

Sept. 11, Class Notes: Meadows and the Stockholm Declaration (1972)

Meadows, Abstract for “The Limits to Growth” and “Beyond the Limits”

- 5 trends in the **World3** model
 - Accelerating industrialization
 - Rapid population growth
 - Widespread malnutrition
 - Depletion of nonrenewable resources
 - Deteriorating environment
- “the limits to growth...will be reached sometime within the next one hundred years”
- Based on a **system dynamics** model (feedback loops, stocks and flows)
 - “none of the five trends is independent” (**what is this implying?**)
- From 1900 to 1970 levels
- **Overshoot and collapse**
- ‘the industrial capital stock grows to a level that requires an enormous input of resources...as resource prices rise and mines are depleted, more and more capital must be used for obtaining resources, leaving less to be invested for future growth...investment cannot keep up with depreciation...population and industrial growth will certainly stop within the next century’ (**ignores T**)
- The **Green Revolution (define)**
- **What are the assumptions here?** “overuse of land leads to erosion, and food production drops. Resources are severely depleted by a prosperous world population...Pollution rises, drops, and then rises again dramatically...”
- **What’s the problem with models? Their utility?** (assumes continuity—ignores ‘black swans’)
- “although the rate of technological change has so far managed to keep up with this accelerated pace, mankind has made virtually no new discoveries to increase the rate of social, political, ethical, and cultural change.”
- “Perhaps the best summary of our position is the motto of the Sierra Club: “not blind opposition to progress, but opposition to blind progress.”” (**what’s the diff?**)
- “the longer exponential growth is allowed to continue, the fewer possibilities remain for the final stable rate”
- Discussing a world of “nongrowth”
- “The most basic definition of the state of global equilibrium is that the population and capital are essentially stable, with the forces tending to increase or decrease them in a carefully controlled balance...an equilibrium defined in this way does not mean stagnation...any country could change its average standard of living by altering the

balance between its population and its capital...” (this assumes an international enforcement body, no?)

- “since the amount of material production would essentially be fixed” (by whom???)
- The 2 meanings of “beyond the limits”

Criticisms of “Limits”

- From “a piece of irresponsible nonsense” to...
- Predicted oil would run out by 1992 (disingenuous criticism, but makes important point about models – they’re useful for what they are)

Stockholm Declaration

- How is this piece different from what we’ve read so far?
- “soft law” instrument
- 4 – in the developing countries most of the environmental problems are caused by under-development...the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment.
- 7 – “local and national governments will bear the greatest burden for large-scale environmental policy and action...”
- Principles
 - Principle 6/7 as good example of soft law principles
 - Principle 21 – **discuss the contradiction inherent in the ‘voluntarist’ international system...**

Introducing Brundtland and Shiva

“Our Common Future” – 1987, the foreword from Gro Harland Brundtland, former PM of Norway, a classic piece which laid the groundwork for the Earth Summit, Agenda 21, and the Rio Declaration, and which solidified our conception of “sustainable development”.

Staying Alive, Vandana Shiva – 1989. Introducing a new critical perspective in environmentalism

Hand out *Economists*, *New Scientists*.