

Dartmouth Goes Green

Notes for talk
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Debt of Gratitude

- I would not be here today if it had not been for the support of:
 - Leonard Rieser
 - Dean Thaddeus Seymour
 - Scotty in the design dept
 - Noel Perrin
 - Prof. Bean & Comp Lit 21
 - The editor of the Alumni Magazine
 - A faculty daughter who supported me in ways I did not then appreciate
- and other who will forgive for not mentioning them.

Take Aways

- There are serious interlocking problems;
- Time is short;
- An expanded vocabulary may be useful in generating fresh questions;
- There is hope if we can put all of the moving pieces together.
- Dartmouth has an important role to play!

\$1M later

- Some years ago I was a member of a team that designed and built a product that produced 600K BTUs of carbon negative energy. We found no takers.
- What follows is partly the result of asking why?

Roots

- Op-ed “Regenerative Capitalism” - May 2015

What should we call an economic system that continuously degrades our oceans, soils, lakes, rivers, forests and atmosphere, while leaving billions of our fellow human beings unhealthy and impoverished?

The world we live in today is a world dominated by degenerative capitalism and its monotonic metric of “profit maximization.”

- Is this the world we wish to sustain?

- Commentary “Beliefs” - April 2017

If we could wave a magic wand and stabilize the climate tomorrow, we would still be on a path to disaster. Our normal day-to-day activities (at least in the industrialized world) are driving an interlocked series of crises that threaten to upend the one-world civilization we live in.

- Is there a Commons for which we have stewardship responsibilities?

History

- Robert Malthus - 1798 & 1803
- Fairfield Osborn “Our Plundered Planet” - 1948
- William Vogt “Road to Survival” - 1948
- Paul & Anne Ehrlich “The Populations Bomb” - 1968
- Club of Rome “Limits to Growth - 1972 (10 million copies / 28 languages)
 - Donella Meadows @ Dartmouth 1972 - 2001
- Brundtland Commission report “Our Common Future” - 1987
 - Sustainable
- Environmental Studies Dept. - 1996 (after?)
- Dartmouth Alumni for Climate Action (DACA) 2015
- Irving Institute - 2017

Three Challenges

- Disruption of the environment
- Nuclear Weapons
- Economic inequality produced by current economic theory
- All 3 are major threats to the Commons

Key questions

- Why are we worth sustaining?
 - Do we want to sustain, for example, the agricultural processes that are killing the bees that pollinate our food?
- Is the world multi-win or zero sum?
- What do we have to change? How? When?

Compost story

- How many of us have compost containers?
- Odor? Nasty?
- Solution
 - Biochar & PBR in the compost pail
- Add to garden to create conditions for life
 - Grows top soil
 - Increase in quantity & quality for years
 - Reduce inputs increase Outputs
 - Virtuous regenerative cycle

Words to Write Down

Pyrolysis <> Combustion

Drawdown <> Increasing

Regenerative <> Degenerative

Commons <> Zero sum

Biochar <> ash

Carbon negative energy <> Carbon additive energy

Community <> isolation

Co-Intelligence <> Co-Stupidity

Transformational <> Transactional

The Commons?

- Adam Smith “Invisible Hand”
 - Theory of Moral Sentiments - 1759
 - Wealth of Nations - 1776
- Benj Franklin - Junto Club
- Milton Friedman
- Maggie Thatcher et al (Ronald Reagan, Ayn Rand)
- E. O. Wilson - Evolution in the individual & the group

Regenerative Commons

- Virtuous cycles of improvement, quality, quantity
 - Top soil
 - Bees
 - Water
 - Oceans
 - Politics
 - Economics

What is our goal?

- Where do we want to be in 2050?
- How do we want to get there?
- What are the barriers?
- How do we route around them?
- Time limits?
 - 30 years to scale up new solutions?

Speaking of Goals

- What level of atmospheric CO₂ should we aim for?
- David Wasdell of apollo-gaia.org: 280 ppm?
- Is this creditable? What if it is?
- Any number below 410 requires Drawdown

Essential requirements

- Policies
- Incentives
- Education
- Without all three, change is very unlikely.
- If these three factors had been place supporting drawdown, our carbon negative energy product would have been the foundation of a robust business.

For Some Hope

- Paul Hawken's new book: Drawdown
 - The 100 Most Substantive Solutions to reverse Global Warming ...
 - If you are driving in the wrong direction, simply slowing down means you are still going in the wrong direction.
- Daniel Wahl's book: Designing Regenerative Cultures - May 2016

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