

**Grand Theory and exemplary cases in *Guns, Germs, and Steel***

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- Epilogue: The Future of Human History as a Science
  - restates Yali's question, and asserts that the answer is not to be found in inherent differences of people – racism
  - lays out his Grand Theory
    - intended to explain the big patterns in history
    - which form his Grand Narrative of the rise of Eurasian domination of the world
  - This Grand Theory is a social evolution theory, as opposed to a historical particularist one
  - it is an environmental determinist theory
    - of which there are many kinds, but Diamond immediately specifies what he considers to be the key environmental factors that shape social evolution
    - since these are facts of nature, he considers them to be the ultimate causes he is seeking
    - of course, we could still ask why each one is true...
- cites 4 main environmental ultimate causes
  - 1. continental differences in wild plants and animals available for domestication
    - in turn due to size of continent
    - and extinctions at end of Pleistocene
  - 2. different rates of diffusion of ideas within continents
    - due to E-W vs. N-S axes of continents being along vs. across ecologically similar zones at the same latitudes
  - 3. different rates of intercontinental diffusion of domesticates and technology
    - Africa could benefit from Eurasian animals, etc.
    - New World, Australia, New Guinea, etc. could not
  - 4. different total area or population
    - more inventors, inventions
    - more competition and pressure
    - New World effectively divided up into several smaller continents
- to refine this Grand Theory, we need a science of history
  - 1. quantify claims and data he has presented
  - 2. try to explain smaller-scale variations, as within Eurasia
    - why Europe, when China and Muslim world had had the lead?
    - westward shift of power from Mesopotamia due to deforestation, goats, erosion, and salinization
      - Reason: the Fertile Crescent was ecologically fragile, Europe was not
    - China was too unified, politics could stifle useful changes
    - while Europe was fragmented, in competition, favoring advancement
      - Reason: Europe has a complicated shape, coastline, peninsulas, mountains, many small river systems
      - compared to China's simple shape and two big river systems
  - Europe's divided terrain also protected it from Asian nomadic destruction and incorporation

- some unity is productive, too much holds back development
  - sounds like Toynbee’s problem with “just enough challenge, but not too much”
- role of cultures and individuals (Great Men theory)
  - Great Men cannot be great enough to affect the huge patterns discussed here
- seeks a science of history with general laws p 421
  - is that realistic?
  - at what scale?
- 4 features of historical sciences
  - 1. cannot experiment, must use “natural experiments” (comparable cases with differing variables)
  - 2. seek ultimate causes (chemistry and physics do not)
  - 3. cannot predict outcomes, can only predict what further evidence should be found if a theory is correct
  - 4. formulate statistical tendencies, not absolute outcomes
    - every case is unique, but represents the general trend
- historical sciences work at a large scale that averages out particulars
  - [vs. historical particularist theories]
  - is this large scale useful for all purposes?
- point(s)
  - (again): environment, not race, is the ultimate cause
  - four major environmental factors are key
    - see above
  - we need a historical science of history
    - this already exists: it is anthropological history, or anthropological archaeology!
    - except that anthropologists have less confidence in eventually finding general laws
    - but the methods of historical sciences are in constant use by anthropologists and archaeologists
- Chapter 2: A Natural Experiment of History
  - starts with example of the Maori wiping out the Moriori
    - Diamond argues that the proximate causes of imbalance of power were that
      - the Maori had many advantages:
        - larger number of fighters (at least potentially)
        - accustomed to warfare
        - more advanced weapon technology
        - effective military organization
    - Diamond argues that the ultimate causes of the imbalance of power were that
      - because the Maori came from a place (New Zealand) that allowed them to have
        - a large population, versus the small population of Moriori
          - due in, turn to an environment that allowed for productive agriculture that could feed many people
        - and a much larger island that could hold more people
      - a more complex social organization, versus the decentralized, egalitarian Moriori

- because agriculture allows for the support and development of this kind of organization
- warlike customs and technology
  - because of the competition and warfare that arose due to the larger population and greater resources
  - due, in turn, again, to farming
- the point is to dramatically illustrate how proximate causes of extreme domination in this case can be explained ultimately by the environments that each group developed in
  - this is a small, demo version of the argument Diamond will make for the whole world in his book
- Polynesia presents a “natural experiment” in seeing how societies developed differently in the different conditions of each island
  - starting from roughly the same kind of society that colonized each island
    - this idea is not new; people working in Polynesia have been using it for decades
  - Diamond suggests several key variables:
    - 1. climate: hot to cold, wet to dry
      - allowing for agriculture or not
      - and affecting the kinds of agriculture, where possible
    - 2. geology: flat limestone atolls to high volcanic islands to the continental fragment of New Zealand
      - providing little fresh water on limestone atolls, to plentiful streams on some high islands and New Zealand
      - providing from very few to fairly varied mineral resources for tools, ornaments, etc.
    - 3. marine resources: rich, shallow lagoons to steep sea-floor drop-offs
      - providing lots of accessible seafood, to much less
    - 4. land area: larger islands can support larger populations
    - 5. fragmentation of the landscape by steep ridges and valleys: less broken-up landscape allows for more unity, larger political units, less competition and conflict between groups
    - 6. isolation: less isolated islands exchanged more ideas, but also could be conquered by others
      - also stand better chance of maintaining all the introduced animal species: pig, chicken, and dog
      - while more isolated islands were prone to have one or more go extinct, or not make it there in the first place
  - several of these combined to make agriculture possible or not
    - and more or less feasible to intensify
- point: different environments lead to different social and technological outcomes
  - environments that facilitate agriculture, can support large populations, offer a variety of resources, and facilitate interaction among people lead to larger, more complexly organized societies
- large, dense, agricultural, complex, armed, warlike societies will trounce small, simple, foraging, peaceful ones

- [OK, but does this necessarily suggest that the same applies at the continent level?]
- Chapter 3: Collision at Cajamarca
  - the story: what happened?
  - the point: this is a clear example of the process of European domination of other societies, that we have a lot of information about to study
    - like the Maori conquering the Moriori
    - but much larger scale
    - and part of the Grand Narrative: the domination of the rest of the world by Europeans
- Why did the Spaniards succeed?
  - Diamond tells the story in order to point out the obvious (and less obvious) proximate causes:
    - Better weapons
      - especially horses
      - guns, although not as useful then as you might think
      - steel swords and armor, very important
    - European diseases that spread ahead of the Spaniards
      - killed the Inka emperor and set off a civil war of succession between followers of two of his sons
      - wiped out a large part of the population, throwing the empire into chaos
  - Ships to get the Spaniards, their horses, supplies, reinforcements, etc. to Peru
    - true, but Diamond does not tell you that the Peruvians had large sailing rafts that carried cargo and people up and down the coast
    - and occasionally, apparently, all the way to Mexico
    - Pizarro's first encounter with Andean people was when he encountered one of these rafts
    - not as good as the Spanish ships, but nothing to scoff at
- States,
  - because they collected the wealth to pay specialists to design and build the ships, weapons, etc.
  - and funded missions such as Pizarro's, buying supplies, etc.
  - but again: both the Inkas and the Aztecs (previously conquered by Cortéz) were also organized as hierarchical states
    - they, too, collected vast resources for large projects
    - although those tended to be domestic, as in temples and palaces
    - but did include large armies and stores of supplies for the army
- Writing
  - because it gave the Spanish a broader knowledge of the world, tactics, methods that had worked elsewhere, etc.
  - and facilitated communication among them and with their state
  - but again, the Aztecs also had writing
  - and the Inka had an elaborate system of relay runners trained to carry messages at high speed all around the empire
- another cause that Diamond implies elsewhere, but does not include in his list at the end of Chapter 3: an ideology that prepared and motivated the conquerers

- note how the first-hand accounts emphasize the role of the priest, defending the Bible, converting the Indians to Catholicism, etc.
  - while also mentioning gaining riches for Spain (and themselves)
  - their ideology allowed them to think that this was OK, in fact, the right thing to do
  - Pizarro even tells Atahualpa that they have done him a good turn by slaughtering most of his high officials and taking him prisoner!
- Diamond argues that such an ideology is made possible by food production, because it allows for specialists, including priests
  - who promulgate religious ideology
  - that can motivate behavior such as this
  - do you buy that argument?
- also, didn't the Inkas and Aztecs also have religious and political ideologies?
  - wouldn't they have been willing to kill for their beliefs, too?
  - they certainly had specialist priests
  - official religious beliefs and practices that centered on their leaders, etc.
- Diamond lists these proximate causes in order to ask “what caused these causes?”
  - he is looking for ultimate causes of these proximate causes
- His answer will be that the proximate causes (the advantages held by the Europeans) were due to the geographic and ecological conditions of the continent that they came from
  - that is, the Europeans were just the lucky inheritors of a society that was fortunate to develop in a region that led them to have the advantages that allowed them to dominate the world
- what do you think of Diamond's use of primary sources?
  - he strings together paragraphs quoted from different sources written close to the time of the events
    - good, in that these are eyewitness accounts, or close to them
    - and he is passing them on exactly (albeit in translation), so we can draw our own conclusions with a minimum of interpretation from him
  - but he does not give a source for each paragraph, so we don't know which person wrote which
    - some are probably more reliable than others
    - is this good historiography?
  - he just reports what they said, without considering biases and errors
    - again, not good history writing
    - one witness says there were “really” 80,000 Inka soldiers, rather than the 40,000 that Hernando Pizarro told them... how would either man know?
      - Diamond goes for the higher figure without comment – while the exact number does not really matter, Diamond is revealing his bias towards believing whatever claims most support his argument
      - so we should be concerned that he might do the same in other places, where we cannot detect it
  - Diamond says that “95%” of the population had died off...
    - there he goes again... in some regions, as many as 90% apparently did die
    - but in other regions, many fewer

- I don't think any significant part of South America suffered 95% mortality, and certainly the entire Andes as a whole suffered much less mortality than
- Diamond seems to be going for the most extreme claims that most strongly support his argument
- and it is not even necessary – his point would still be made if he claimed “only” 50% mortality
- again, this should make us wary of what he says in other contexts, where we don't have sufficient background to evaluate his claims
- the “Erich Von Daniken” (*Chariots of the Gods*) effect: an expert can see the flaws in any case that he/she knows something about, but all the rest that he/she doesn't know well sounds convincing...
  - is Diamond similar?