

Power, politics and environmental change

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Class 3: The power of nature

Christos Zografos, PhD

Institute of Environmental Science & Technology
(ICTA)

Universitat Autònoma de Barcelona, Spain

christos.zografos@uab.cat

Introduction

- **Purpose:** nature (geography) can also determine the course of environmental change
- **Why** important to know?
 - Another explanation (i.e. beyond social factors) of what is the driving force behind environmental change brought by humans

Class outline

- Watch video: 'Guns, germs, and steel'
 - By Prof Jared Diamond
- While watching, think/ make notes:
 - What is **the question** JD tries to answer?
 - What is **the answer** he gives?
- Have a discussion – based on questions (concerning Diamond's explanation)

<http://video.google.com/videoplay?docid=6846344734969027300>

GUNS, GERMS, AND STEEL EPISODE TWO: 'CONQUEST'

“What explains unequal distribution of wealth and power among societies around world?” - “Yali’s question” (min 4.40-7.00)

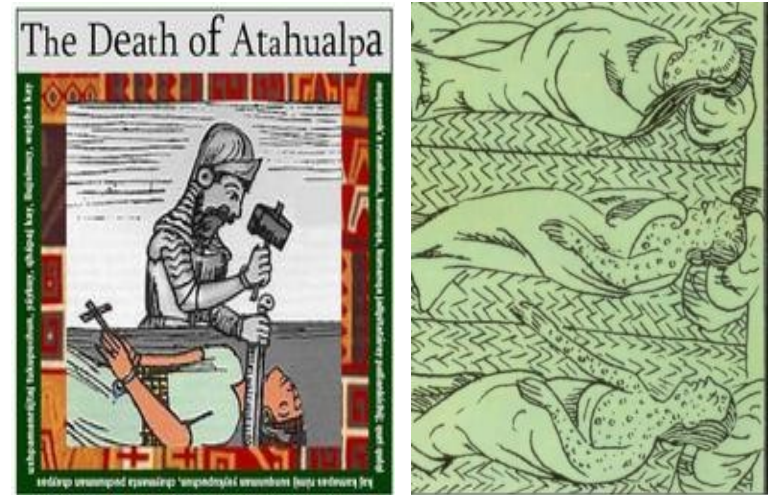
THE QUESTION

“Distribution of **wealth and power** among societies around the world has been powerfully shaped by **bio-geographic factors**” (they explain unequal distribution)

THE ANSWER

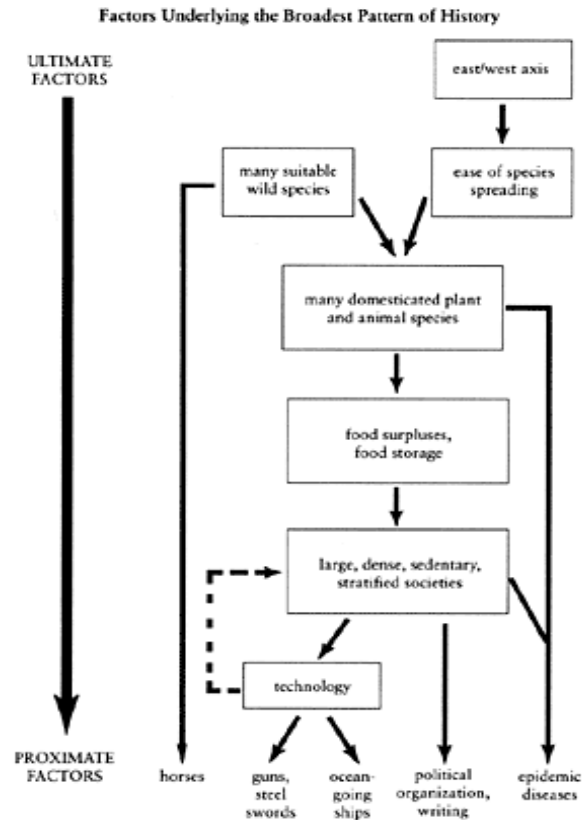
A note: JD and ecological change

- Why are we interested in this?
- This documentary seems to be a story about colonialism
- But it is also an explanation of ‘why’ (driving forces) behind the types of environments or **ecologies** produced by colonialism
 - i.e. explanation of **reasons why of environmental change** in colonies
- i.e. ecologies hostile to its ‘previous’ inhabitants: disease (germs; yellow fever vectors) and pollution (Potosi)



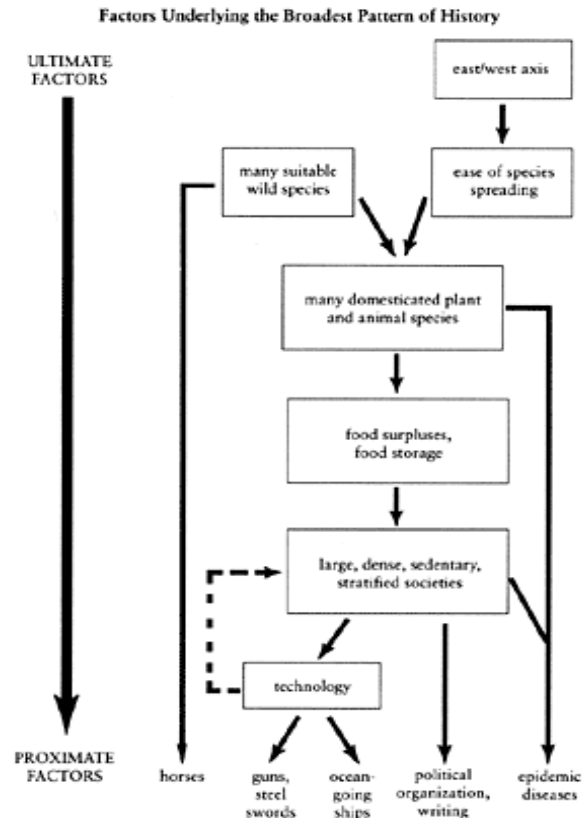
The argument (McNeill, 2001)

- **Proximate causes** of success in history: guns, germs, and steel
- But behind them lay the **ultimate causes** of success: a favourable environmental endowment [geography]



Ultimate causes (McNeill, 2001)

- **Environmental endowment** (baggage/ rucksack) sharply favoured some societies (continents) over others
 - Highly probable that lucky ones would in time prevail over unlucky
- Great **advantages**: parts of world fortunate to
 - have many domesticable plants and animals
 - located so as to favour the migration and diffusion of domesticated plants and animals (the E-W nexus of knowledge/ technology diffusion)
- These parts of world:
 - developed **useful things** farming, metallurgy, writing, states, etc. earlier than other societies
 - earlier exposure to "crowd diseases," and so earned **wider immunities** to lethal infections earlier



But the explanation leaves things out

- **Geographical determinism**
 - Given the importance of ‘initial natural endowments’
 - Eurasian dominance was inevitable, or at least very likely
 - i.e. initial endowments strongly determine the result of the encounter between Europeans and America (its peoples and ecologies)
- What about **other factors** (‘silenced’ by author)?
 - The importance of local ecologies?
 - The importance of socio-political factors?

Local ecologies: yellow fever (YF)

- Introduced to America via mosquitoes brought from Africa with slave trade (16th-17th century)
 - Humid & crowded conditions of 'crossing': help mosquito survive
 - E.g. water barrels to incubate



A tobacco plantation (source: Public Broadcasting Service)

Differential immunity

- Mosquitoes and diseases wreck havoc but not indiscriminately: **differential immunity** (YF)
 - If brought up as child in places where yellow fever common (endemic) then have some resistance and less likely to fall ill or die when adult
- But if virus finds many organisms without antibodies becomes epidemic!
 - Attacks those without immunity (to find hosts)

Military implications

- So, if all of a sudden you bring (e.g. in America) many non-immune bodies (e.g. people who have grown up in places where there is no YF), virus (latent-sleeping) finds space (human body) to expand -> epidemic
 - Such non-immune bodies: European soldiers (from Europe)
 - Instead: African slaves + locally-born colonists/recruits + ‘seasoned’ troops: no space for epidemic

Knowledge by observation – not science

- Colonial officials and aspiring attackers knew from observation (empirical knowledge) that this happened
 - Although did not know exactly ‘why’: the ‘Climate’
- Also knew that rains increased deaths
 - More water for mosquitoes to reproduce
- ...and that number of deaths would increase exponentially after 6-8 weeks
 - Happily coincided with fortification durability!
- So, prepared themselves for a 6-8 week defence before letting YF “take its toll”
 - Fortification and provisions + Soldiers

Political importance of differential immunity

- YF: crucial part of **Spanish imperial defence**
 - Without it Spain would have lost much of her American empire in 18th century
 - Same but vice versa for success of independence wars in 19th century Americas (e.g. southern parts of US)
- Until 1770s, mosquitoes **underpinned** geopolitical order in Americas – after that they **undermined** it!

Local ecological conditions

- **Ecological conditions that prevailed in colonies** (*note difference to Diamond*) governed **probabilities of success** or failure of colonial project
 - Mosquitoes
 - Plantation ecologies and swamps: mosquito incubator & habitat sites
- *Lowly mosquitoes and mindless viruses can shape human international affairs*
 - *Blow to our species, but true!*
- Who has the power? Military-advanced, and epidemiologically immune Europeans (Spaniards) or mosquitoes in the colonies?

Other socio-political factors made invisible

- **Eurocentrist**

- Blaut: examples of North-South diffusion of crops in Western Hemisphere, e.g. cultivation of maize in Peru -> adoption in North America

- **Political factors: important**

- Importance of politics: Ottoman closure of lucrative trading routes to Orient -> traders: look for other trade routes
- Trade and importance of culture: individualism, capitalism, rationalism, etc.

- **Technological-military superiority**

- European dominance and colonial success not always based on clear technological superiority in armaments, nor the spread of disease (e.g. Brits in India dependent on local military force + divide-and-rule policy)

Conclusion

- Geography or environment can be powerful explanations of where sources of power lie
- However, too much emphasis on them may hide from view or even silence the role (*capacity*) of other human and non-human actors in shaping history and ecology
- Always question yourselves: whose actors' voices are silenced in an explanation?
 - And, how do these influence the course of history and/or environmental change?