Foundations of World Civilization: Notes 7

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

- Epilogue of *G,G,&S*: 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
    - as we saw earlier, there are many kinds of social evolution theories
    - there was one kind that we had not yet covered: **environmental determinism**.
    - this is the kind of theory that Diamond uses in this book
  - Environmental determinism
    - grand theories based on the idea that societies primarily respond to conditions set by the environment
      - mostly having to do with how they can get or produce food
        - by foraging, farming, irrigating, herding, etc.
        - but also by how they adapt to climate and geography
          - extreme cold, deserts, forests, high elevations, plains, rugged territory that makes travel difficult, etc.
    - the idea is that these material realities of life are primary, and set the conditions for everything else
      - religion, ideology, politics, family structure, gender roles, etc. are largely determined by how the society deals with the environment
    - and the broad pattern of historical events is determined by
      - the environmental conditions
        - and social responses to them
        - like the availability of water and good soil for farming in some places and not others
      - changes in the environmental conditions
        - and social responses to them
        - like global warmer or cooler periods that changed how much food farmers could produce
    - many variants of this approach
    - modern historians tend to look down on environmental determinism today as being too simplistic
      - societies vary a lot, even in similar environments
        - so other causes must account for all these different societies arising from the same environmental "causes"
      - there are only a limited range of possible environmental causes (warmer, cooler, wetter, drier, etc.)
        - yet these limited causes are supposed to explain the countless unique cultures and events in history

        - again, other causes must account for all these different results from the same few "causes"
      - there must be so much more going on that ignoring other factors misses important points
    - but to be fair,
      - the environment clearly does limit what is possible
      - it clearly does channel historical events in some ways
      - and changes in the environment have clearly played big roles in some aspects of history
        - the end of the Pleistocene, global warm and cool periods, volcanic eruptions, etc.
      - so the environment must be an important part of what explains history
        - maybe environmental determinism is useful for understanding some aspects of history
        - but must be supplemented with additional kinds of explanations for other aspects of history
- Jared Diamond's variant of environmental determinism
  - Diamond specifies what he considers to 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
- 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
    - E-W axis of Eurasia favored easier, more rapid diffusion of ideas
      - because people, plants, and animals are spread out along a long band of roughly similar latitude
      - thus similar climate and ecology
      - thus domesticated animals and plants, technology, etc. developed in one area is easily transferred to another
    - while the other continents have principal axes that run N-S
      - so people, plants, and animals are spread out across different latitudes
      - so they are in different climates and ecologies
      - so domesticated animals and plants, technologies, etc. are harder to adapt from one region to another
  - 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 lead to more inventions
    - more competition and pressure leads to more rapid development
    - New World effectively divided up into several smaller continents
- Diamond sees these as the ultimate causes of the dominance of Eurasia

- These 4 causes may explain the broad pattern of history
  - the dominance of Eurasia over the rest of the world
  - for smaller patterns within this, other environmental factors may provide explanations
  - Example: within Eurasia, why did Europe eventually dominate, when China and the Islamic world initially had the lead?
    - power shifted westward from its original center in Mesopotamia due to deforestation, goats, erosion, and salinization
      - Reason: the Fertile Crescent was ecologically fragile, Europe was not
    - China did not continue developing its power because it was too unified
      - China's simple shape and two big river systems promoted large-scale integration
        - allowing internal politics and lack of competition to stifle useful changes
      - while Europe was fragmented into many competing units
        - due to its complicated shape, coastline, peninsulas, mountains, many small river systems
        - this competition favored advancement
      - Europe's divided terrain also protected it from destruction and incorporation by Asian nomads
    - Diamond is suggesting that some unity is productive, too much holds back development
      - sounds like Toynbee's problem with "just enough challenge, but not too much"
- to refine his Grand Theory, Diamond says we need a science of history
  - intended to find general laws of how societies develop
    - much as Ibn Khaldun proposed in the 1370s to seek broad explanations for patterns in history
  - 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
  - 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 reasources 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
    - all together, combinations of these variables resulted in islands with very different degrees of social complexity and power
  - 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
  - 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
- 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 Hernán Cortés) 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 Atahuallpa 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 that
      - 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" effect (*Chariots of the Gods*, later TV version: *In Search of Ancient Astronauts*):
  - an author makes claims supposedly supported by a wide range of cases
    - Egyptian pyramids, Mayan art, Babylonian pottery, Australian rock paintings…
  - an expert can see the flaws in any case that he/she knows something about
    - I can tell that he is confused about the pyramids and the Maya
  - but since the cases are so many and varied, there are many cases that any given expert cannot evaluate
    - I don't know anything about Australian archaeology or Babylonian pottery, but that Babylonian pot that generates electricity sounds amazing, and his interpretation of the Aboriginal rock art seems OK…
  - we reject his conclusions in the cases we know, but many of the unfamiliar ones sound pretty good, so we think maybe he is right…
  - is Diamond similar?