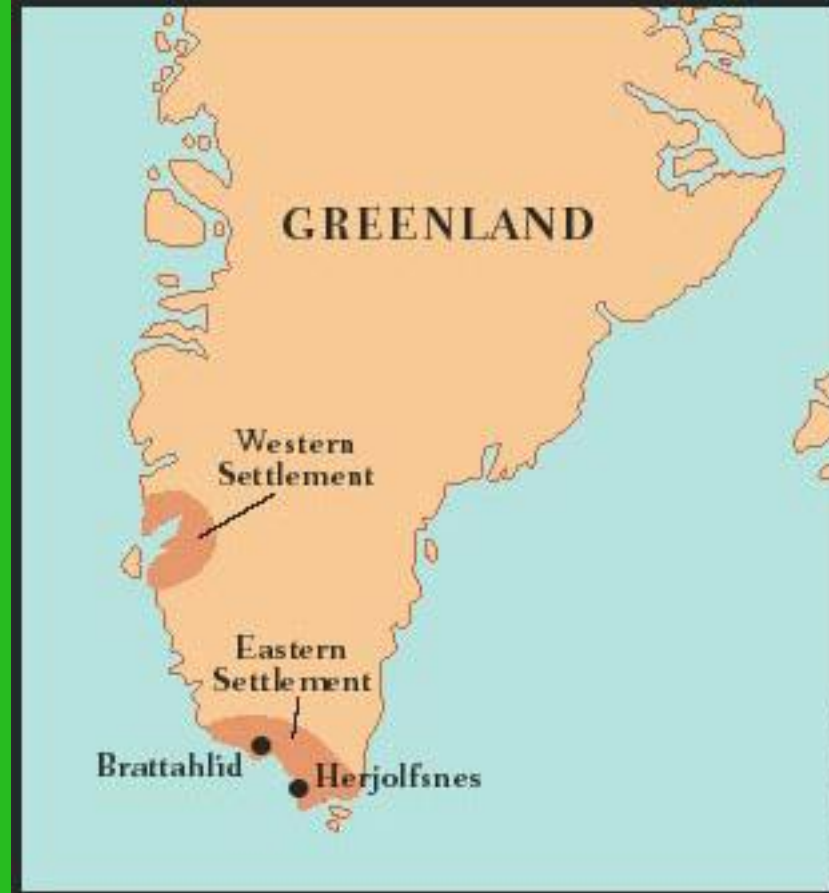
# GREENLAND

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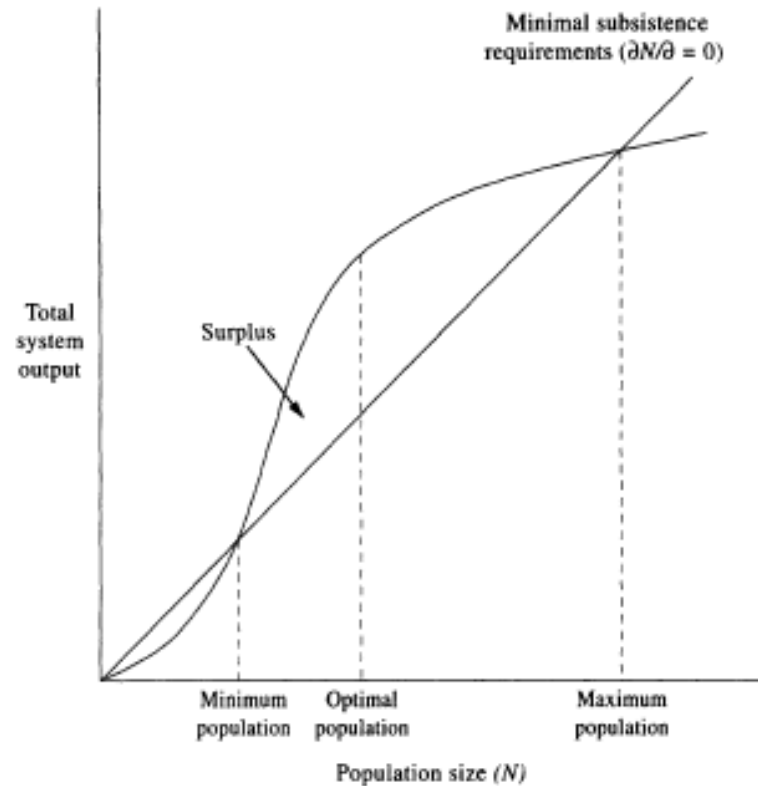
For the Europeans, yes.  
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Marginality can only be considered a meaningful idea in relation to a particular economic and social system'

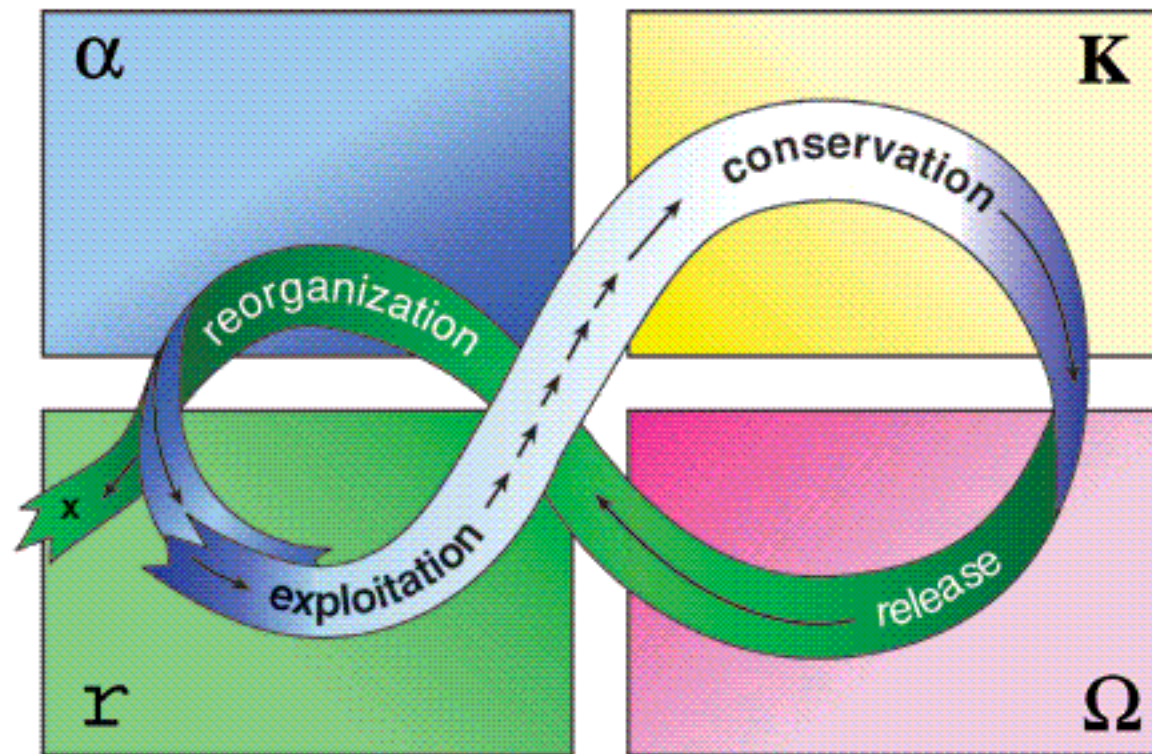
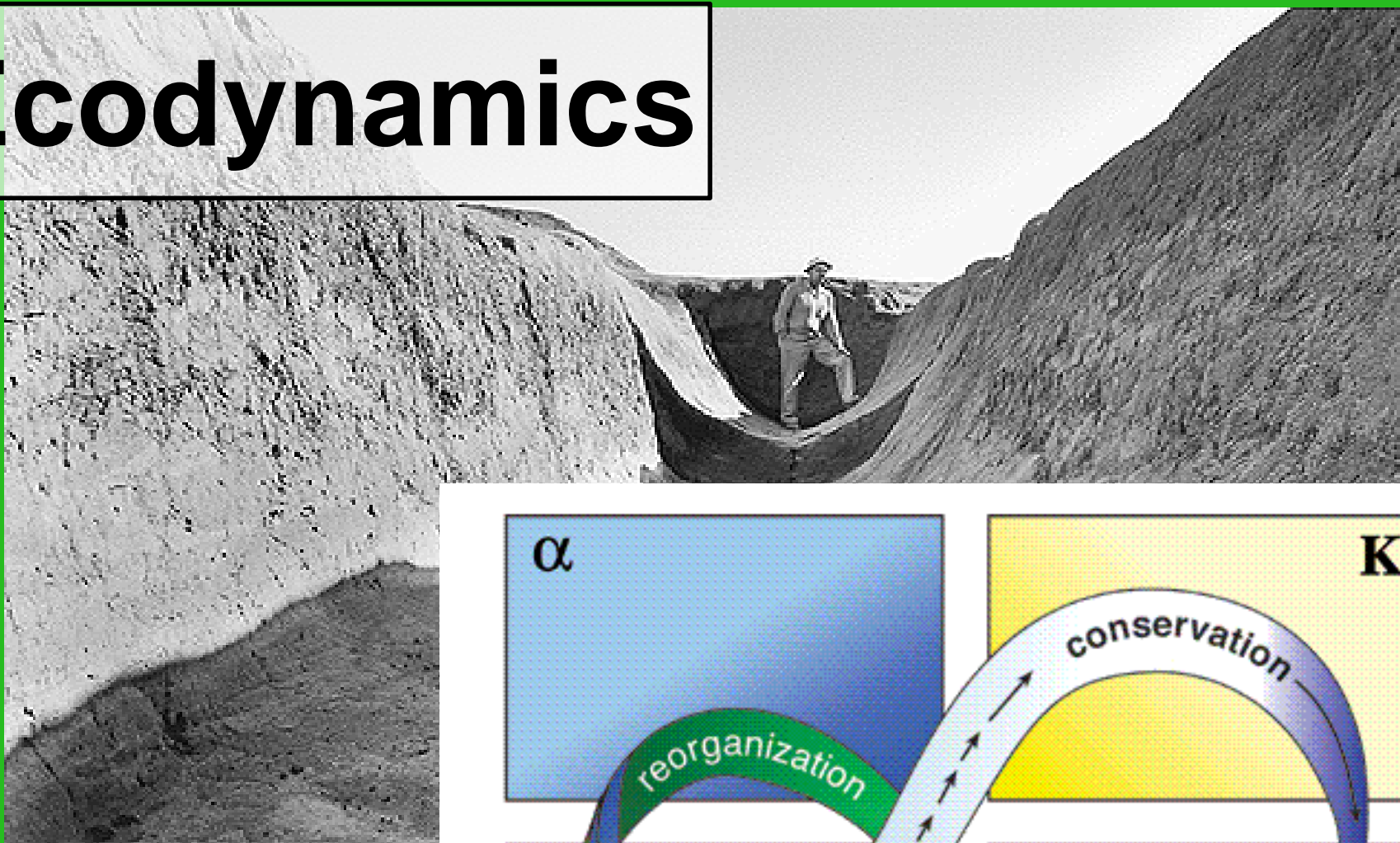
Does population obey statistical laws about output?

Can societies collapse from overpopulation?  
Underpopulation?



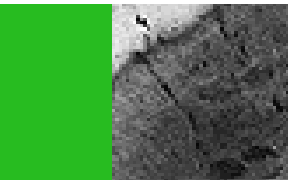
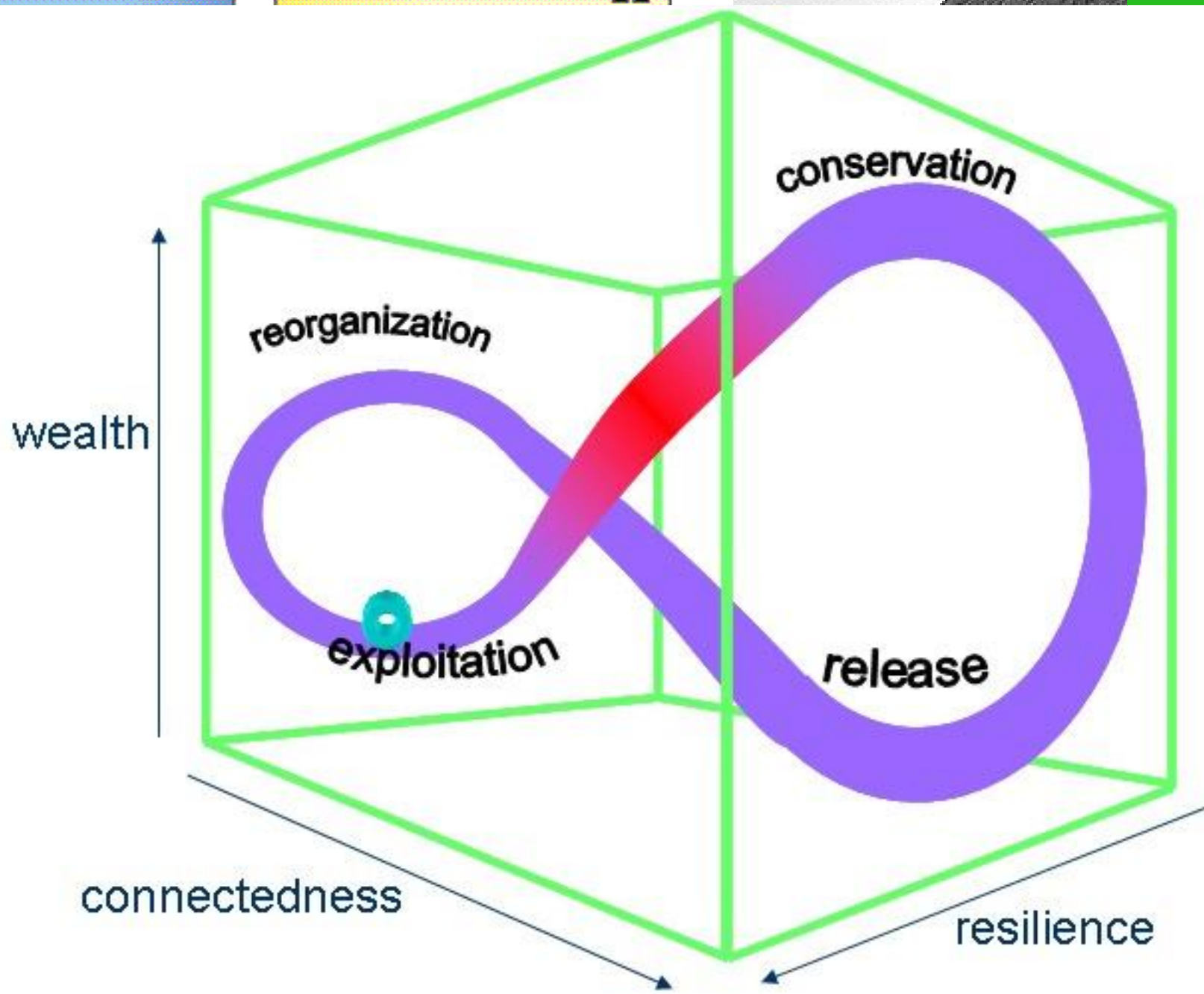
**Figure 2 Output and population relationships in pre-industrial societies (after Wood 1998)**

# Ecodynamics





$K$





# RIGIDITY TRAP?

**Populations often attempt to remain in the K-phase of the adaptive cycle. As a result of these processes, human-dominated systems sometimes lose resilience.**

**The pathological manifestation of this process is known as a “rigidity trap,”**

**Use four parameters to measure the severity of transitions: *demographic scale, population displacement, degree of cultural change, & physical suffering***

# The Holocene:

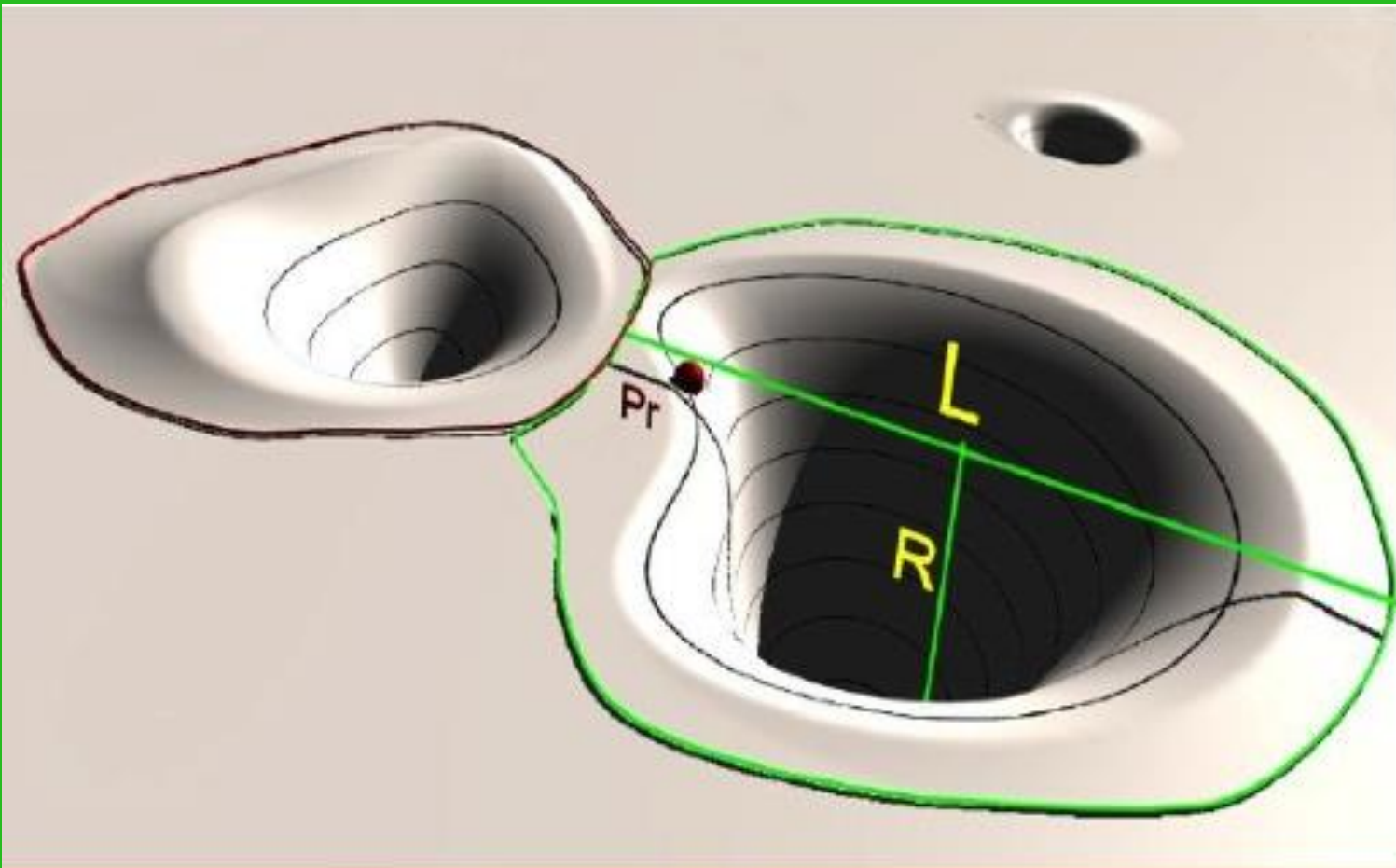
## Steady State or Fortuitous transition?

“The interglacial state is much shorter than the glacial one, hinting that it is inherently less stable as regards duration, that is, it is a weaker basin of attraction or a shallower valley.”



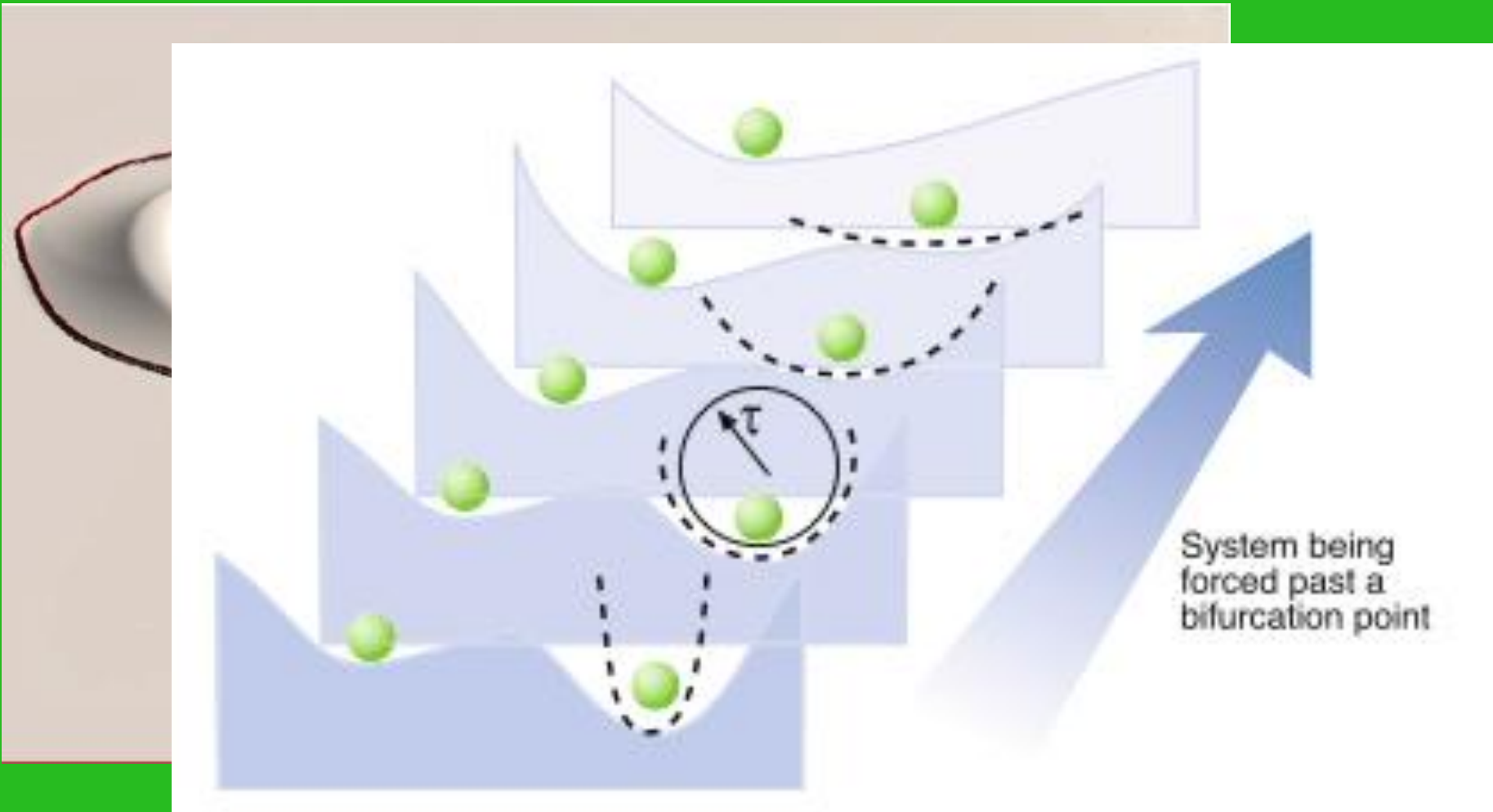
# The Holocene:

## Steady State or Fortuitous transition?



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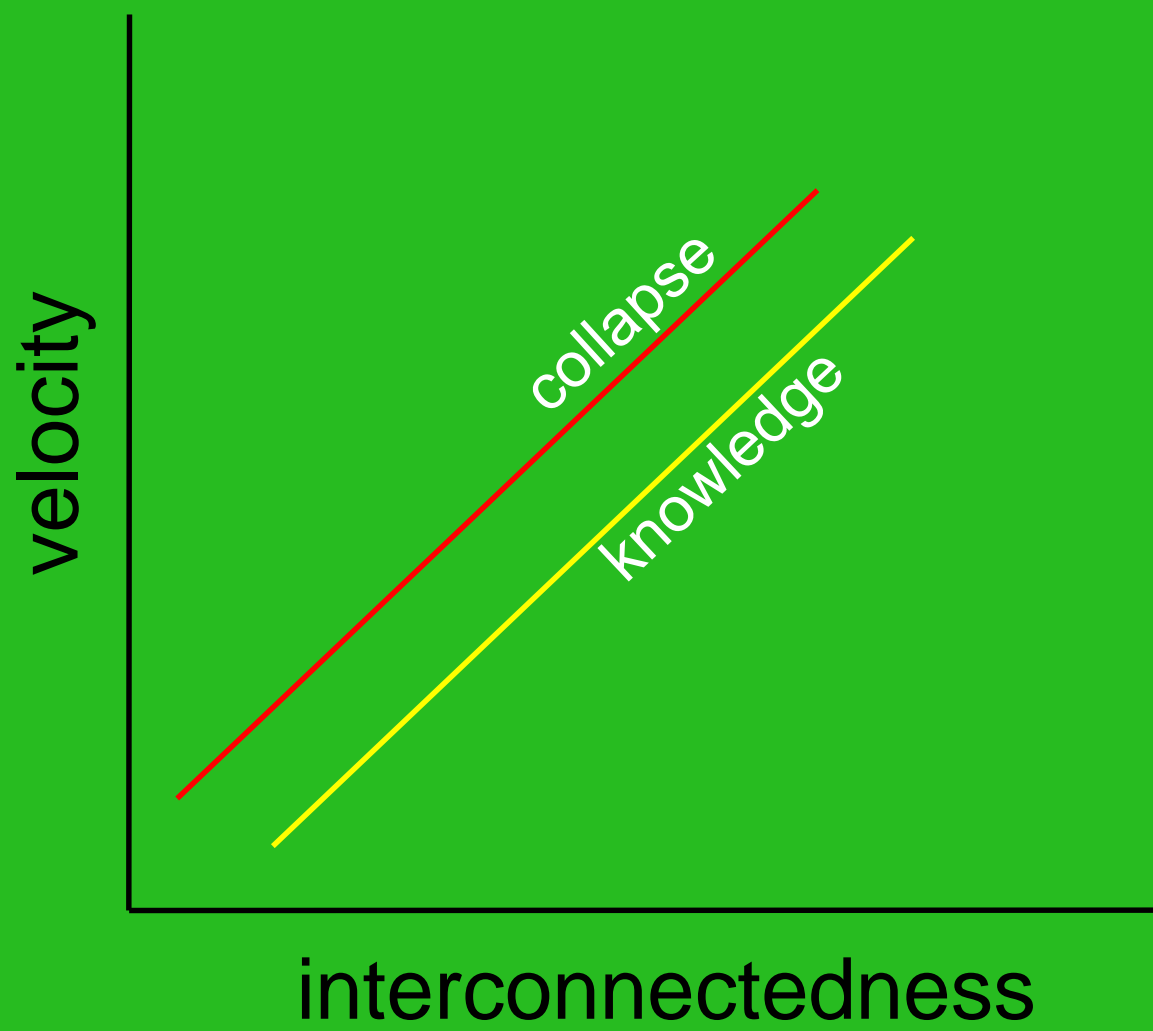
# The Holocene: Steady State or Fortuitous transition?

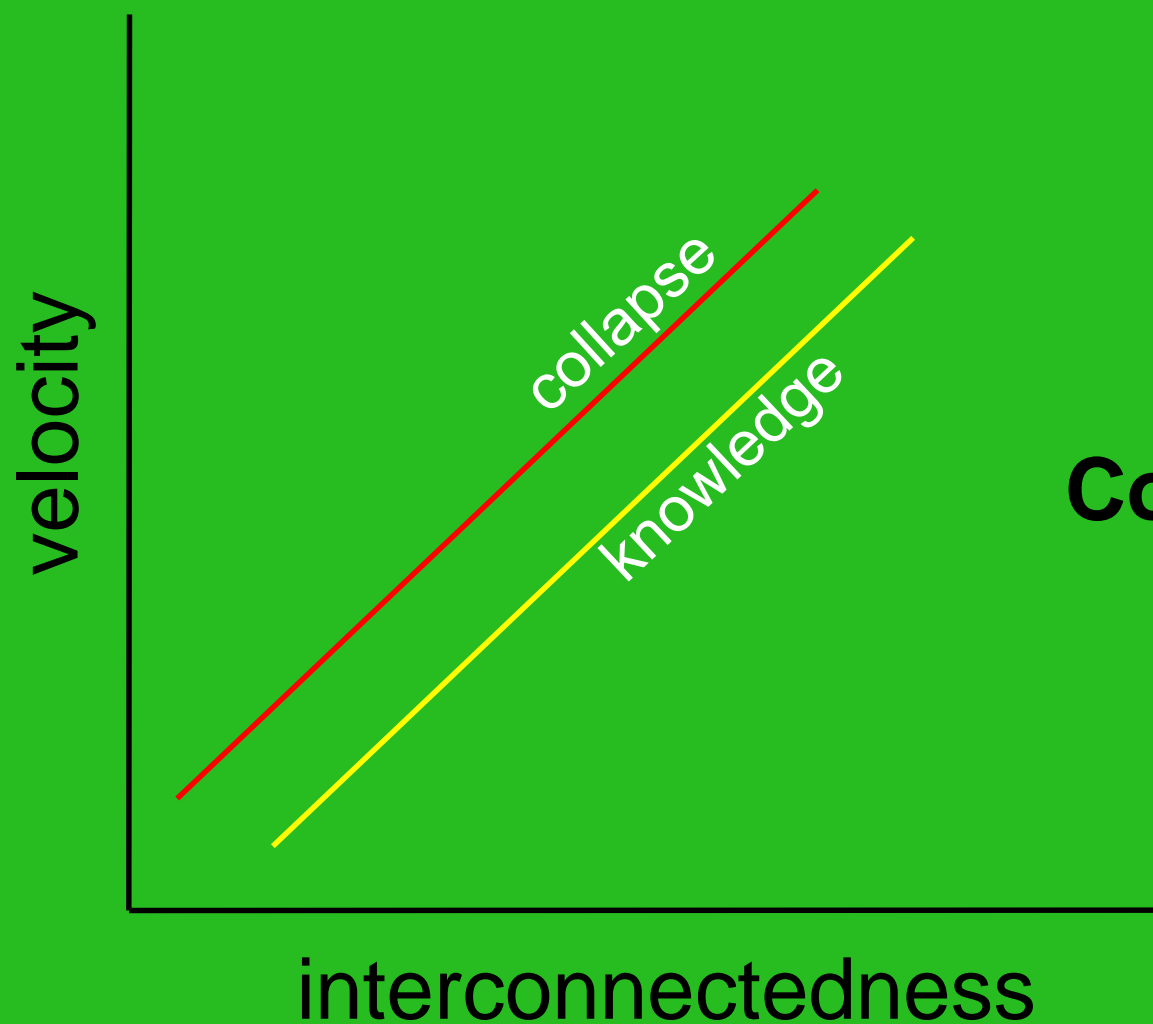


# The Holocene:

## Steady State or Fortuitous transition?

- “We are the first generation with widespread knowledge of how our activities influence the earth system, and thus the first generation with the power and responsibility to change our relationship with the planet.”
- “Without planetary stewardship, the Anthropocene threatens to become for humanity a one-way trip to an uncertain future in a new, but very different state of the Earth system.”





**Trade**  
^  
**Communication**  
^  
**Culture**

velocity

collapse

knowledge

**Will local collapses  
spread rapidly  
through global  
systems?**

Trade

^

Communication

^

Culture



Well connected:

more vulnerable to local collapses spreading, as well as more capable of spreading effective knowledge/strategies.

spread through global systems?

Trade

^

Education

^

Culture

# Environmental Racism

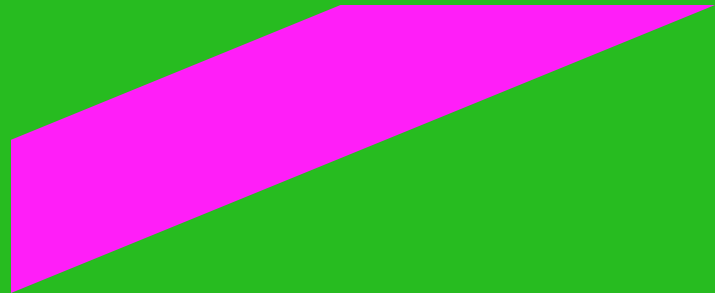


***The Panama Canal!***

**Environmental**

**Determinism**

**Was the U.S. colonialist?**



# Environmental Racism



***The Panama Canal!***

# Environmental Racism



***The Panama Canal!***

# Environmental Racism

Conjectures about environmental fitness were assumed to be neutral.

Such as Africans are better laborers in tropical environments than Europeans.

***The Panama Canal!***

# Environmental Racism

“American residents of the Canal Zone considered it common sense that whites were unable to live in the tropics for long periods, that blacks from the Caribbean had dark skin because of the climate, and that the tropics caused a host of climatically specific diseases. These beliefs were assumed to be scientifically valid and morally neutral, because climatic influence on humans was an empirically proved fact.”

***The Panama Canal!***

# Environmental Racism

“Sanitized” zones created for Europeans overseeing canal construction.

To protect them from an environment they weren't adapted to.

***The Panama Canal!***



# Environmental Racism

Segregation meant unequal access to resources for elites.

Is this similar to how modern U.S. urban spaces are designed? St. Louis and Ferguson?

***The Panama Canal!***

# Environmental Racism



“The digging was done by more than 100,000 West Indian and southern European laborers. These groups were chosen on the basis of factors of cost and supply, as justified by environmental theories about human ability to work in hot, moist climates....Fortuitously, a depression in the Caribbean sugar industry had made available large numbers of West Indians who were willing to work for low wages.”



***The Panama Canal!***

# Environmental Racism



“Being accustomed to the tropics and the different mode of living, workers do not require special quarters which are so necessary to the health of the more skilled employee from a temperate zone.”



***The Panama Canal!***

# Environmental Racism



“The very rules of nature force the fair-skinned man to do only skilled or supervisory work.”



***The Panama Canal!***

# Environmental Racism



**Manifest Destiny?!**

***The Panama Canal!***