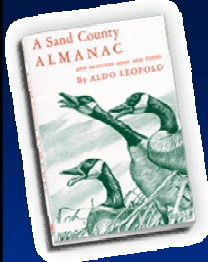


# Mountain Thoughts and Human Thoughts

Finn Arler



## Thinking like a mountain


(14,900,000 hits on Google!)

"We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain.

I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view (...)

The cowman who cleans his range of wolves does not realize that he is taking over the wolf's job of trimming the herd to fit the range. He has not learned to think like a mountain. Hence we have dustbowls, and rivers washing the future into the sea."

Aldo Leopold: *Sand County Almanac*, 1948  
<http://www.eco-action.org/dl/thinking.html>



## Why did Leopold request us to try to think like a mountain?



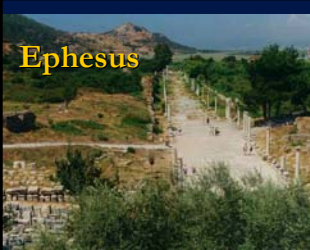
- Avoid decision making based on too limited time scales
- Be aware of large scale mechanisms that we do not know in detail, and over which we cannot have full control
- Look at current human aspirations from a broader perspective
- Give due respect to the lives of other organism

## Purpose

- Show a few – but in my view: extremely important – examples of mountain scale changes
- Try to identify the various kinds of interests human beings may have in examining mountain scale changes
- Ask myself what the mountain may say

## Example 1 The destiny of Ephesus

### Ephesus

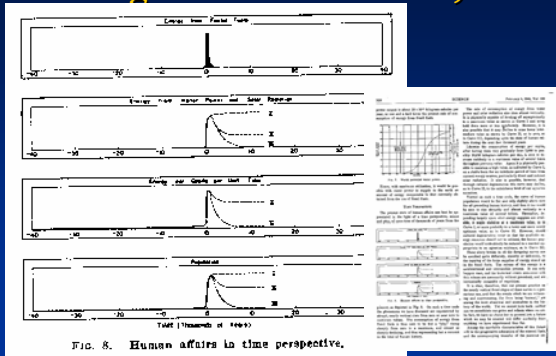


## Which kind of interest?

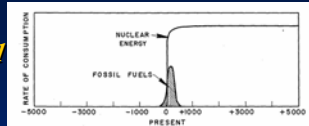
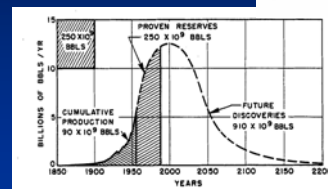
- Storytelling
  - Have you heard the exciting story of Ephesus...
  - Be glad this has not happened to your town (yet)
- Warning and learning
  - Beware of slow, apparently innocent, but highly effective factors working behind our backs – they may be doing their job in your town, too
  - Avoid quick and radical changes of important environmental factors
  - You may not know the mechanisms which are going to hit you, before it is too late to do anything about it
- Memento mori (= mountain thoughts?)
  - Everything has its time; nothing lasts for long
  - We will all be dead in the long run (Keynes)

## Example 2 The age of fossil fuels

### M. King Hubbert in *Science*, 1949



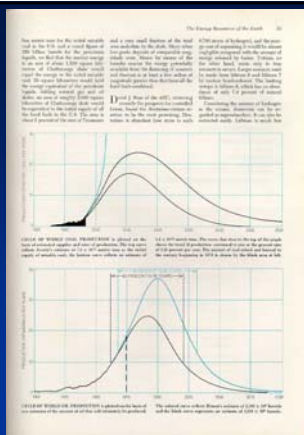
### M. King Hubbert: *Nuclear Energy and the Fossil Fuels*, 1956



M. King Hubbert,  
Chief Consultant (General  
Geology), Exploration and  
Production Research Division,  
Shell Development Company  
Publication Number 95,  
Houston, Texas, June 1956,  
Presented before the Spring  
Meeting of the Southern District,  
American Petroleum Institute,  
Plaza Hotel, San Antonio, Texas,  
March 7-8-9, 1956

### M. King Hubbert: *Energy and Power*, 1971

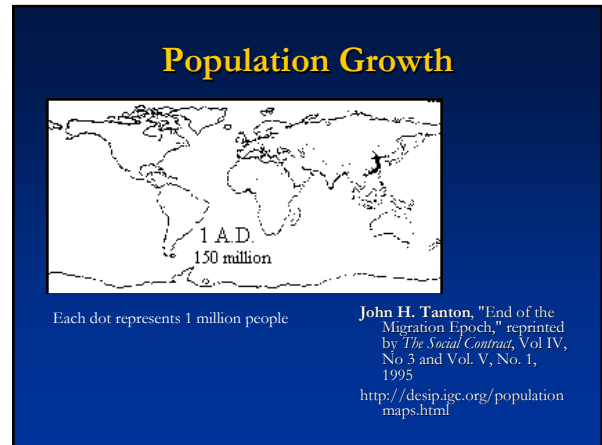
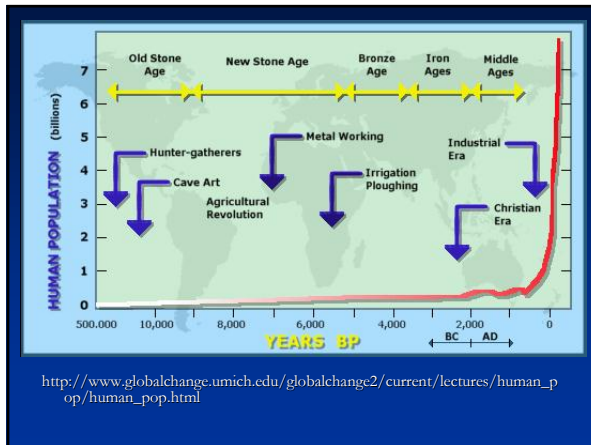
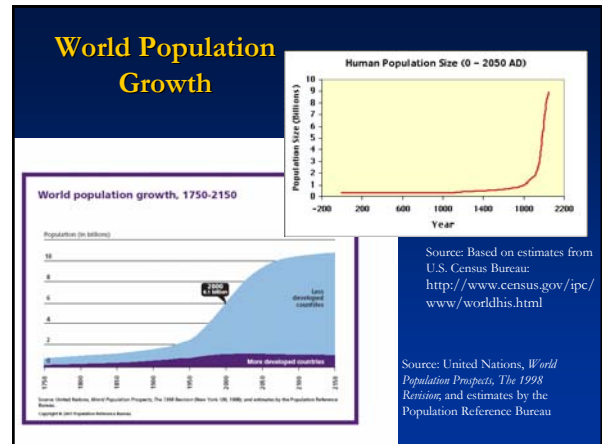
Source: M. King Hubbert:  
*Energy and Power*, Scientific  
American Books, 1971, pg 39



## Which kind of interest?

- Warning and learning
  - Prepare for good alternative solution now, because one of our most basic resources won't last for long
  - Be aware of the fact that the present growth rates – and maybe even the present level of welfare – may be difficult to sustain, because there may not continue to be resources that are so easily accessible
- Memento mori
  - The dreams of the fossil age may have been naïve from the start, and it may turn out to be devastating in the end

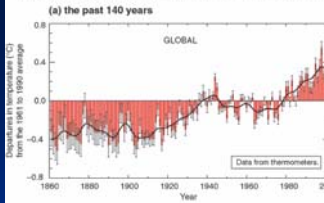
## Example 3 World Population Growth



- ### Which kind of interest?
- Warning and learning
    - Population growth at the present scale is a recent phenomenon, and it cannot continue for long
    - Even if growth stops, this may not be enough
    - Look for means to stop the growth and to reduce the human population in an acceptable way
  - Memento mori
    - Species come and go; nothing lasts for long
    - The human species may not happen to be smart enough to invent appropriate institutions in order to avoid heavy conflicts

## Example 4 Climate change

### Variations of the Earth's surface temperature for:

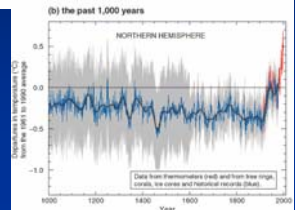


## Climate Change

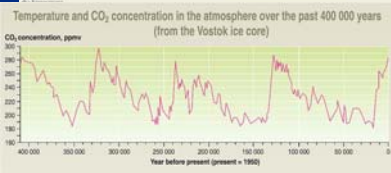
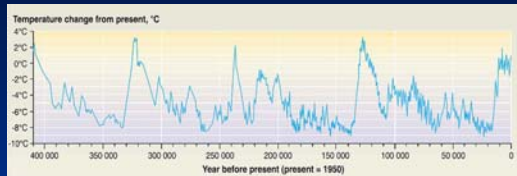
▲ Over the past 140 years

▶ Over the past 1000 years

Source: IPCC: Climate Change 2001  
[http://www.grida.no/climate/ipcc\\_tar/](http://www.grida.no/climate/ipcc_tar/)



## Climate Change



Petit, Jouzel et al.:  
*Climate and Atmospheric History*, Nature 1999

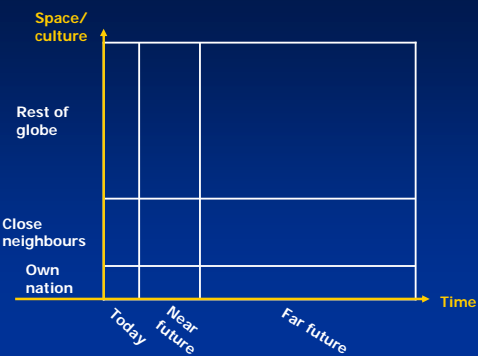
## Which kind of interest?

- Warning and learning
  - The activities of human beings seems to be changing climate all too quickly
  - We will have to abate, mitigate, and adapt
- Memento mori
  - Even if we succeed, we cannot stop climate change forever; things will change anyway
  - Everything has its time; nothing lasts for long

## Time scales and interests

Time scale	Geographical scale	Interests
0-30 years	Individual, local community or nation	Traditional planning interests
30-150 years	Local community, nation or culture	Important changes, possibilities and threats
150-500 years	Nation, culture or species	Basic changes in terms of cultural identity
500-5000 years	Culture or species	Changes revealing basic human traits
5,000+ years	Species	Destiny of the human species

## Real size



## Attention to various groups

