

Environmental Ethics and Land Management

ENVR E-120

<http://courses.dce.harvard.edu/~envre120>

Agriculture, Land Management, and the Emerging Water Crisis

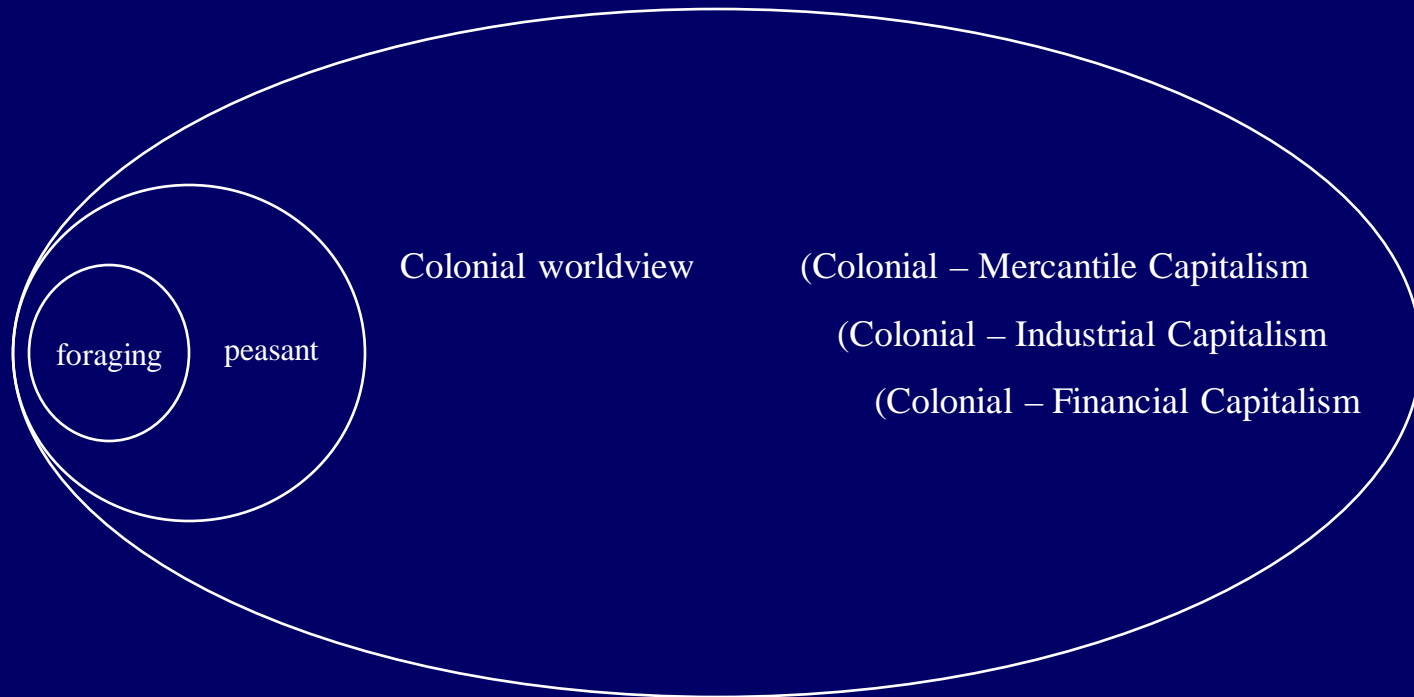
Timothy C. Weiskel

Session 8
20 October 2009

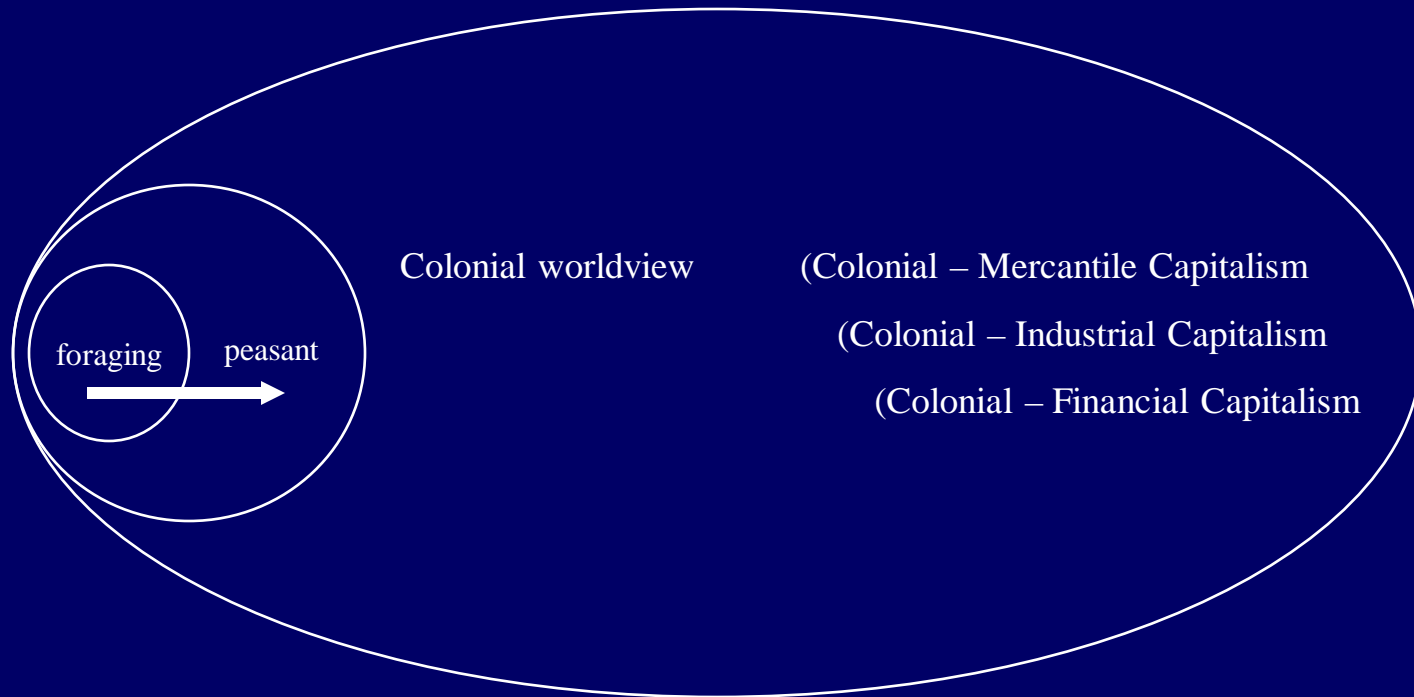
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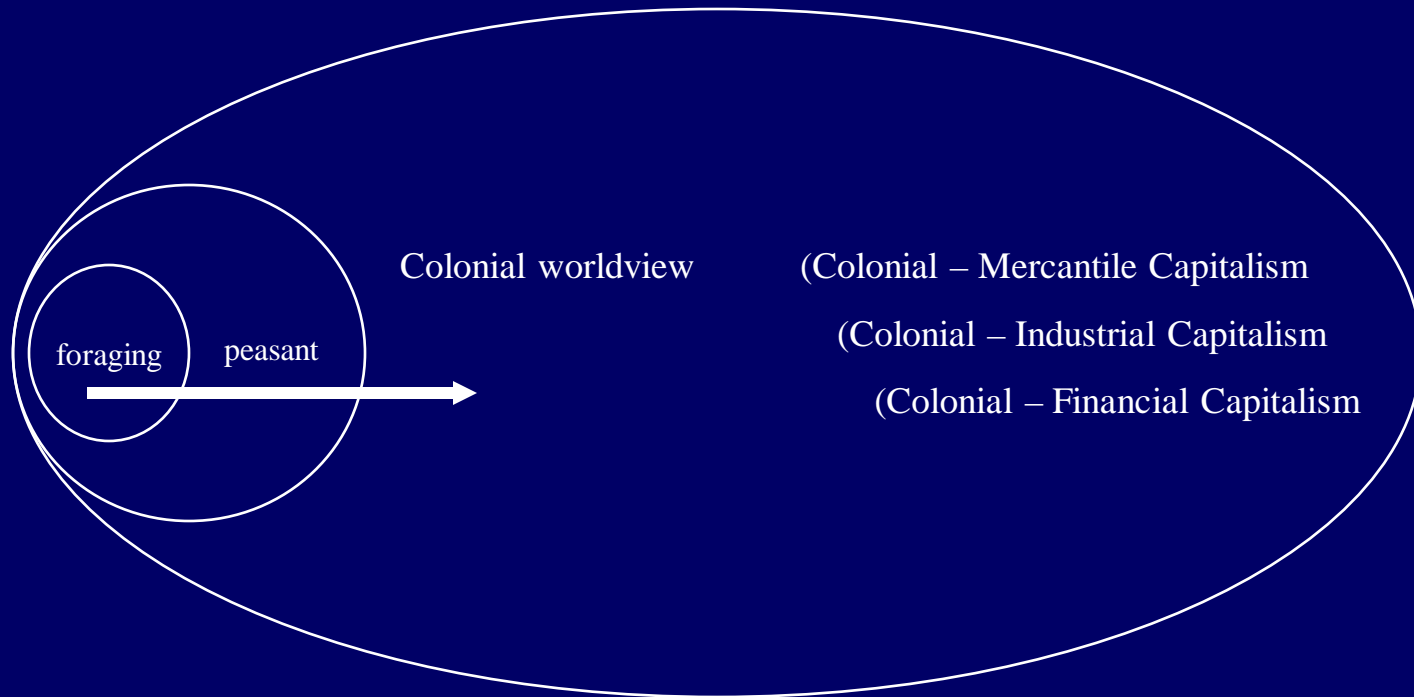
Remember, worldviews are not so much obliterated....they are merely displaced.



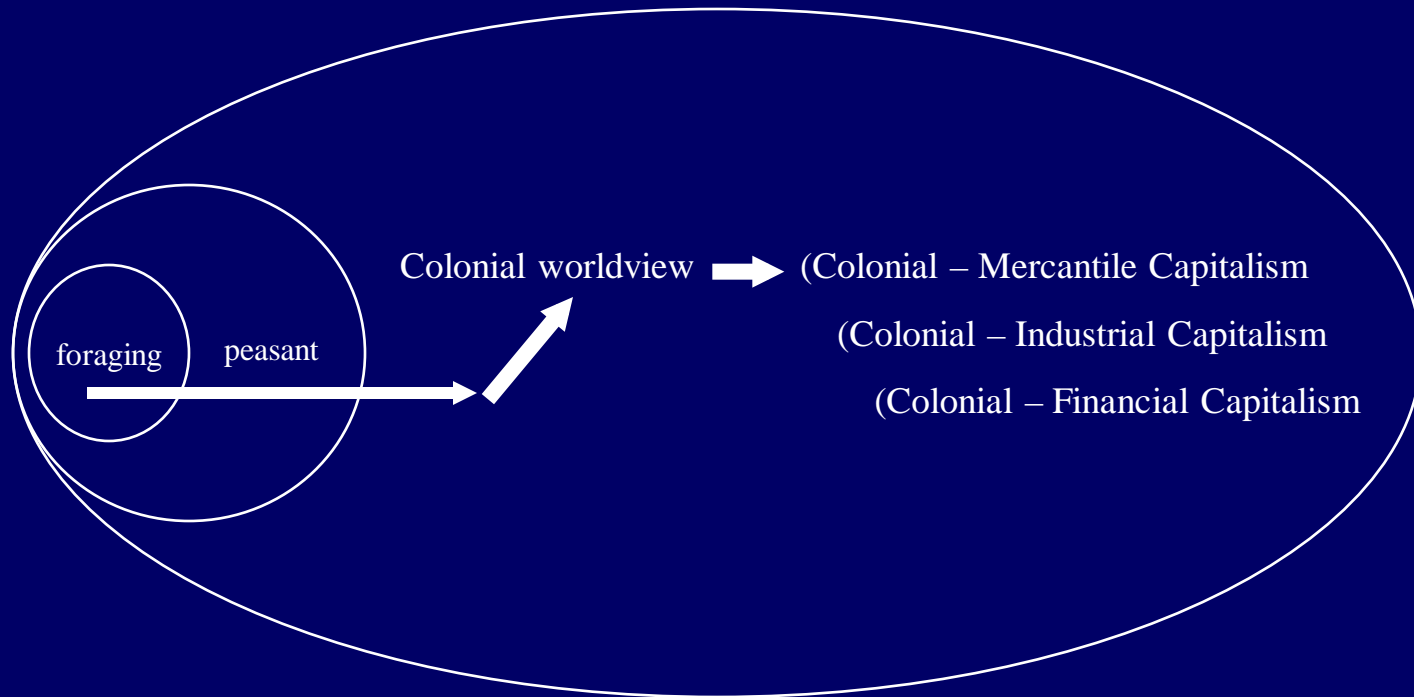
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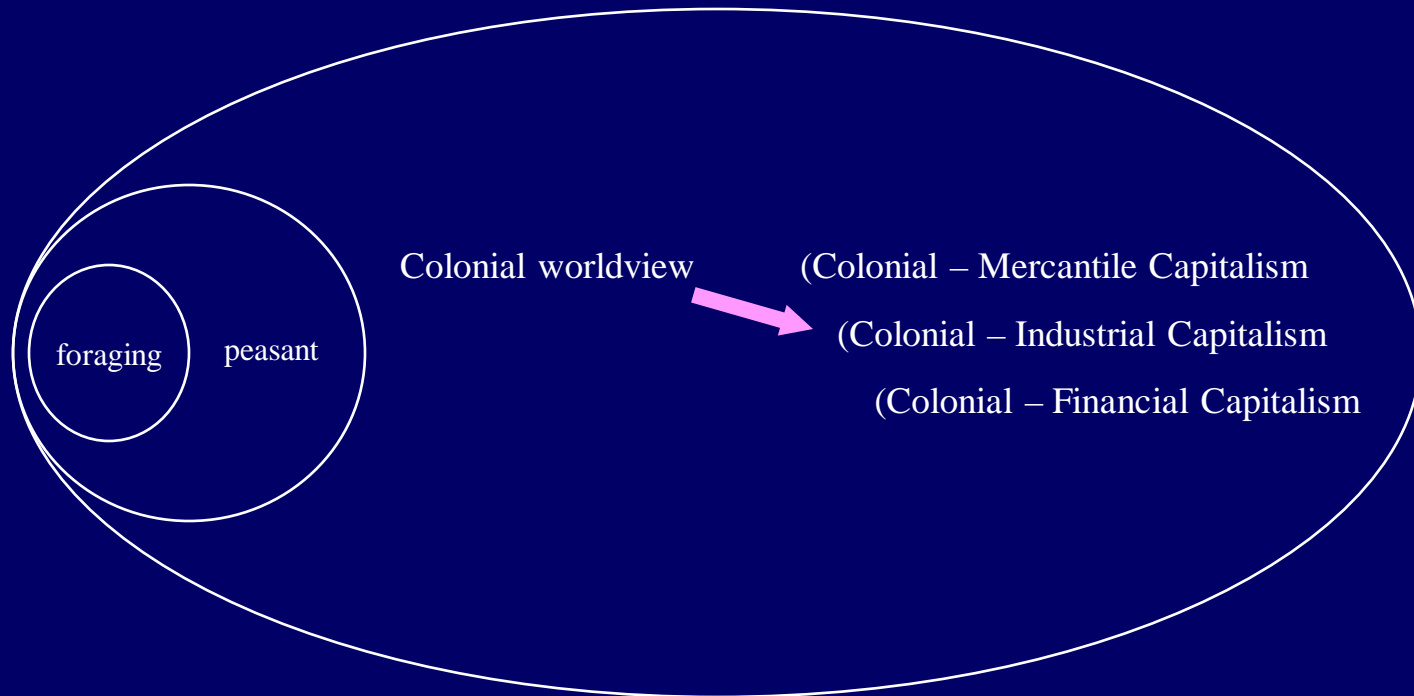


Remember, worldviews are not so much obliterated....they are merely displaced.



Remember, worldviews are not so much obliterated....they are merely ~~displaced~~.

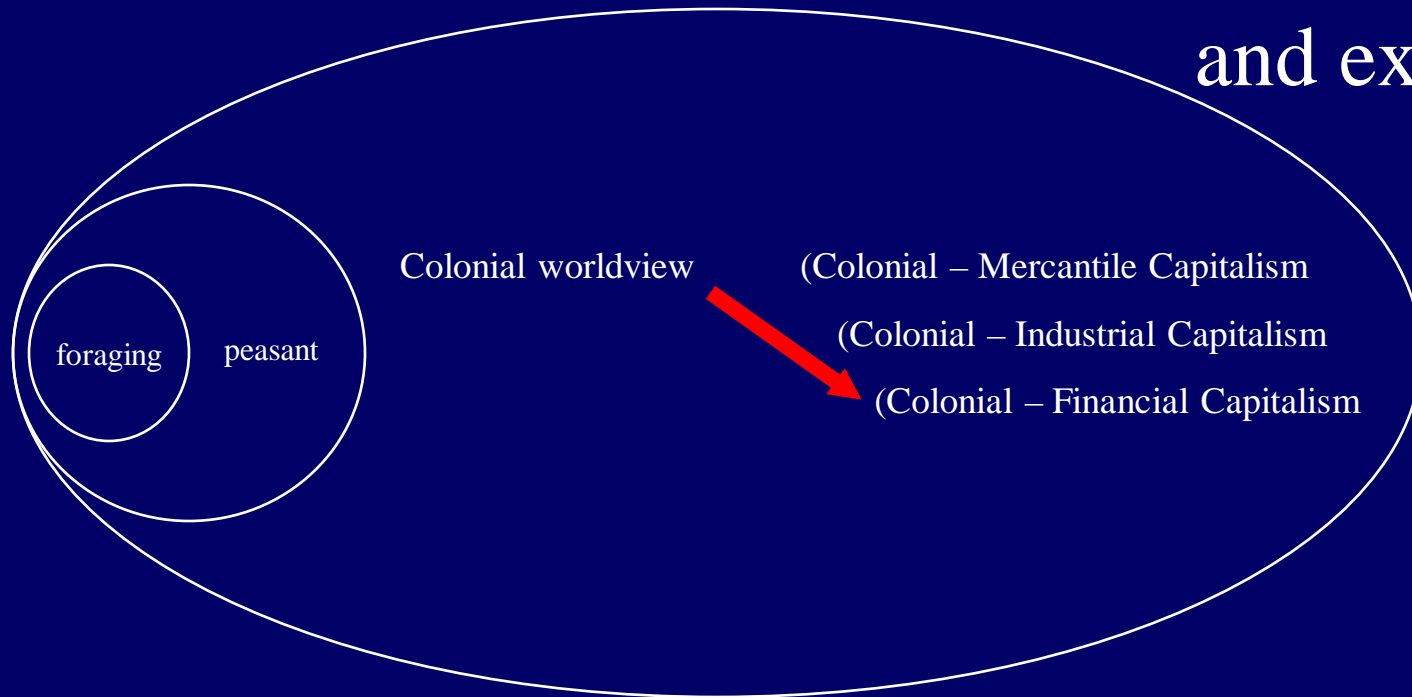
extended



Remember, worldviews are not so much obliterated....they are merely ~~displaced~~.

~~extended~~

and expanded



Finance Capital Worldview

Implicit theories

Colonial (Financial) Worldview

Community

The moral community is made up of those who share in capital to undertake investments in industrial capacity and trading ventures

System

The system consists of investors engaged in differential strategies of investment throughout the world. The world as a whole is available as a theater for profitable investment. Financial resources knit the system as a whole together.

Authority

Authority is vested in trans-national and multinational alliances and agreements that work to facilitate the unimpeded movement of capital

Change

Change occurs through the identification and investment in new ideas.. Change is good and has become essential for competitive survival of rival financial groups. Growth is both good and necessary.

Agency

The investor is the agent of change in the system. The state should act to facilitate and “free up” the potential for the global movement of financial resources.

Time

The focus is upon the next “quarter” or a shortened time horizon determined by a calculation of the annual average rate of profit. Rapid “turnover” of capital is necessary for maximum profit generation. “Time is money.”



Summary of Progression in Colonial Worldview

Social systems dominated by a mercantile, industrial and, finally, a financial capital view the world in similar ways. In each stage of capitalist consciousness there is:

- a common assumption that *growth is good & growth is normal*; infinite growth is both possible and desirable.
- *a hastening of the theory of time* -- that is, a “shortening” of the effective time frame within things are expected to happen (time is money, we cannot “waste” it, etc. Time is that phenomena which by being expended generates growth automatically through returns to capital – ie. “interest”).



Over all Colonial Worldview - Summary

Further, there is in this evolution of worldviews:

- *a removal of the locus of power over decision making* from the physical bases of ecosystemic dependence. Economy and moneyed wealth thought to be *autonomous*. Money generates interest automatically – “spontaneously,” all on its own.
- *a collapse of consciousness from system → to sector → to “virtual” reality.* (stock market paper “investments,” etc.) Movement to specialized concerns, generalized indifference and post-literate consciousness.



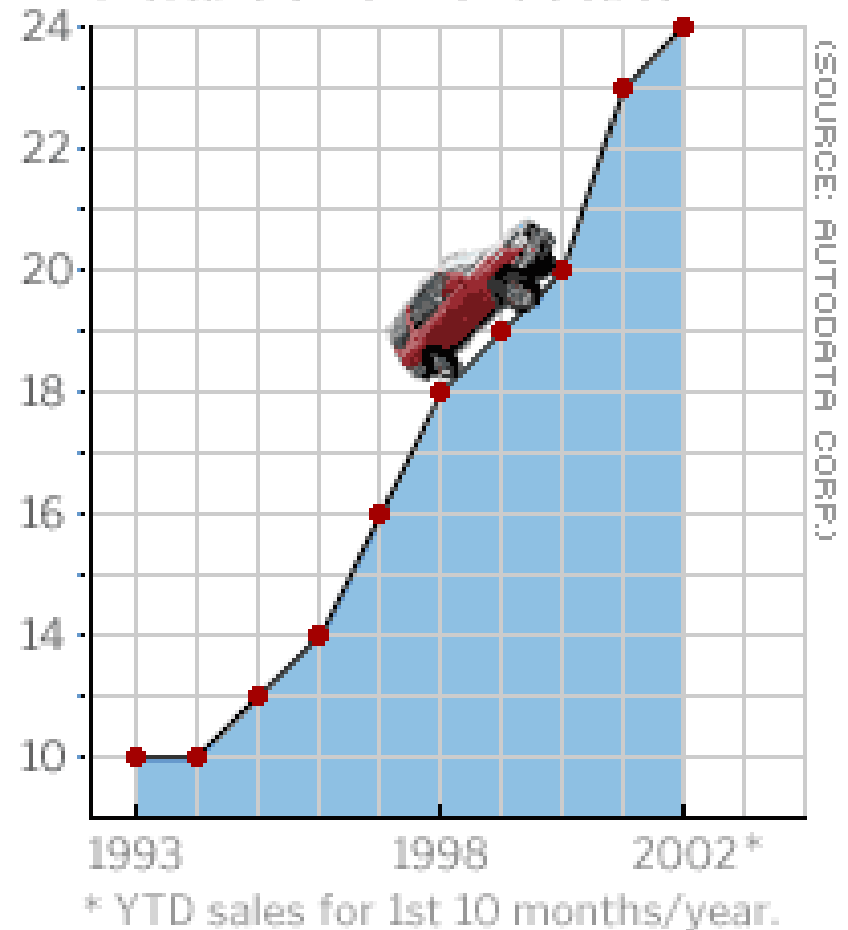
The 1990s saw an enormous boom in SUV sales and a boom in suburban sprawl – all made possible through a continuously expanding economy.

Our President became famous for his encapsulation of the issue:
“It’s the economy, stupid”.

Under President Clinton the U.S. economy enjoyed the longest sustained period of continuous growth in U.S. history...

SUV Sales

Sport/utility vehicle sales as a % of total U.S. new vehicle sales



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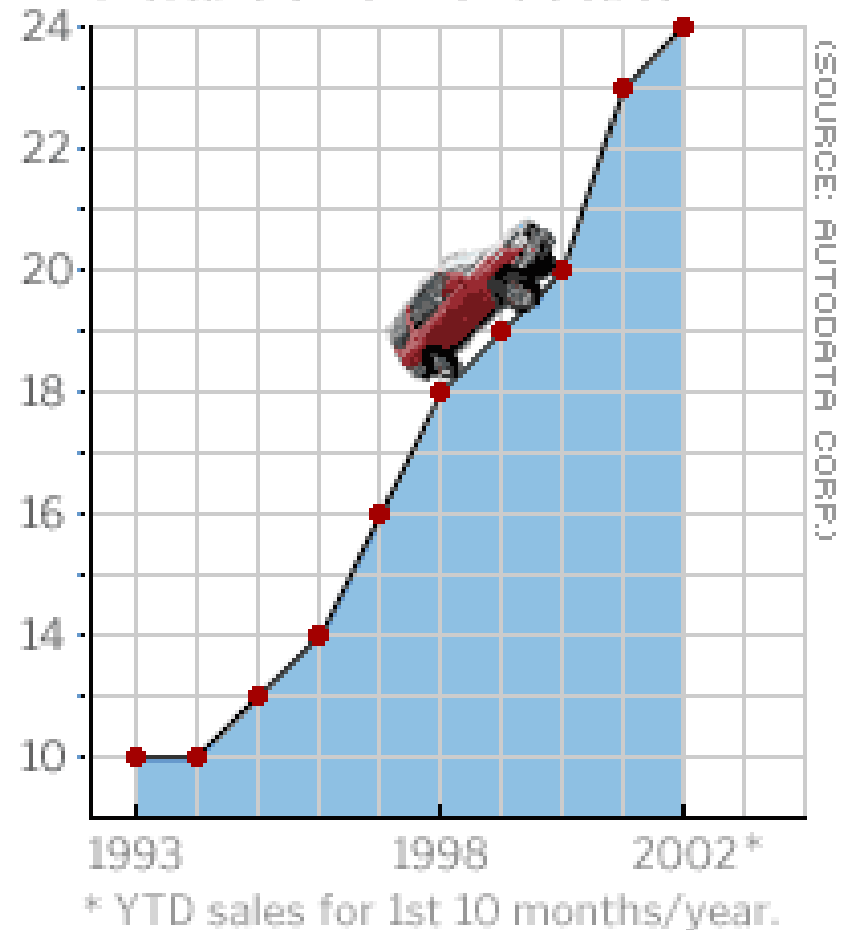
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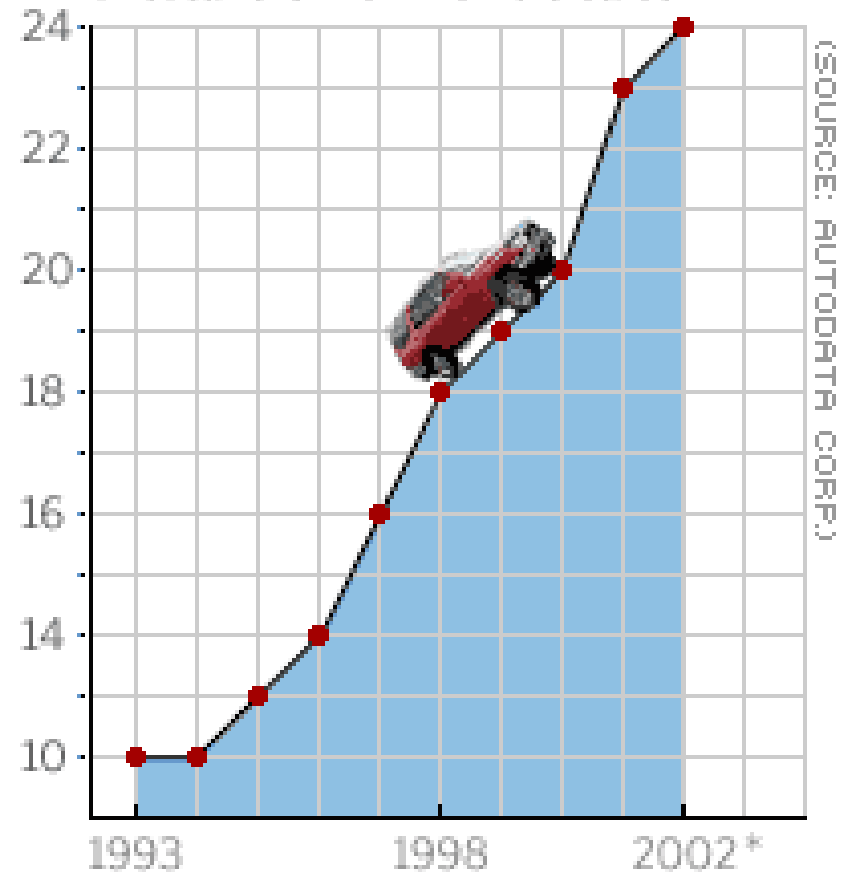
BUT

...we had a growing economy based on a non-renewable?

(Who was really stupid?)

SUV Sales


Sport/utility vehicle sales as a % of total U.S. new vehicle sales



"We're literally stuck up a cul-de-sac
in a cement SUV without a fill-up."

James Howard Kunstler, 2003



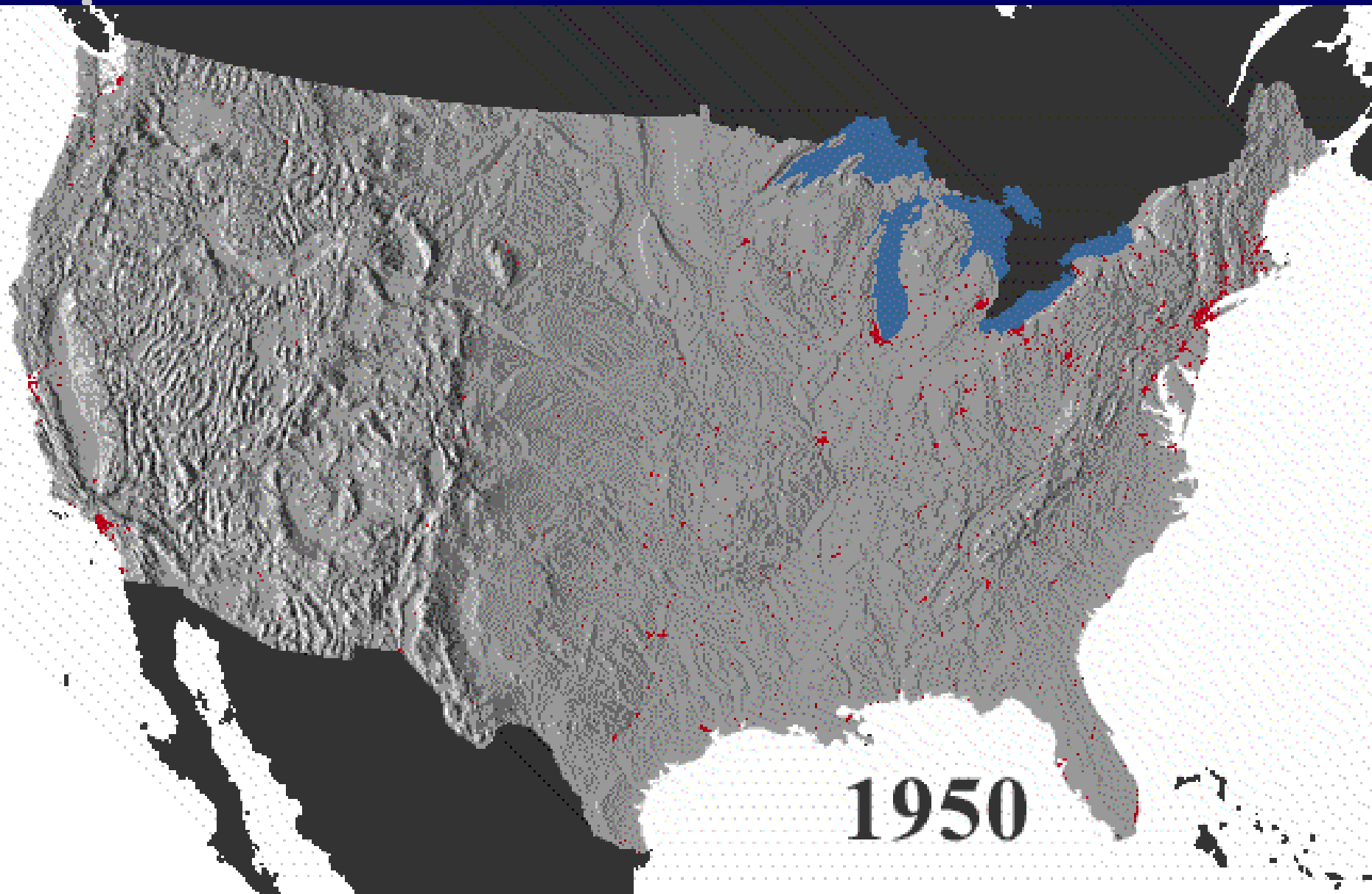
A video frame showing a man with thinning hair and a black shirt, identified as James Howard Kunstler. He is seated in a room with bookshelves and a lamp in the background. The video has a dark blue border at the top and bottom, with a red bar on the right side.

James Howard Kunstler

author, "The Geography of Nowhere: The Rise
and Decline of America's Man-Made Landscape"







1950





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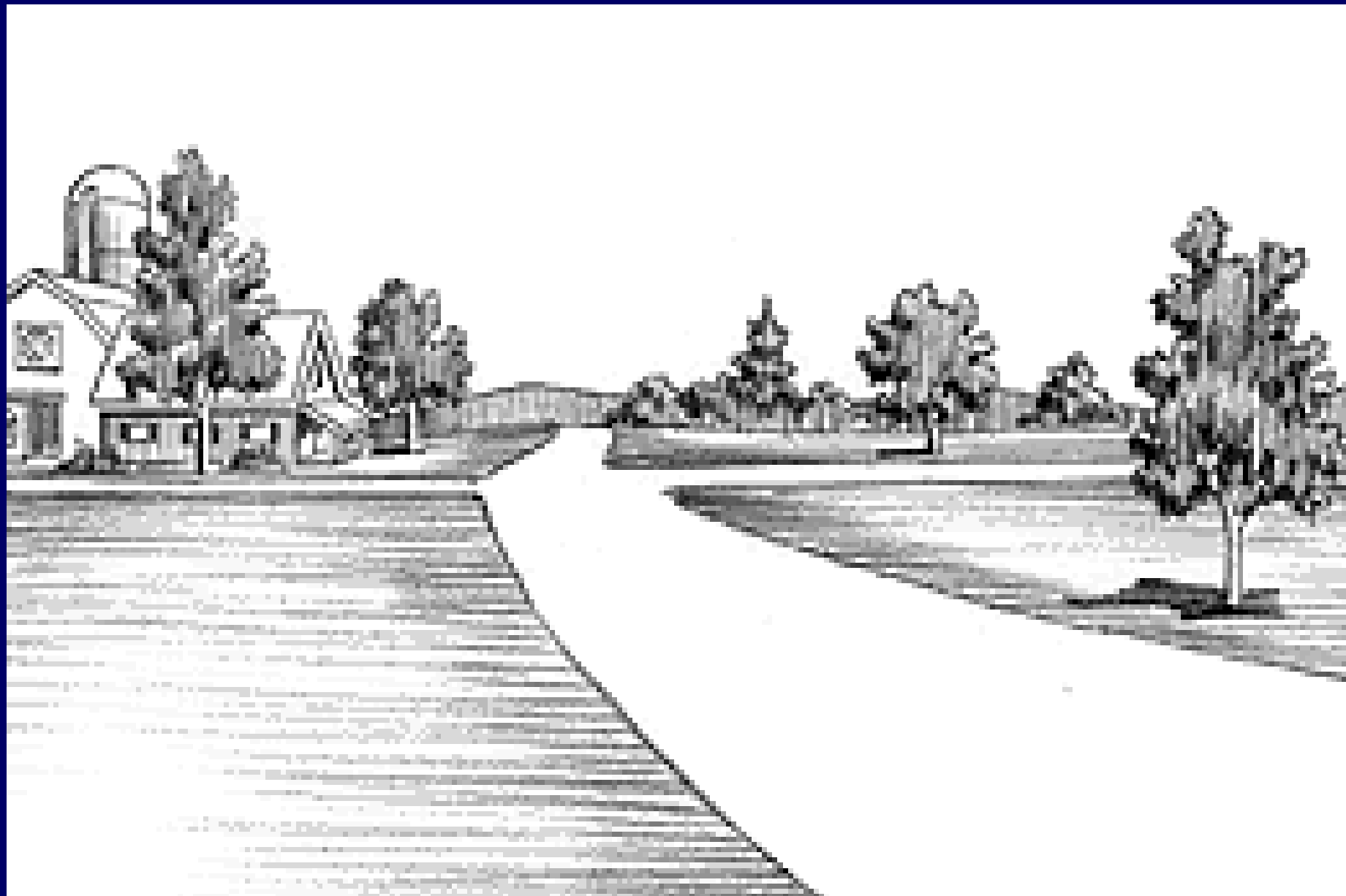
[The Sprawling of America:
Inner City Blues](#)

A documentary on land use, examines the social, political, and economic causes of sprawl and urban decline.

[Great Lakes Television](#), Christopher M. Cook, Producer.
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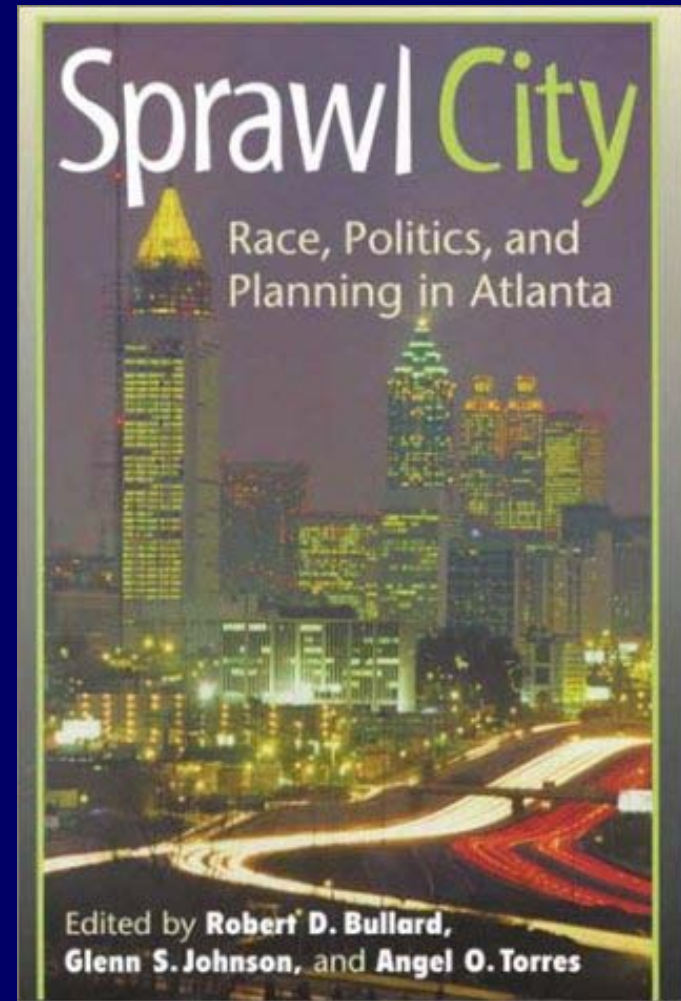




Sprawl and the 'Colonial' worldview...

Atlanta has been identified as the “poster-child” of sprawl.

Sierra Club calls it the most sprawl-threatened city in the United States. *



Atlanta Sprawl



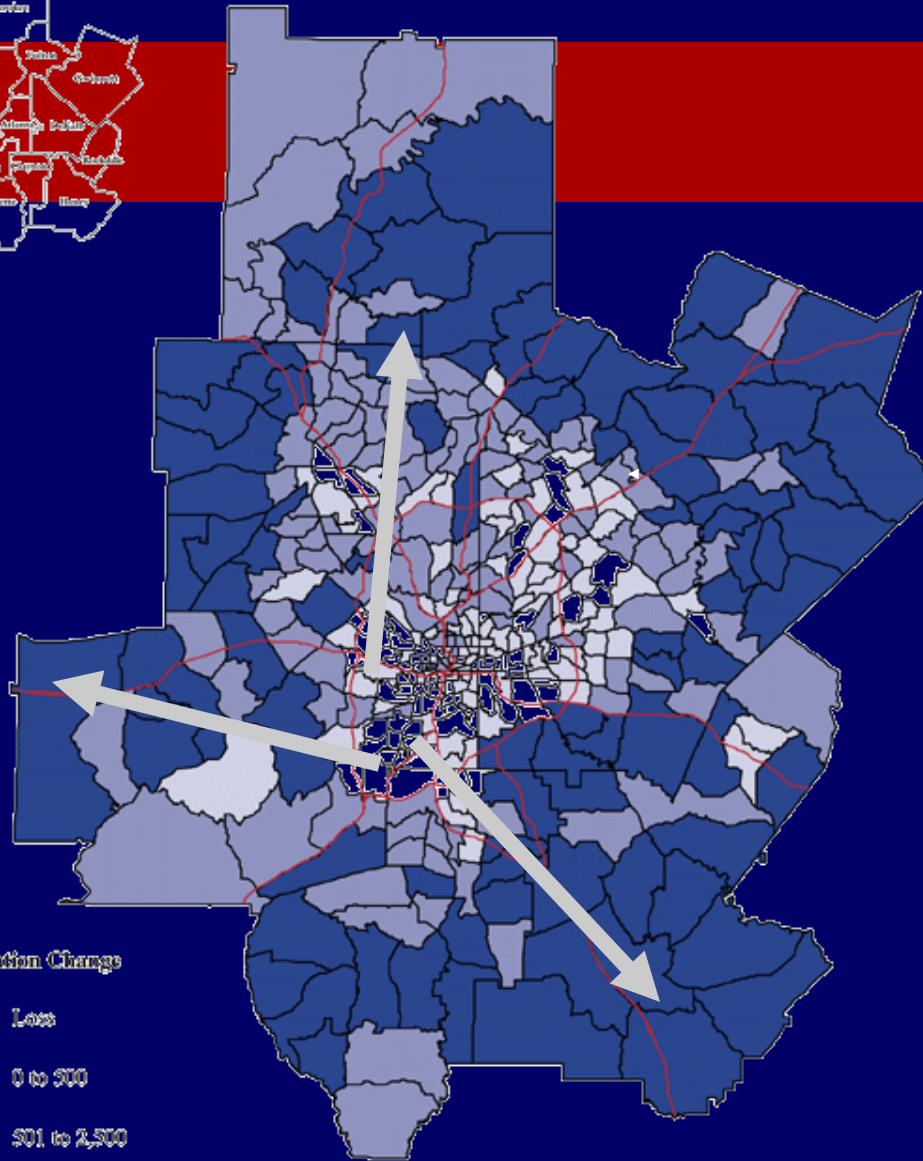
The counties around Atlanta have experienced phenomenal growth.

National urban policy groups have focused on the region and its problems. *

Even farmers have had their say. *



Population Change 1990-2000



Population Change



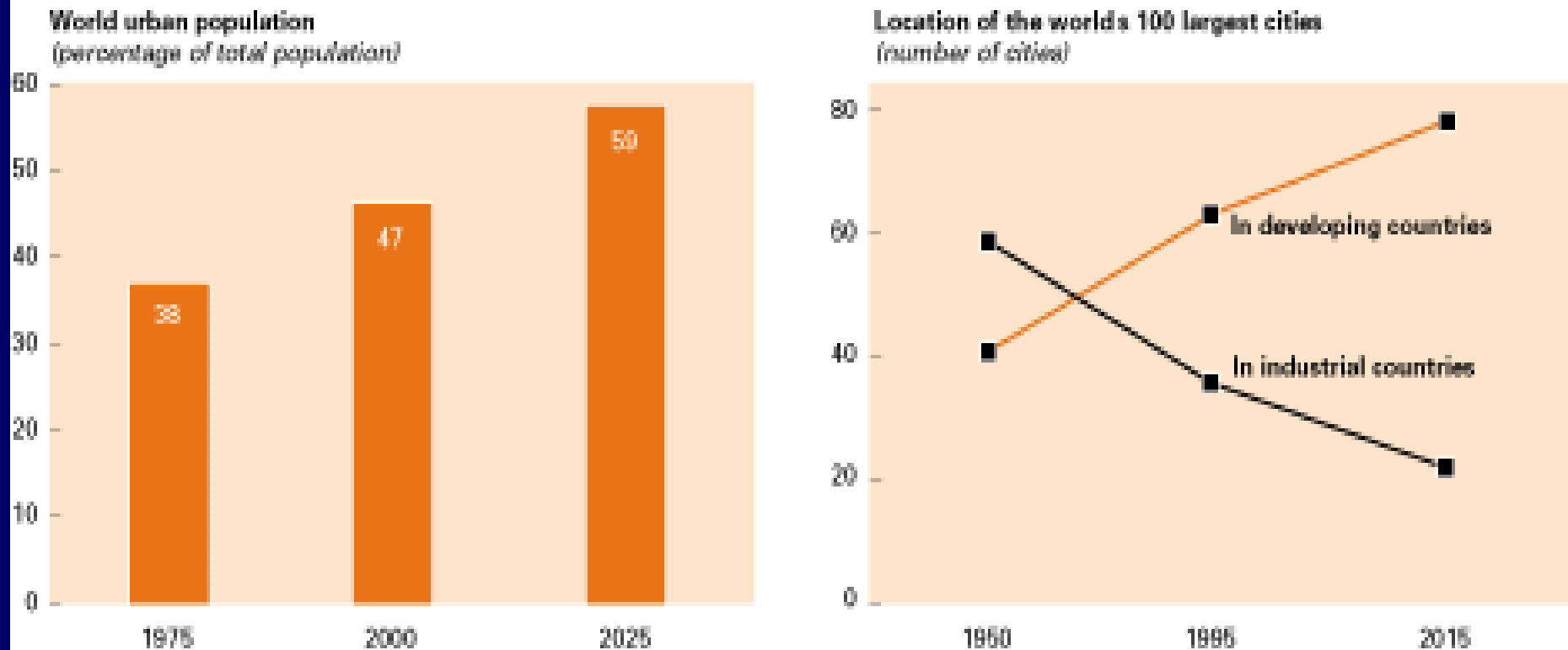
ARC

Atlanta has experienced “white flight,” as the more affluent leave the “core” and move to the sprawling “periphery.”

Problems, Issues and Perspectives

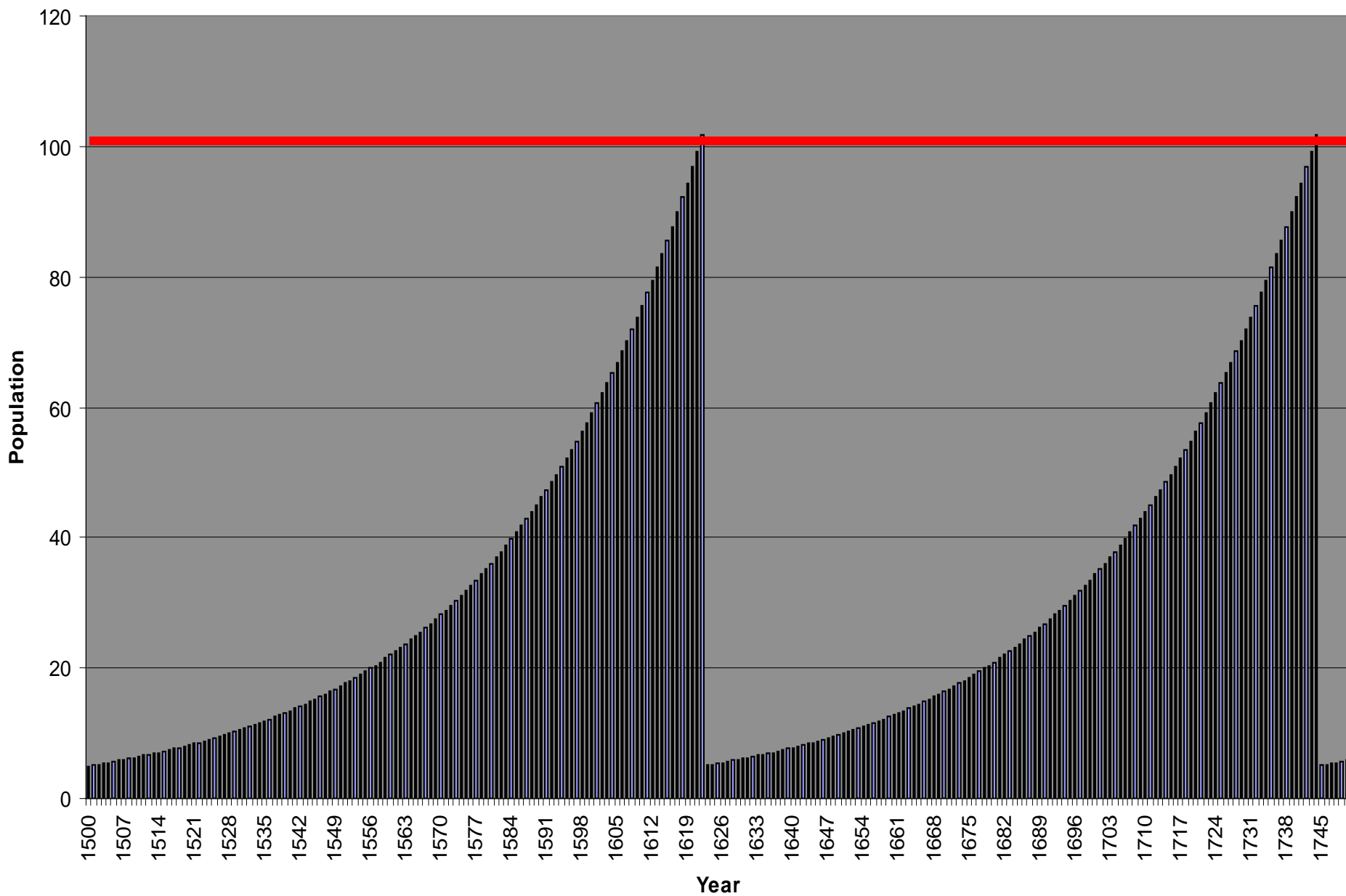
Figure 7

Urban population is growing—primarily in developing countries



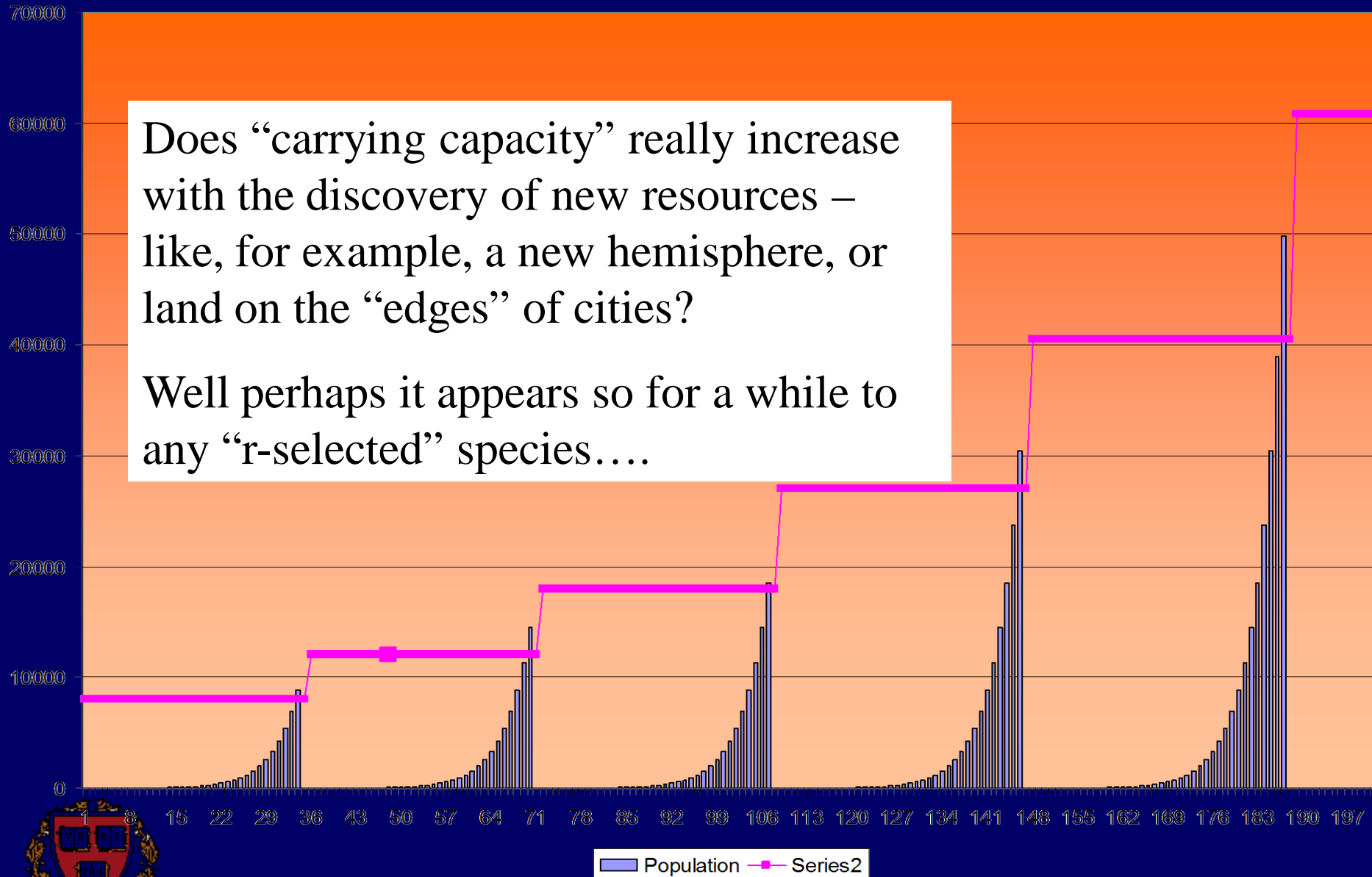
Source: United Nations Department of International Economics and Social Affairs, *World Urbanization Prospects*, 1998.

Growth of r-Selected Species



Does “carrying capacity” really increase with the discovery of new resources – like, for example, a new hemisphere, or land on the “edges” of cities?

Well perhaps it appears so for a while to any “r-selected” species....



Atlanta is not alone in America...

In fact, space science is now making available the technology that make careful urban comparisons possible. * *

Detroit also provides a classic case study of sprawl *and* its link to racism....

These two simultaneous aspects of sprawl need to be kept in clear focus:

1) the *expansion outward* from the city center to “new” and “virgin” housing tracts *

and 2) the *disinvestment in the city* center left behind. *

We are likely to see “The End of Suburbia” in the relatively near future...

Tim Weiskel - 27



The END of SUBURBIA

Oil Depletion and The Collapse
of The American Dream



*"We're literally stuck up a cul-de-sac
in a cement SUV without a fill-up"*

- James Howard Kunstler

Perhaps not the
end of the
world....

...but the end
of the world as
we know it.





And because of its “car culture,” America is “addicted” to oil.
Our leadership knows this...

[http://www.climate-talks.net/2008-
ENVRE130/Video/20080422-YouTube-Klare-Oil-Dep.htm](http://www.climate-talks.net/2008-ENVRE130/Video/20080422-YouTube-Klare-Oil-Dep.htm)



"Bill Moyers on Big Oil and Iraq." The Bill Moyers Journal, (27 June 2008).



A CRUDE AWAKENING

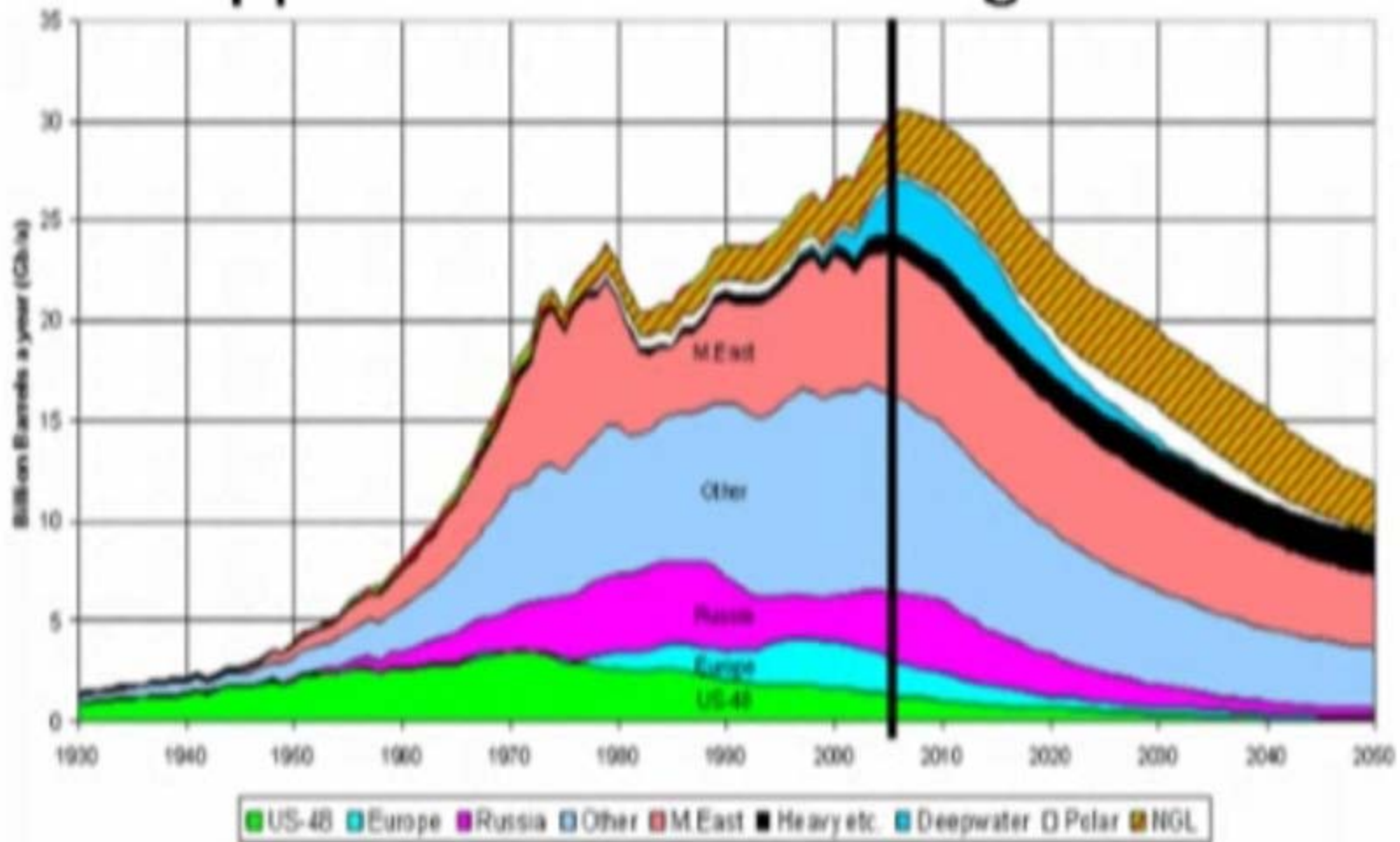
THE OIL CRASH



WE'RE RUNNING OUT,
AND WE DON'T HAVE A PLAN



The peak of world oil production appears to be occurring now.





Tim Weiskel - 33



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Hubbert peak theory

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For other uses, see [Hubbert peak theory \(disambiguation\)](#).

The **Hubbert peak theory** posits that for any given geographical area, from an individual oil field to the planet as a whole, the rate of petroleum production tends to follow a bell-shaped curve.

Choosing a particular curve determines a point of maximum production based on discovery rates, production rates and cumulative production. Early in the curve (pre-peak), the production rate increases due to the discovery rate and the addition of infrastructure. Late in the curve (post-peak), production declines due to resource depletion.

The Hubbert peak theory is based on the observation that the amount of oil under the ground in any region is finite, therefore the rate of discovery which initially increases quickly must reach a maximum and decline. Extraction roughly follows the discovery curve after a time lag (typically about 35 years ^{[1][2]}) for development. The theory is named after American geophysicist [Marion King Hubbert](#), who created a method of modeling the production curve given an assumed ultimate recovery volume. Hubbert's theory was initially greeted with skepticism by many in the oil industry, but has since gained widespread acceptance.

Peak oil

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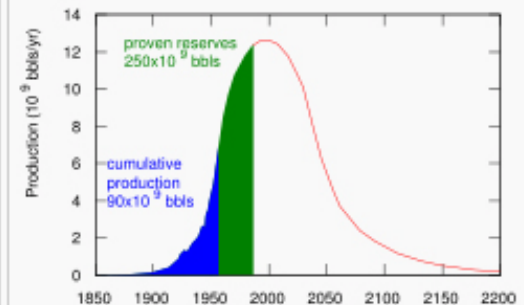
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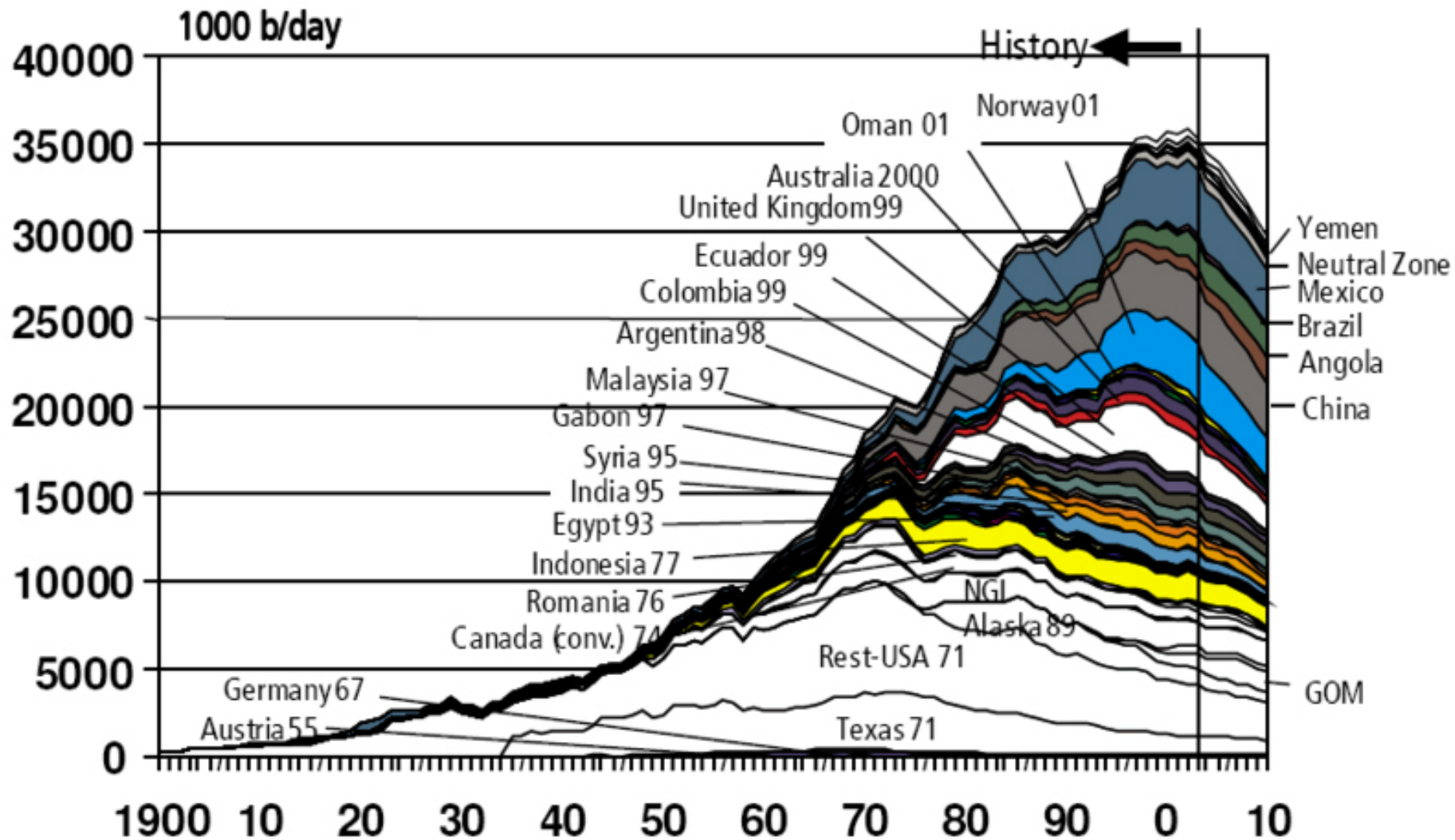


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- Hubbert's theory
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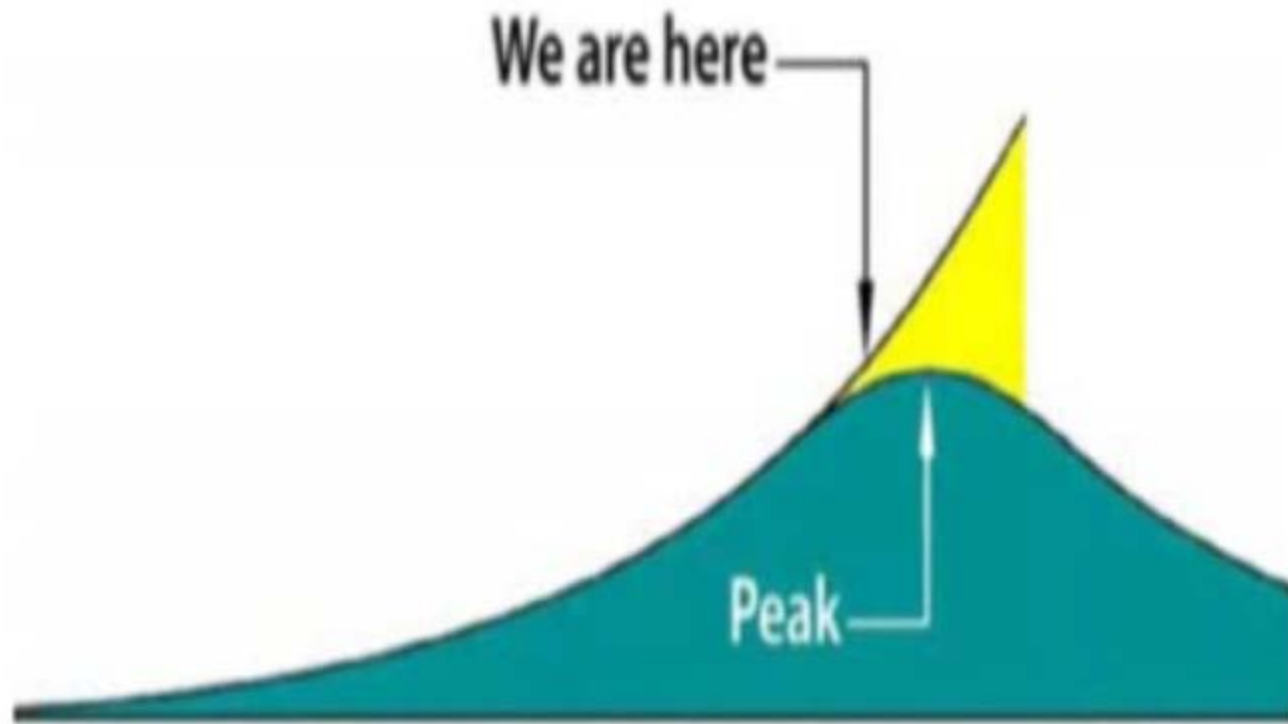




Source: Industry database, 2003 (IHS 2003)
 OGI, 9 Feb 2004 (Jan-Nov 2003)



Peak Oil is causing price increases.



Over all Colonial Worldview - Summary

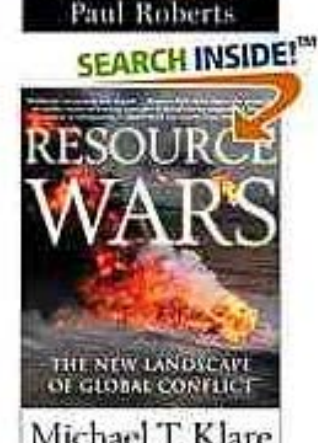
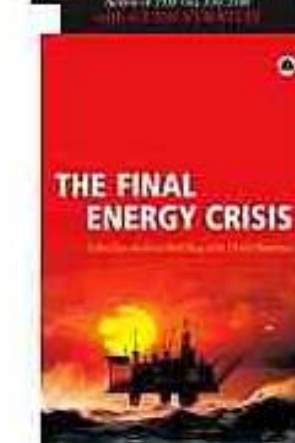
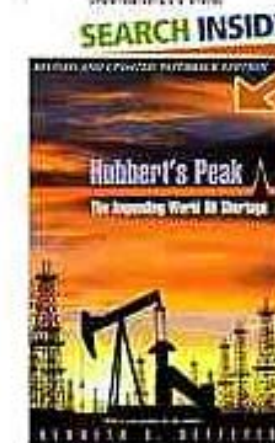
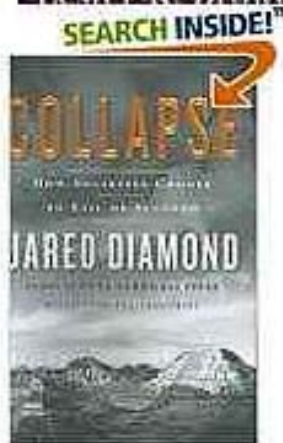
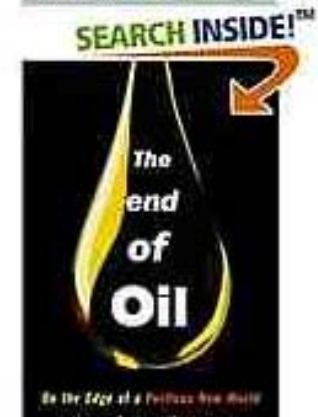
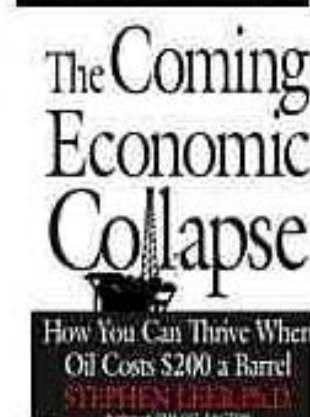
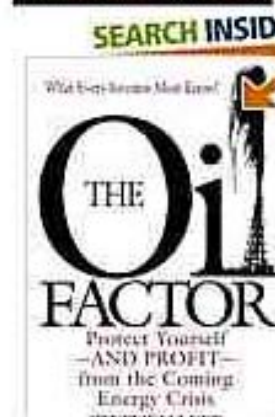
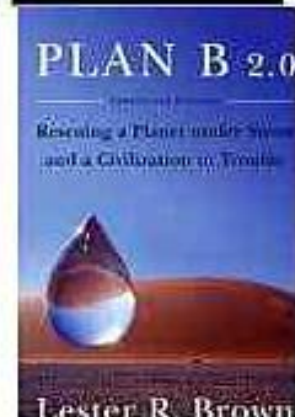
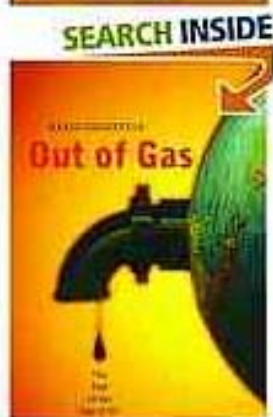
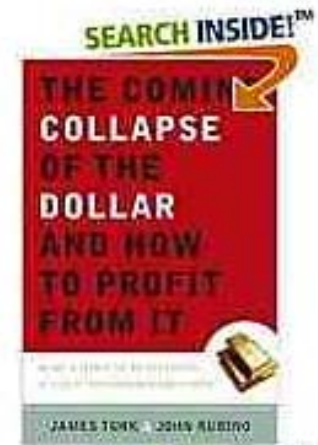
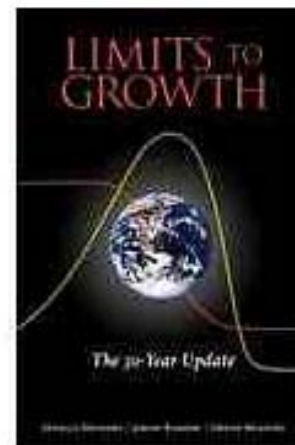
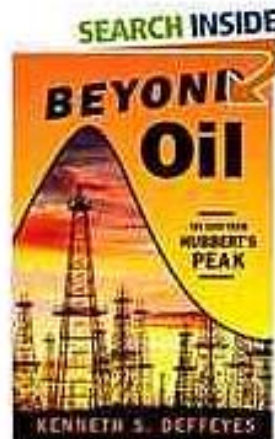
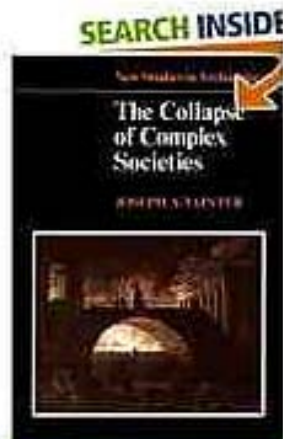
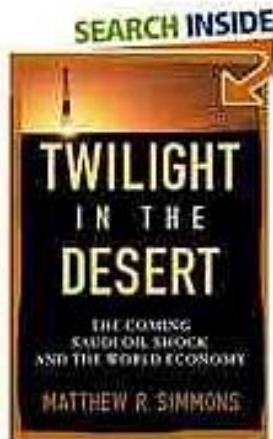
- All of these things → leads us to the growing illusion of increasing command and control over economy -- *and* therefore the ecosystem.

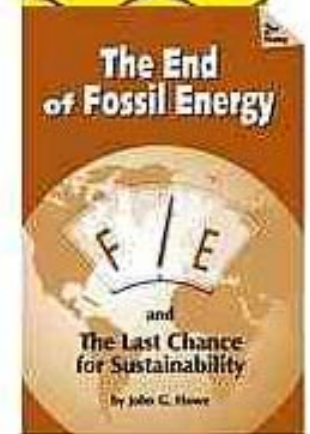
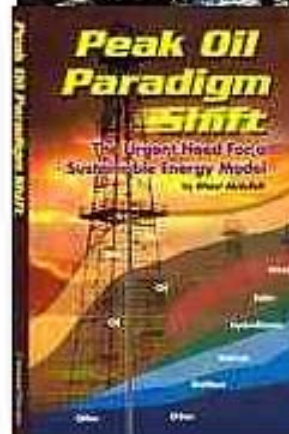
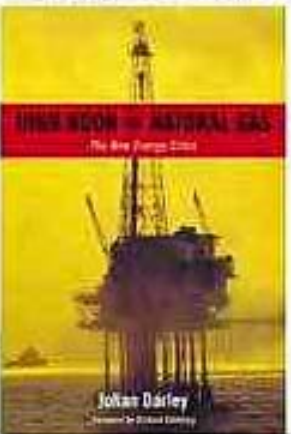
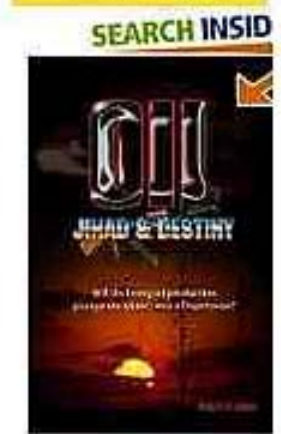
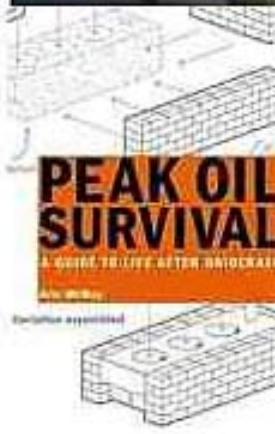
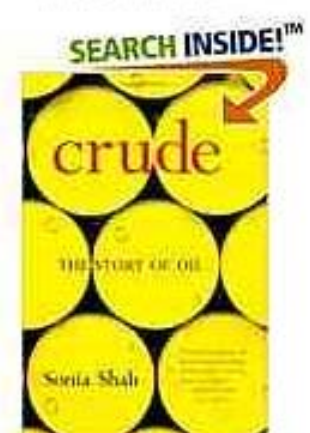
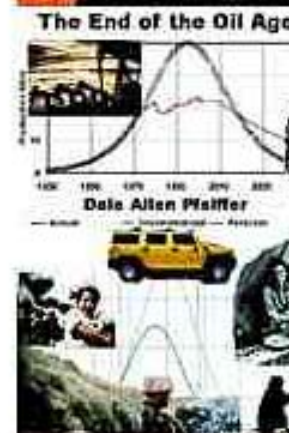
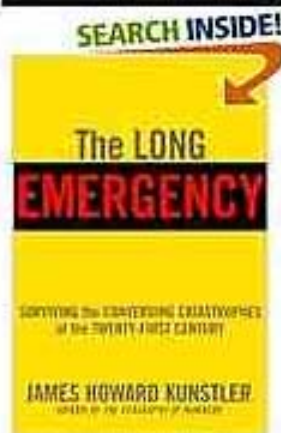
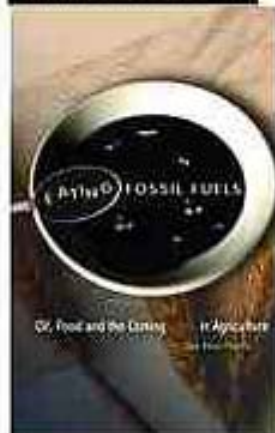
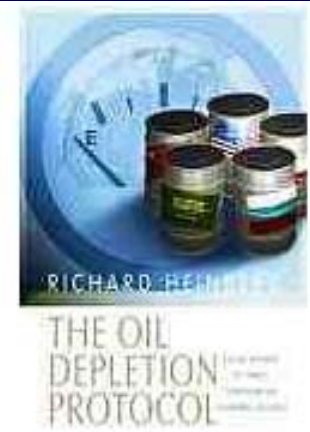
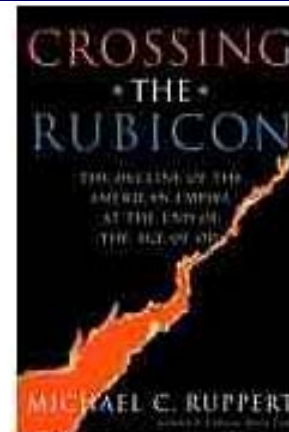
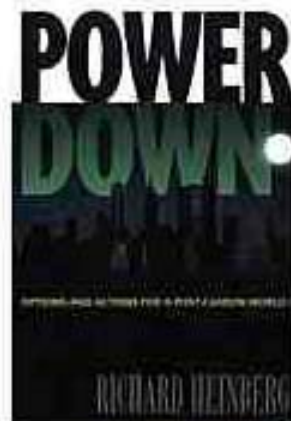
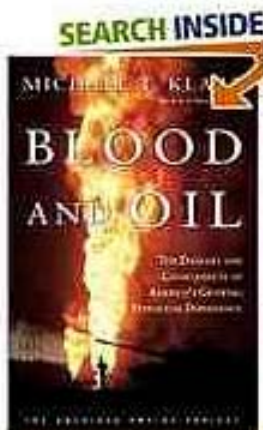
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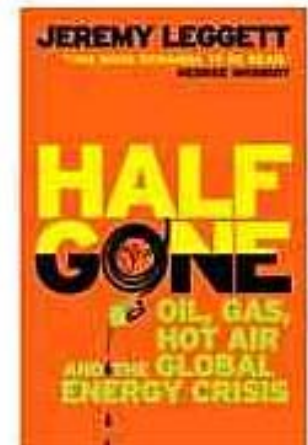
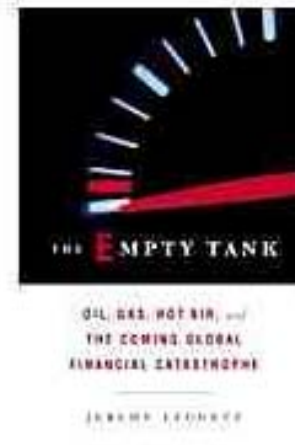
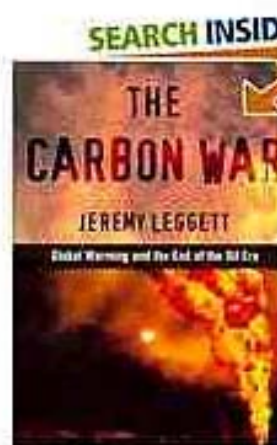
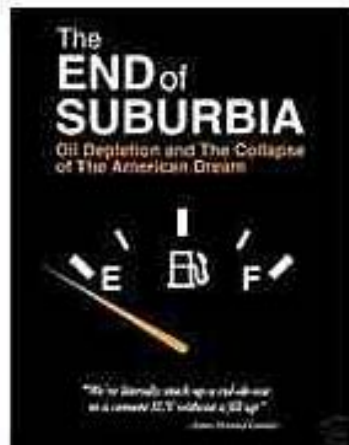
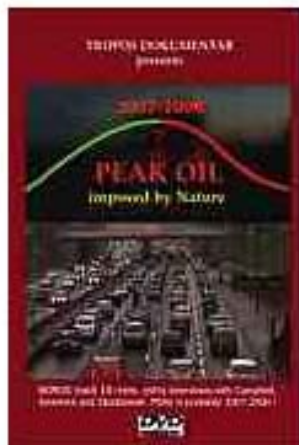
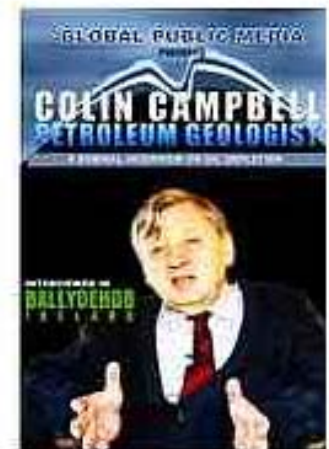
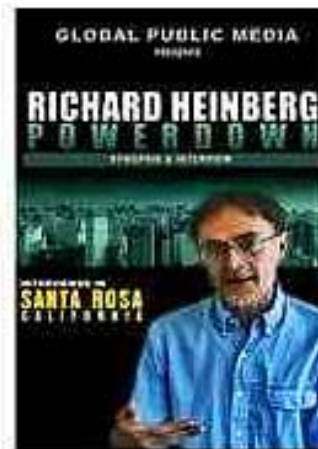
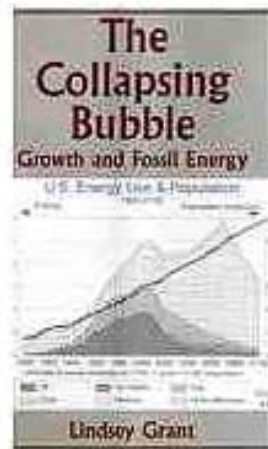
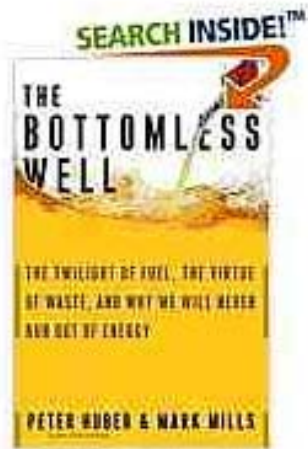
BUT we are often

“...most ignorant of what we are most assured.”









What people are warning us?

- M. King Hubbert
- Colin Campbell
- Ken Deffeyes
- Matt Simmons
- Richard Heinburg
- Michael Ruppert
- Julian Darley
- Roscoe Bartlett
- Vern Ehlers
- Ben Bernanke
- Alan Greenspan
- Bill Clinton
- Al Gore
- George Bush
- Robert Hirsch
- Many, many, many more



TIMOTHY C. WEISKEL

Rubbish and Racism: Problems of Boundary in an Ecosystem

We had fed the heart on fantasies;
The heart's grown brutal from the fare.

W. B. Yeats, *Meditations in Time of Civil War*

In an age of mounting racial tensions and in the presence of an impending environmental crisis, it may seem irresponsible for anthropologists to fly off to remote corners of the world and continue their studies of people who, even if they do survive, will have no effect upon the world's major problems. As research money becomes scarce, government agencies and foundations appear to agree that such field work is a luxury they can ill afford. Anthropologists, of course, have always maintained that their research has been intimately bound up with the total human condition, and if their peoples have been remote and their theories esoteric, this has been so only in order to offer a fresh approach to the problems we all face daily. If anthropologists have been right, then they should have something to offer concerning two of the major crises which



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Perhaps even more important, the history of this expansion has led Western cultures and the westernized elites in Third World countries to believe in the illusion of unlimited growth. The industrial revolution and discovery of fossil energy sources further sustained the belief in infinite growth. Having expanded upon the things of nature, modern mankind has come to believe that expansion is in the nature of things. This is not so, of course, but we are only now just beginning to discover that this cherished belief is a potentially fatal illusion.



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"While Angels Weep..." Doing Theology on a Small Planet

[Timothy C. Weiskel](#)

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From *The Harvard Divinity Bulletin*, XIX, 3 (1989).

"....But man, proud man,
Drest in a little brief authority,
Most ignorant of what he's most assur'd,
His glassy essence, like an angry ape,
Plays such fantastic tricks before high heaven,
As make the angels weep...."

Shakespeare



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Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist.

Kenneth Boulding, economist



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*“...Drest in a little brief authority,
Most ignorant of what he’s most assur’d”*



*“...Drest in a little brief authority,
Most ignorant of what he’s most assur’d”*



Daniel Yergin

AUTHOR ~ COMMANDING HEIGHTS

YouTube



The Global Idea
excerpt from "Commanding Heights - PBS video,"
YouTube - ilovedocumentary2, (18 June 2009).
[Dan Yergin.....5:35 min.]

Commanding Heights - excerpt

Tim Weiskel - 53



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*“...Drest in a little brief authority,
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*“...Drest in a little brief authority,
Most ignorant of what he’s most assur’d”*



*“...she tried to sound the
warning....Nobody listened.”*

FRONTLINE

• • • Introduction

THE WARNING

In the midst of the 1990s bull market, one lone regulator warned about derivatives' dangers -- and overnight became the enemy of some of the most powerful people in Washington...





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*“...Drest in a little brief authority,
Most ignorant of what he’s most assur’d”*



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*“...Drest in a little brief authority,
Most ignorant of what he’s most assur’d”*



FRONTLINE

“...he was the enforcer...”

Equation for Understanding the Dynamic of Exponential Growth

You can use this formula to calculate any phenomena at time “B” with initial input of “A” at an earlier point which is known to grow at an fixed rate “y” over a known period “n.”

$$B = A \cdot y^n$$

High-school algebra is sufficient here -- no need for rocket science.



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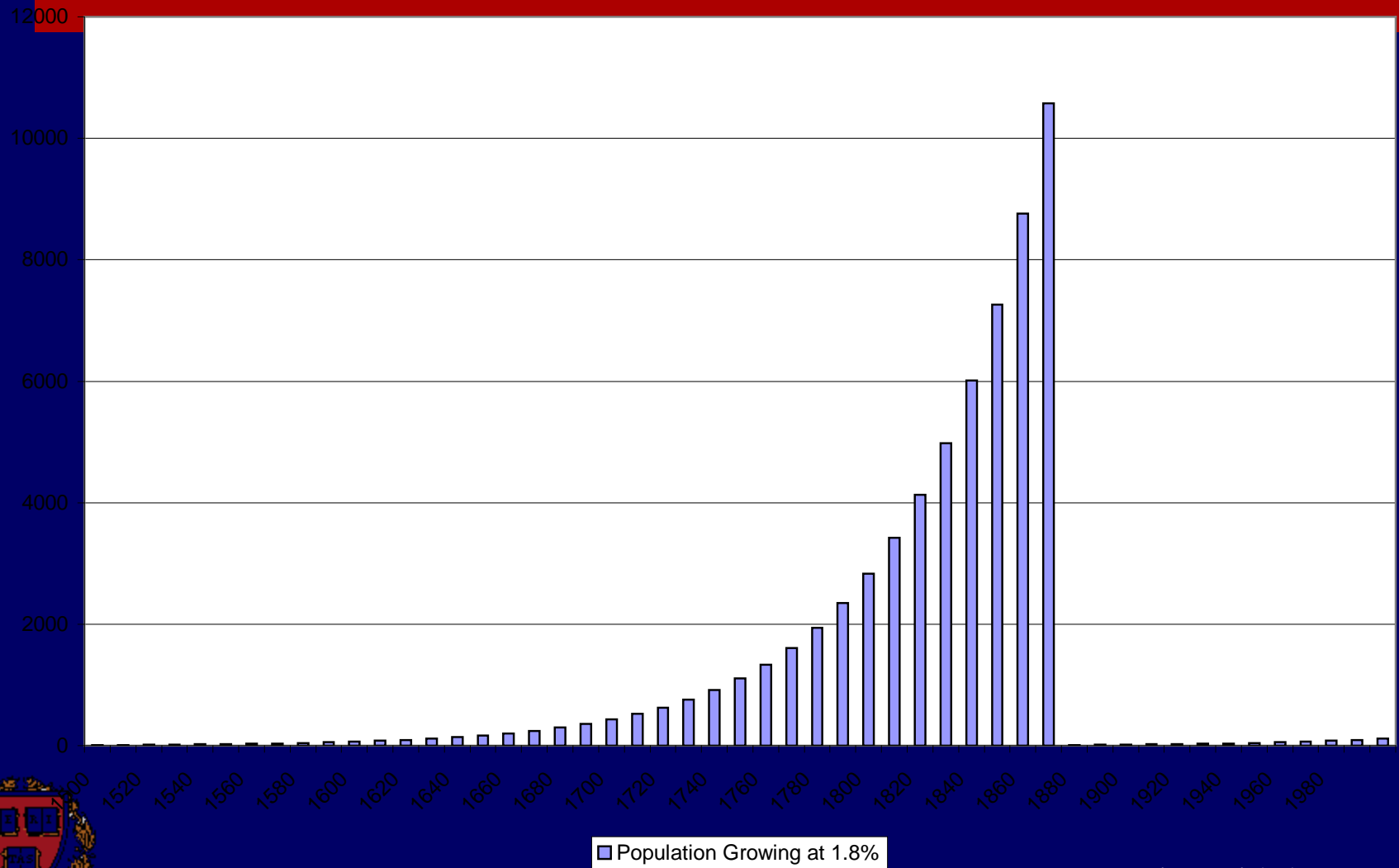
...this cannot go on indefinitely.

$$B = A \cdot y^n$$

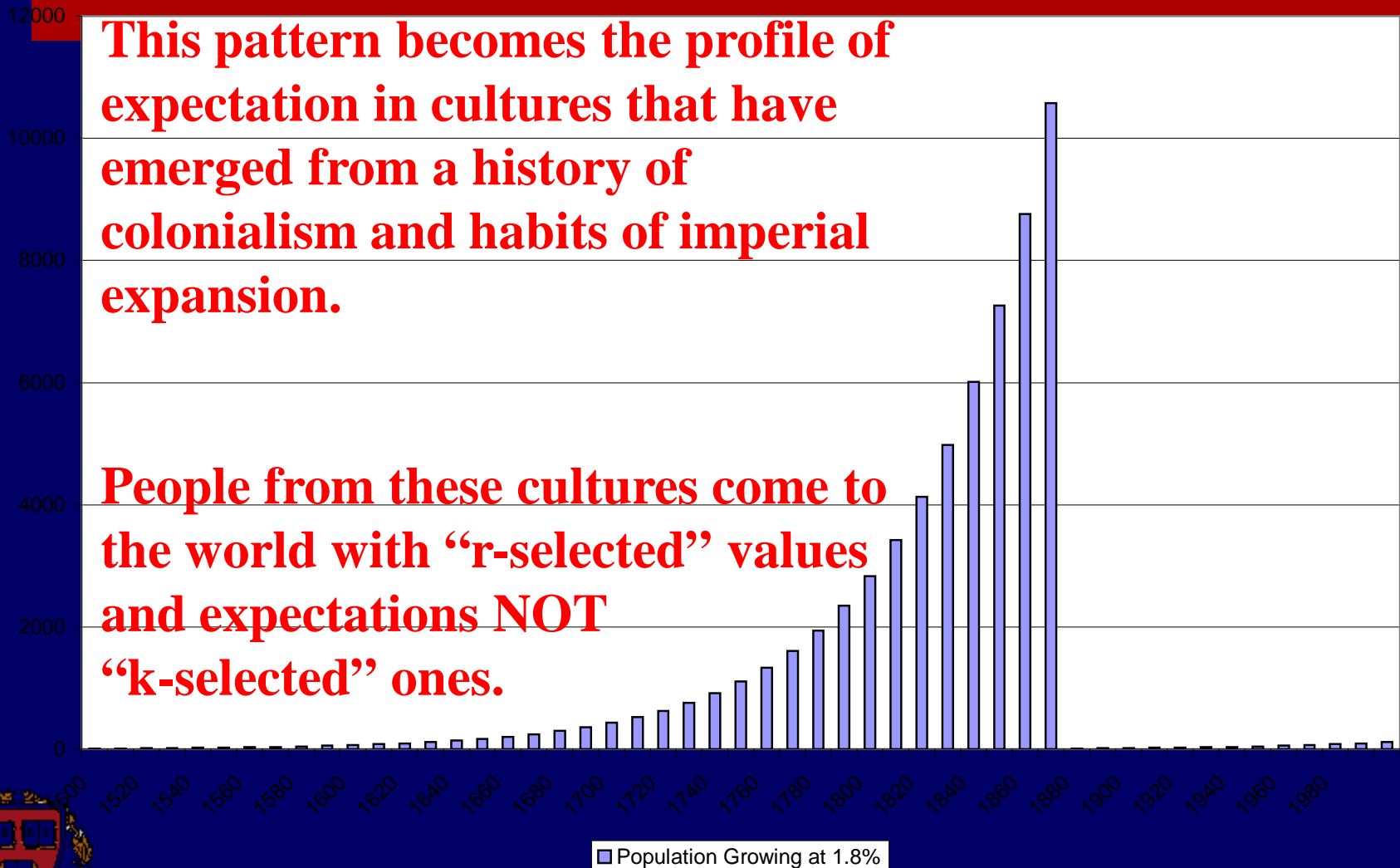
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Population Growing at 1.8%

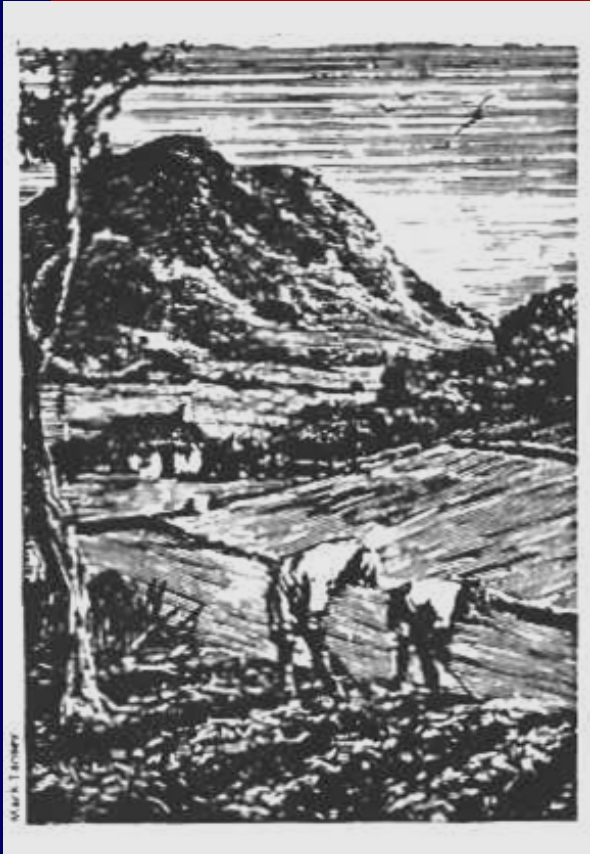


Population Growing at 1.8%



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Our evolving relationship to the land manifests our underlying colonial and imperial worldview.



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Our evolving relationship to the land manifests our underlying colonial and imperial worldview.



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Indeed, all of our sprawl culture with its economy based on Wal-Marts, and global resource extraction depends on carbon fuels.

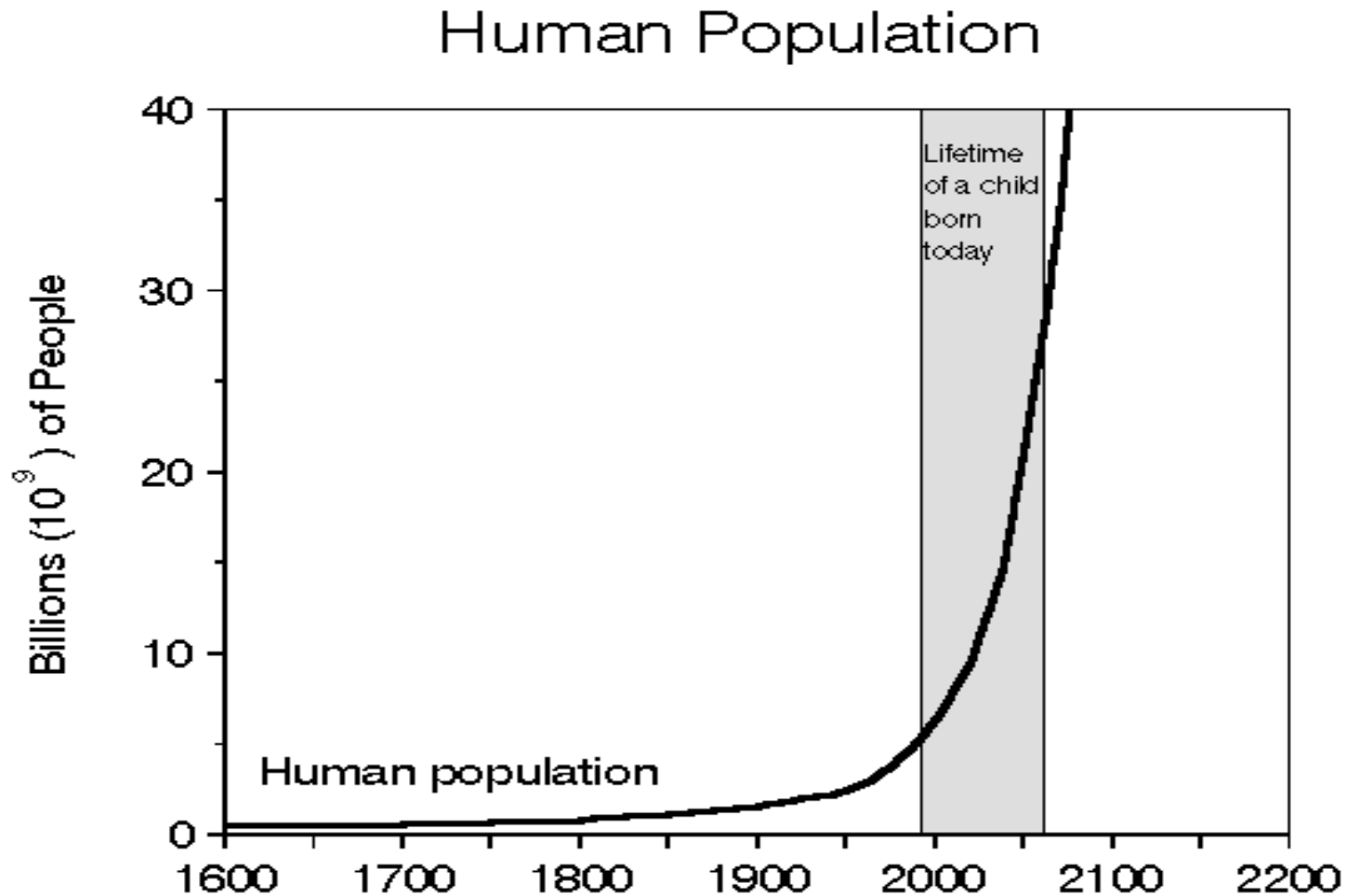


Consider the rise in the importance of oil in the American food system....



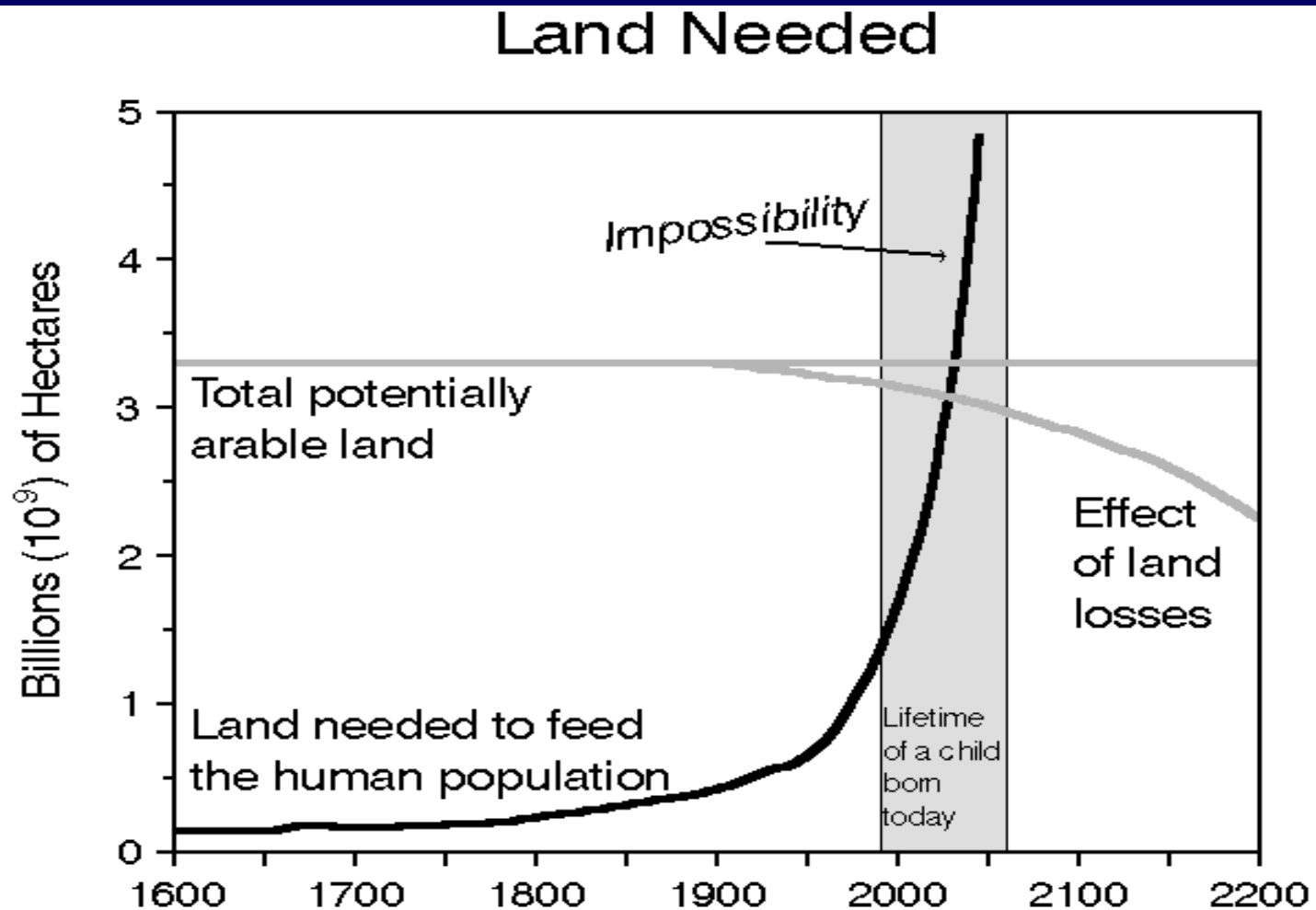
But How Much is Enough in an Ecosystem ..?

(the nature and pace of changes immediately ahead -1)



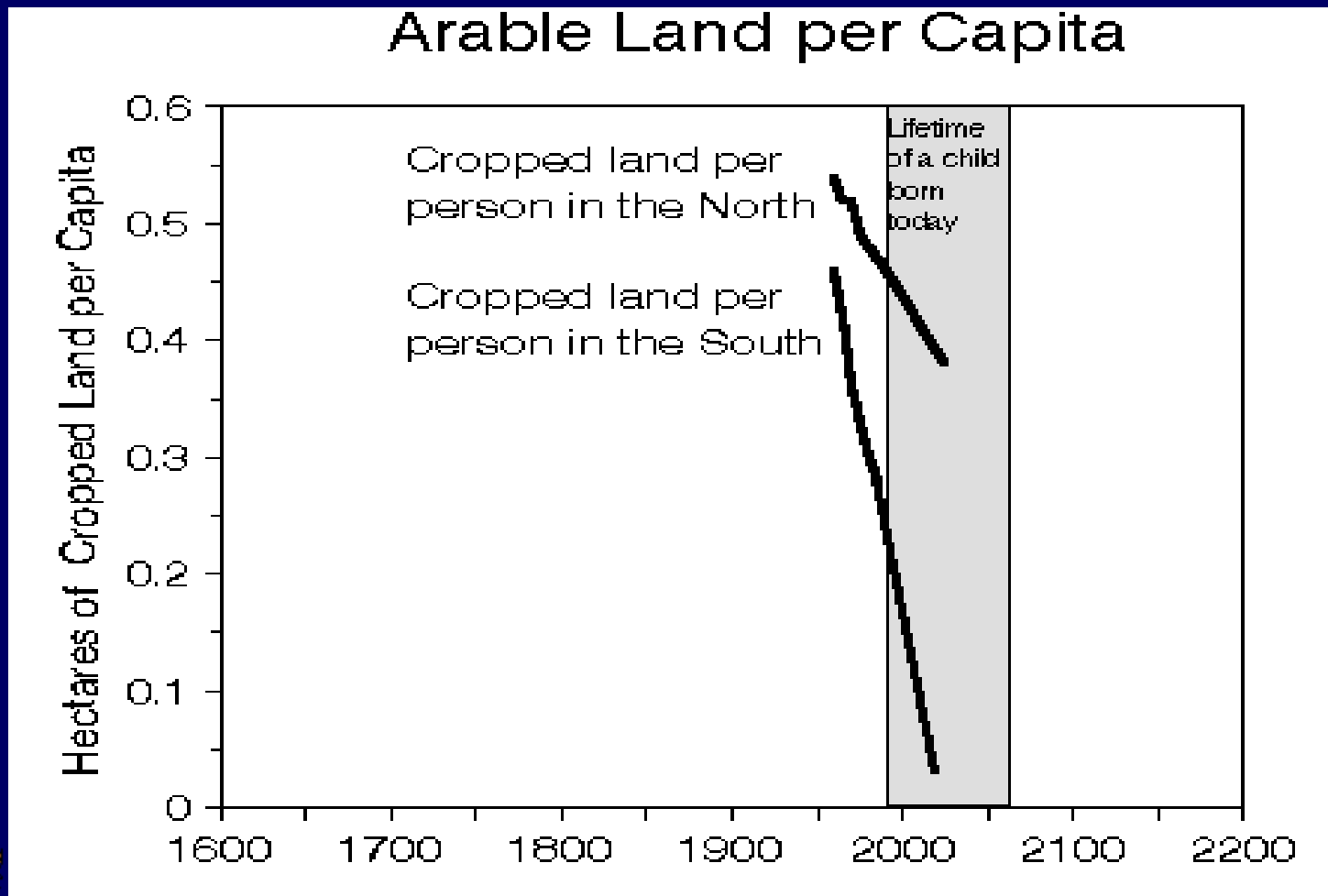
But How Much is Enough in an Ecosystem?

(the nature and pace of changes immediately ahead -2)



But How Much is Enough in an Ecosystem....?

(the nature and pace of changes immediately ahead -3)





"I Was Wrong! Alan Greenspan," [YouTube](#), (23 October 2008).

Environmental Ethics and Land Management

ENVR E-120

<http://courses.dce.harvard.edu/~envre120>

Agriculture, Land Management, and the Emerging Water Crisis

Timothy C. Weiskel

Session 8
20 October 2009

Harvard University Extension School
Fall Semester 2009

