A Tale of Commons’ Tragedies

The Arctic
Announcement about the final and a general review session

• Take Home final posted three days before it is due
• Due Dec. 16 at 11:00 a.m.
• Will consist of identification of key terms and essays.
• More information coming soon
• General Review session: December 12 2:00 p.m. in 145 Dwinelle
Today’s agenda

• Review: The Problem of the global Commons
  – Three Tragedies of Climate change, Resource scarcity, environmental degradation
  – A fourth Tragedy: Nature, Wealth, and Poverty
  – Mitigation of the tragedies
  – Critique from the “Equality School”

• The Arctic as a Case Study
  – A canary in the mine
  – Environmental degradation exacerbates global warming
  – Arctic heating opens economic exploitation
  – A Scramble for the Arctic:
    • Russia, Canada, Denmark, Greenland, China, United States,
    • Arctic Governance?
Today’s Argument

• Mitigation strategies are weak
• Could it work?
• Will nationalism and economic nationalism rear their heads---is war a possibility?
• The Arctic as an example of the Global Commons
• Why the Arctic is important
• A New “enclosure” movement by states and companies? Russia, Canada, Greenland (Denmark), United States?
• Possible conflict
• Unresolved issues
• Lack of Global governance
The “tragedy of the commons” metaphor

• The Metaphor—a “collective action” problem
• The global economy as a global “commons”
  – Free trade and equal access to markets for all
  – In pursuit of economic growth
  – The harm to the global economic commons: protectionism, economic nationalism
• Freedom in the “economic commons” can lead to Three Tragedies of the Global Environmental Commons
  – Climate Change
  – Resource Depletion
  – Environmental Degradation
Inequality as a fourth tragedy: Nature, Wealth, and Poverty

• Poor countries depend on nature directly
• Especially the rural poor in poor countries
• Harvests from forests, fisheries, and farm fields are a primary source of rural income, and a fall-back when other sources of employment falter.
Review: How should the Tragedy of the commons be mitigated?

1. Do the Right Thing
2. Enclosures: National and Private (econ. Nationalist and liberal)
   Conflict? use the Coase Theorem
   Developed countries help the developing countries not to contribute to the tragedies.
   Example of the beach at Waikiki
   But will the Coase Theorem work with nation-States?---tragedy of the commons can lead to international conflict!
But national solutions, privatization, and small groups won’t always work.....indivisible goods
3. For the indivisible goods, another Liberal solution: Keep Freedom and equal access intact

- Develop new (green) technologies and keep growth going.
- Have a giant burst of economic activity designed to replace our fossil fuel system with something else that won't "foul the nest" but keep us living just as we do now.
  - The Green Manhattan Project
  - A Green New Deal
  - A Clean Tech Apollo Mission
4. create a central authority to control access to the global commons

- A Hegemon --- in the form of global government taking away, or drastically limiting, the freedom of users and replace the open access resource with a central authority who regulates access

- Problems:
  - First, users do not like to give up their freedom in the commons to an authority who completely regulates resource access
  - If crisis is attributed to the greed of other users, people are less accepting of a central authority
    - Individuals either do not believe that an authority system can actually stop selfish people from overusing the resource or they fear that the authority is corrupt and exploitative
  - But if they believe the shortage has a non-human cause, a hurricane, a volcano eruption, they want central authority to regulate
  - But central regulation is not efficient
Some successes

- Law of the Sea
- Ozone Treaty
- Antarctic Treaty
Climate Change: Kyoto Protocol

- Recognition of climate as part of the global commons
- The Kyoto Protocol 1997
- The Protocol entered into force on 16 February 2005. As of October 2009, 184 states have signed and ratified the protocol.
- The most notable non-member of the Protocol is the United States, which is a signatory of UNFCCC and was responsible for 36.1% of the 1990 emission levels.
- Under the Protocol, 37 industrialized countries (called "Annex I countries") commit themselves to a reduction of four greenhouse gases (GHG) and two groups of gases produced by them, and all member countries give general commitments. Annex I countries agreed to reduce their collective greenhouse gas emissions by 5.2% from the 1990 level. Emission limits do not include emissions by international aviation and shipping, but are in addition to the industrial gases, chlorofluorocarbons, or CFCs, which are dealt with under the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer.
- The benchmark 1990 emission levels were accepted by the Conference of the Parties of UNFCCC (decision 2/CP.3) were the values of "global warming potential" calculated for the IPCC Second Assessment Report.
- These figures are used for converting the various greenhouse gas emissions into comparable CO₂ equivalents when computing overall sources and sinks.
- The Protocol allows for several "flexible mechanisms", such as emissions trading, the clean development mechanism (CDM) and joint implementation to allow Annex I countries to meet their GHG emission limitations by purchasing GHG emission reductions credits from elsewhere, through financial exchanges, projects that reduce emissions in non-Annex I countries, from other Annex I countries, or from annex I countries with excess allowances.
Without a solution? Military efforts to Climate Change problems?

- predictions about the coming environmental wars imply that climate change requires military solutions—a readiness to forcibly secure one’s own resources, prevent conflict spillovers, and perhaps gain control of additional resources.
Darfur as warning sign

Resource conflicts of this type are most likely to arise in the developing world but the more advanced and affluent countries will be affected too…..

With sea levels rising, water and energy becoming increasingly scarce and prime agricultural lands turning into deserts, warfare over access to vital resources will become a global phenomenon.
A critique from the equality perspective

- Will any of these solutions alleviate the poverty caused by climate change?
- Capitalist corporations are more powerful than governments when it comes to the environment
- And their behavior shows that Ruggie’s discussion of the “social compact” may be flawed.
- Is Ruggie wrong?
Arctic as Global Commons

• Arctic plays a key role in regulating global weather patterns, and, spurred by global pollution, it is warming
• And Resource exploitation issues are leading to international conflict
• Indigenous peoples suffer from both
Arctic is heating up faster than the rest of the world.....
The Arctic Ocean is melting, and it is melting fast.

[Map and graphs showing sea ice extent and thickness changes over time.]
Why?.....
How it works: Pollution and heat lower reflectivity $\rightarrow$ Ice Melts $\rightarrow$ sea absorbs heat $\rightarrow$ melts mores ice

*Ice albedo: critical parameter in snowball models*

- ablative glacial ice ($\alpha \sim 0.6$)
- mature marine ice ($\alpha \sim 0.4$)
- fresh snow ($\alpha \sim 0.9$)

*see Warren et al., JGR Oceans 107, 2002.*  
*Steve Warren photos*
Polar Bears endangered

Their lives depend on being able to hunt on the sea ice
Indigenous Peoples Harmed
Less Ice.....**More** Resources

• Less ice also means increased access to resources....

• And the collective action problem kicks in
An even greater prize ... new sea-lanes created by the great melt.
Promise of new wealth → new national enclosures of the Arctic Commons

**Scramble for the Arctic**

As climate change melts ice in the Arctic, several nations are vying for dominance of resources and shipping routes.

- Russia planted national flag on Aug. 2
- Ice cover as of Sept. 3, 2007
- Northern Sea route
- Barents Sea
- Syalbard (NORWAY)
- Greenland (DENMARK)
- United Kingdom
- Ireland
- Atlantic Ocean
- Arctic Ocean
- Canada
- Baffin Bay
- Hudson Bay
- Northwest Passage

*Source: National Research Council*  
*Mark Nowlin / The Seattle Times*
Russia dispatched a nuclear-powered icebreaker and two submarines to plant its flag on the North Pole's sea floor.

The dive was a symbolic move to enhance Russia’s disputed claim to nearly half of the floor of the Arctic Ocean and potential oil or other resources there.
Why? Economic Nationalism!

• Russia argues that half of the Arctic Ocean is its rightful inheritance.

• an extension of Russia’s continental shelf and thus Russian territory.

• "The Arctic is ours and we should manifest our presence"
Santa Claus as a “common good” could be privatized.

Russia owns the ocean floor... including your Toy Workshop!

I guess that’s the End of Christmas

constructiveanarchy.com/blog
Canada: First principle of Arctic sovereignty is “use it or lose it”

- **Canada** claims Northwest Passage as its own internal seaway.
- Prime Minister Stephen Harper announced **funding** for new Arctic naval patrol vessels, a new deep-water port, and a cold-weather training center along the Northwest Passage.
Hans Island
Greenland: a bid for independence?
China

- China......
Indigenous Peoples Claims

- the Inuit of Canada
- Yakutsk people in Russia
- One Inuit man quoted as saying: “The Arctic sea is ours. It’s where we go for our food, our seals and whales. It’s always been ours, it’s ridiculous for anyone to think otherwise.”
The United States: Slowly entering the race....Domestic Interest Group Politics?
US Government stands on the sidelines

• But The US hasn’t even ratified the relevant international treaties that would give it a voice in deciding on competing claims,

• Congress opposes ceding any US sovereignty to international institutions.
Ambiguities: Global Commons?
No global governance

- Arctic countries will unilaterally grab as much territory as possible and exert sovereign control over opening sea-lanes wherever they can. They are already laying down sonar nets and arming icebreakers to guard their claims.
To sum up

• There are four tragedies of the “commons”
• Mitigation strategies are weak—a new form of “embedded liberalism” in a central authority?
• Could it work?
• Will nationalism and economic nationalism rear their heads---is war a possibility?
• The Arctic as an example of the Global Commons
• A New “enclosure” movement by states and companies? Russia, Canada, Greenland (Denmark), United States?
• Possible conflict
• Unresolved issues
• Lack of Global governance
But maybe global governance is possible.....Antarctica