

# Beacon Hill Seminars – 2016

## “Earth’s Changing Climate: What is Causing It? What Will It Mean for You?”

### Session 4 – Climate Change, Agriculture and The “Food Problem”



**Timothy C. Weiskel**

**27 October 2016**

**Transition-Studies**

**Fall Semester 2016**



Climate change and sea-level rise will affect many cities like Boston...



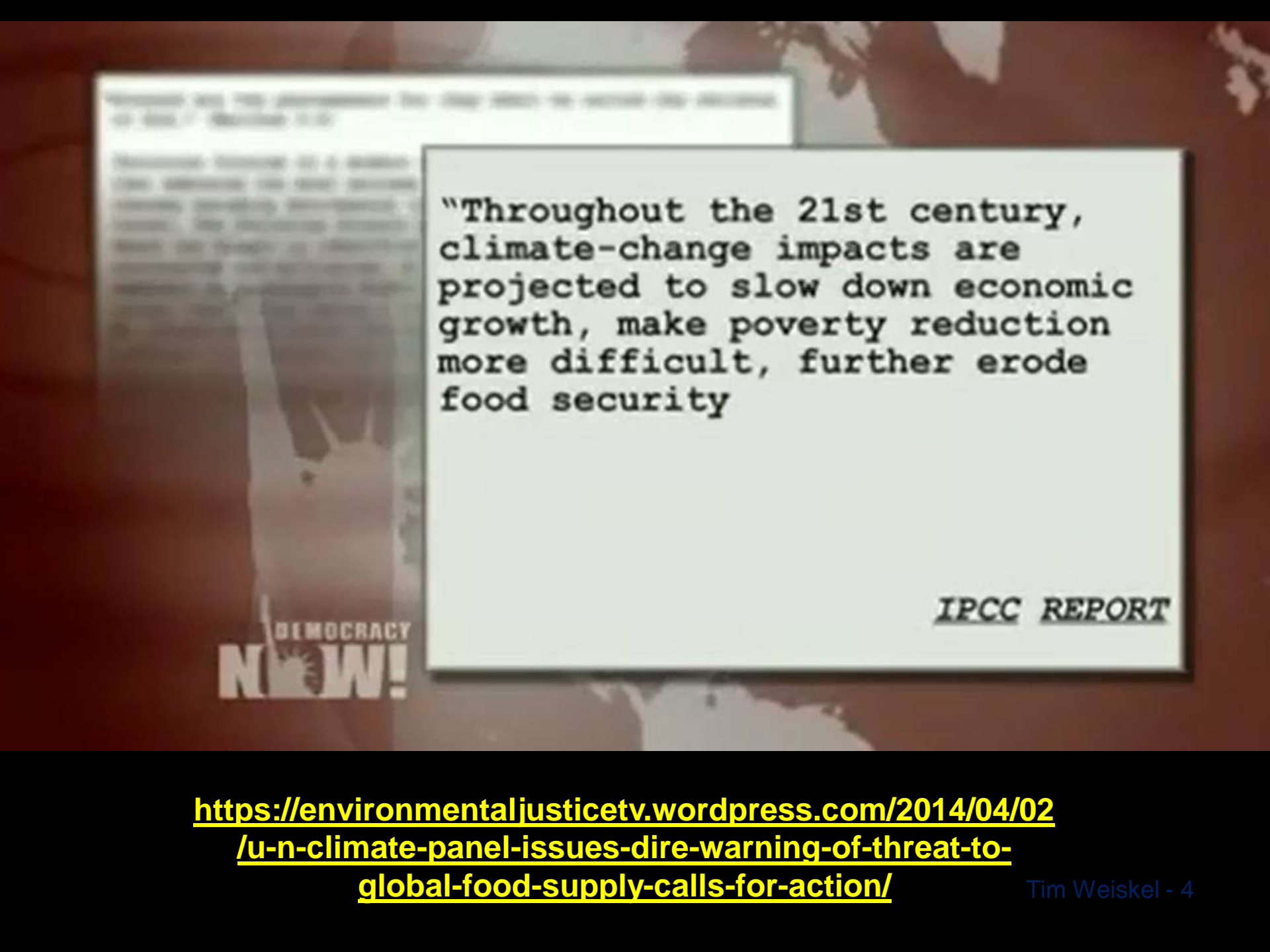
Re-Viewing Boston by the Sea



... But beyond the *post-Columbian* cities like Boston what about the other dimensions of the sea level problem...?.







"Throughout the 21st century, climate-change impacts are projected to slow down economic growth, make poverty reduction more difficult, further erode food security

*IPCC REPORT*

DEMOCRACY  
**NOW!**

<https://environmentaljusticetv.wordpress.com/2014/04/02/u-n-climate-panel-issues-dire-warning-of-threat-to-global-food-supply-calls-for-action/>

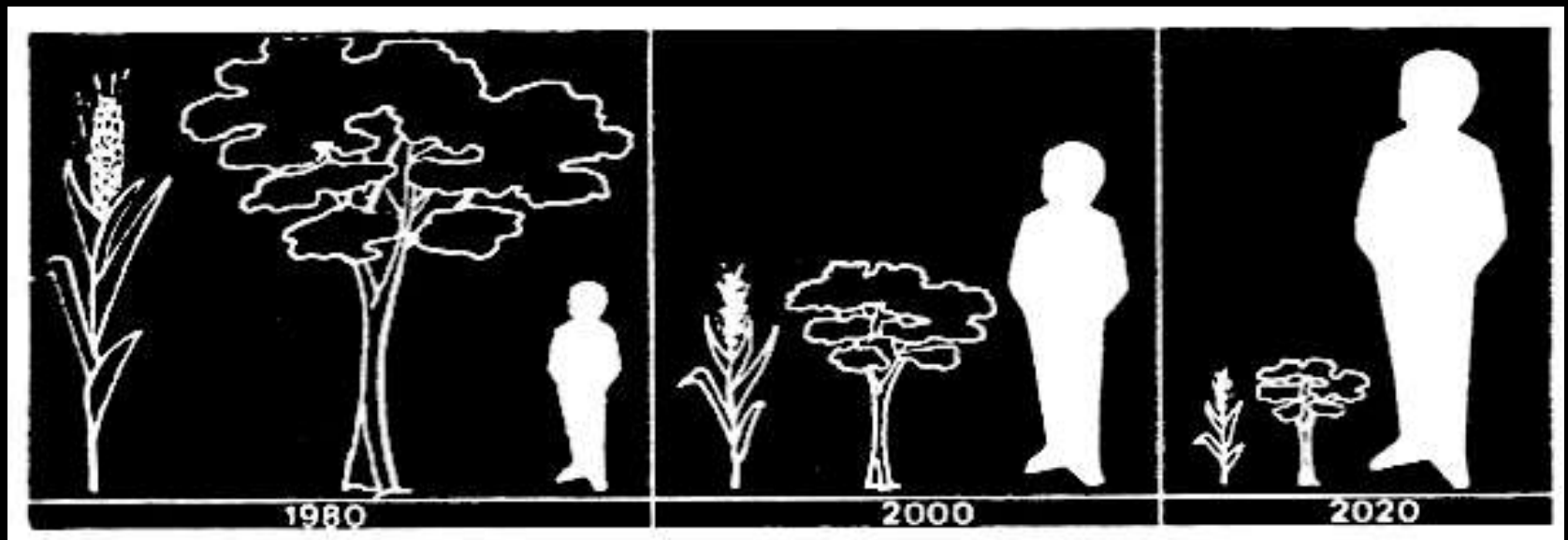
Tim Weiskel - 4



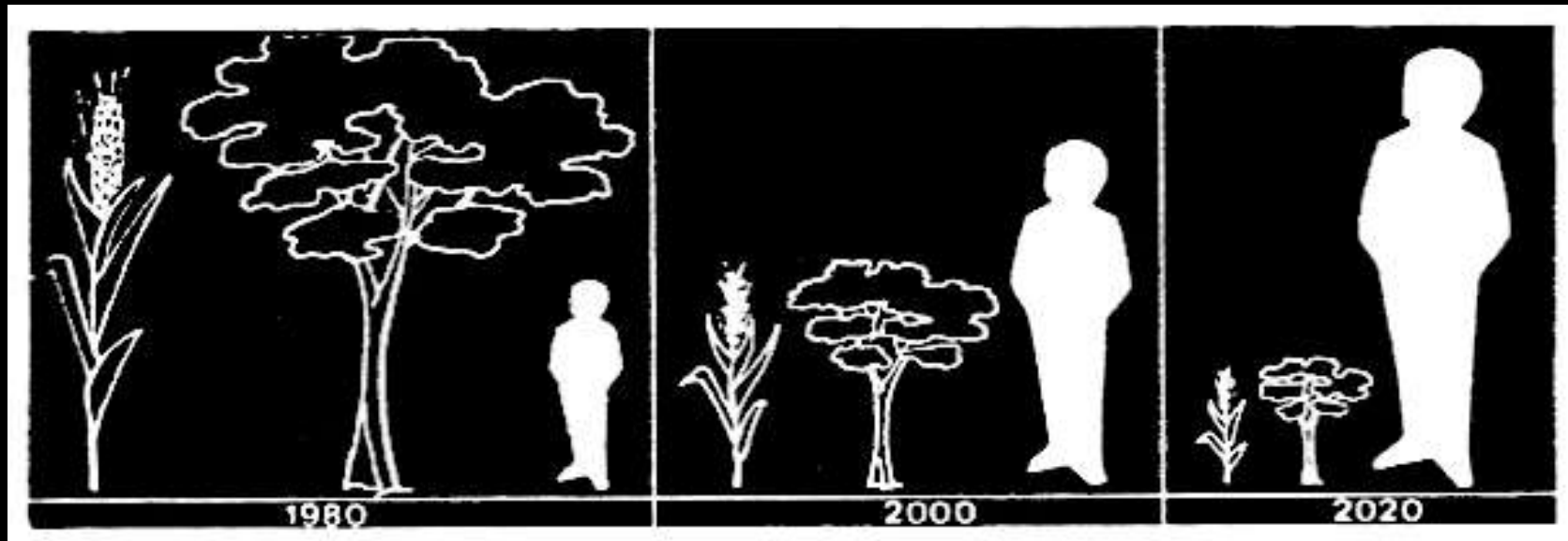


<https://environmentaljustice.wordpress.com/2012/08/16/people-and-planet-speech-only/>





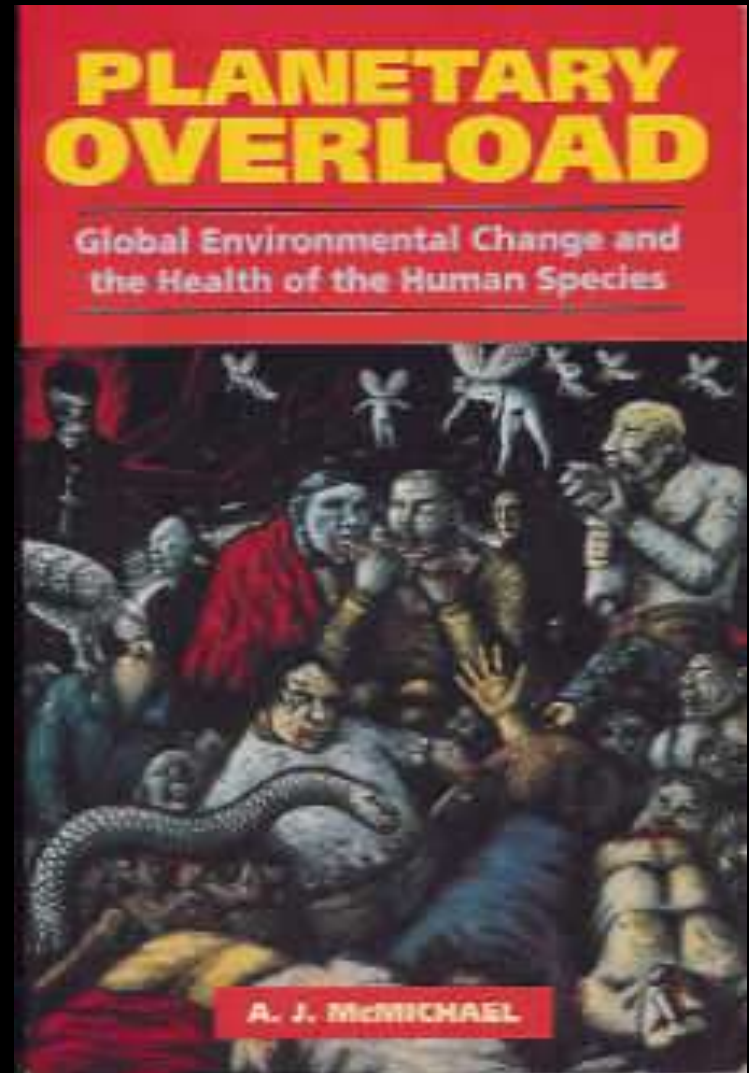




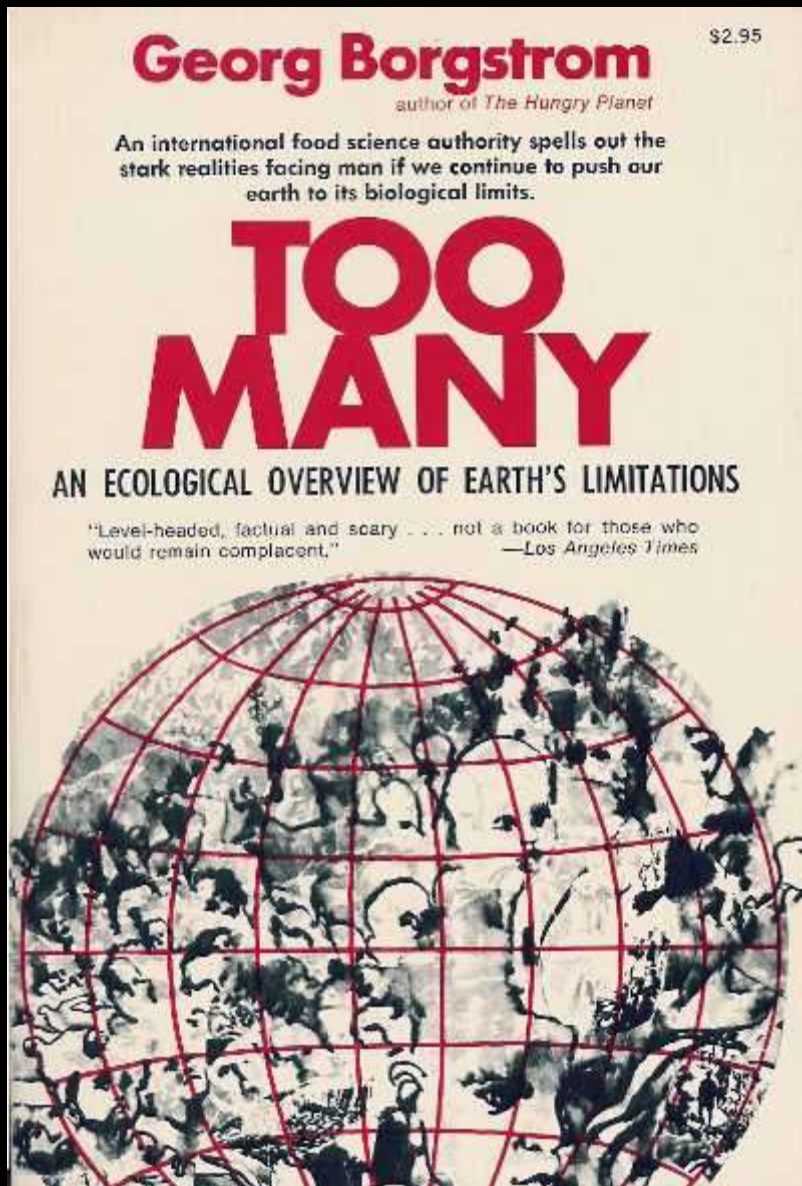
Remember, ... the trophic structure of the ecosystem is crucially important. Therefore, in an ecosystem ***ratios really matter.***



We can begin to ask about “overload” questions, but answering these questions will inevitably raise further (perhaps embarrassing or revealing) questions about ratios.

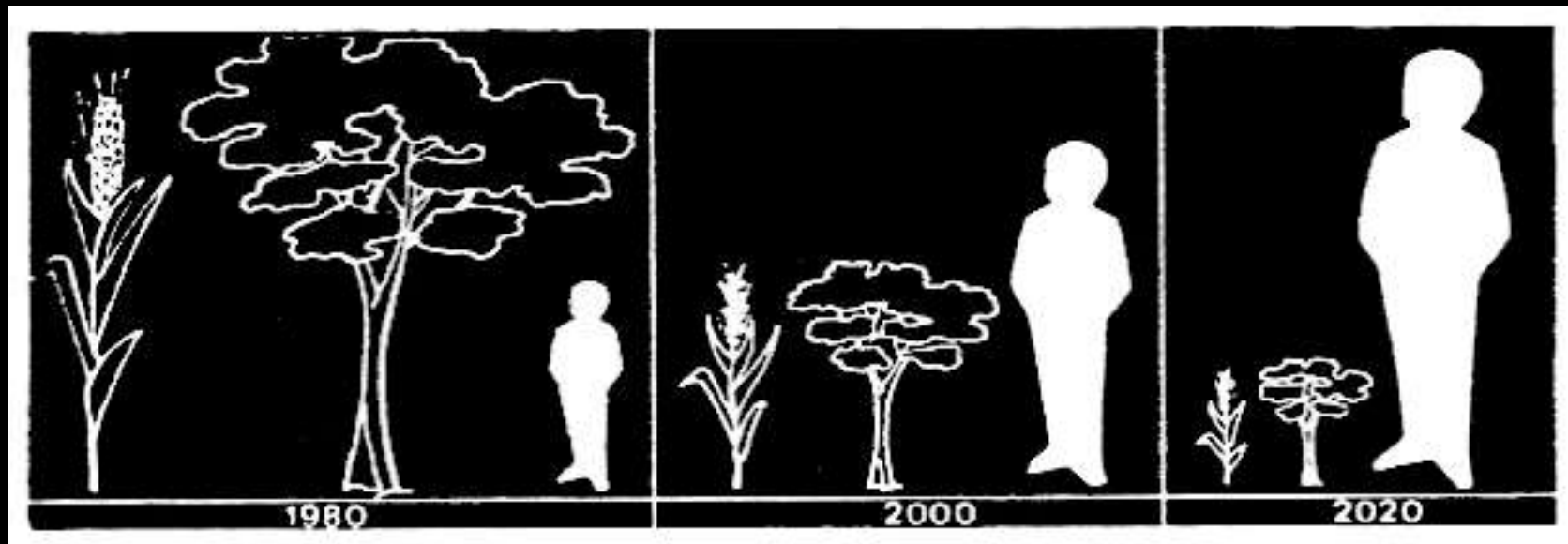






Some have  
already argued  
that there are  
too many  
humans  
currently alive  
and about to  
live for the  
planet to  
sustain them.





Part of the problem comes from transforming the ratios between the “wild” species (forest tree), the “cultivated species” (stalk of wheat) and ourselves.

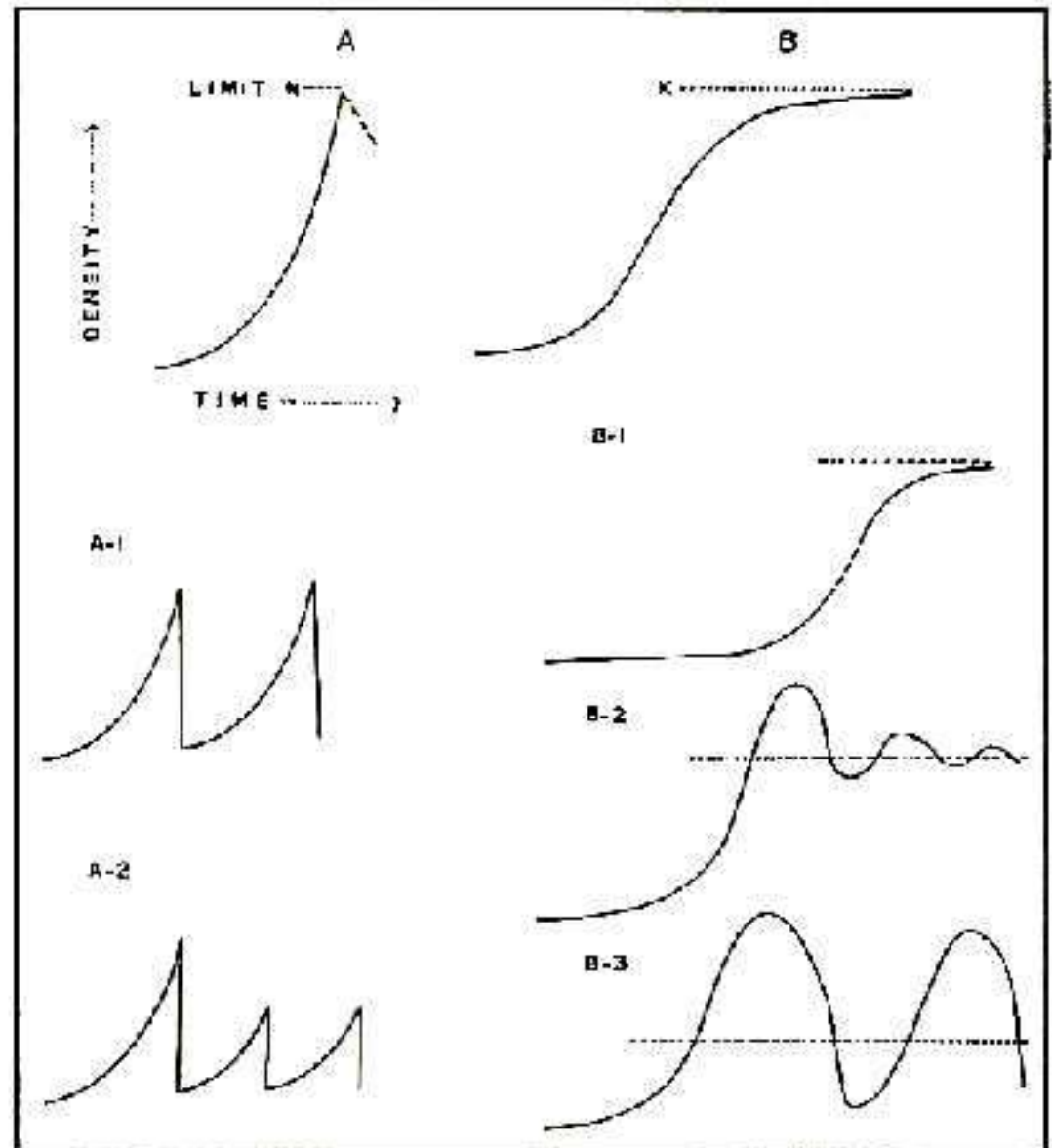
**This 1995 UN Ecosystem Assessment Report is the largest and loudest warning signal from the environmental scientists ever.**



[ Remember the patterns of population dynamics in biological species.]

In fact, r-selected species repeat a depressingly predictable pattern of growth in ecosystems.

*What does it mean to applaud this pattern?*





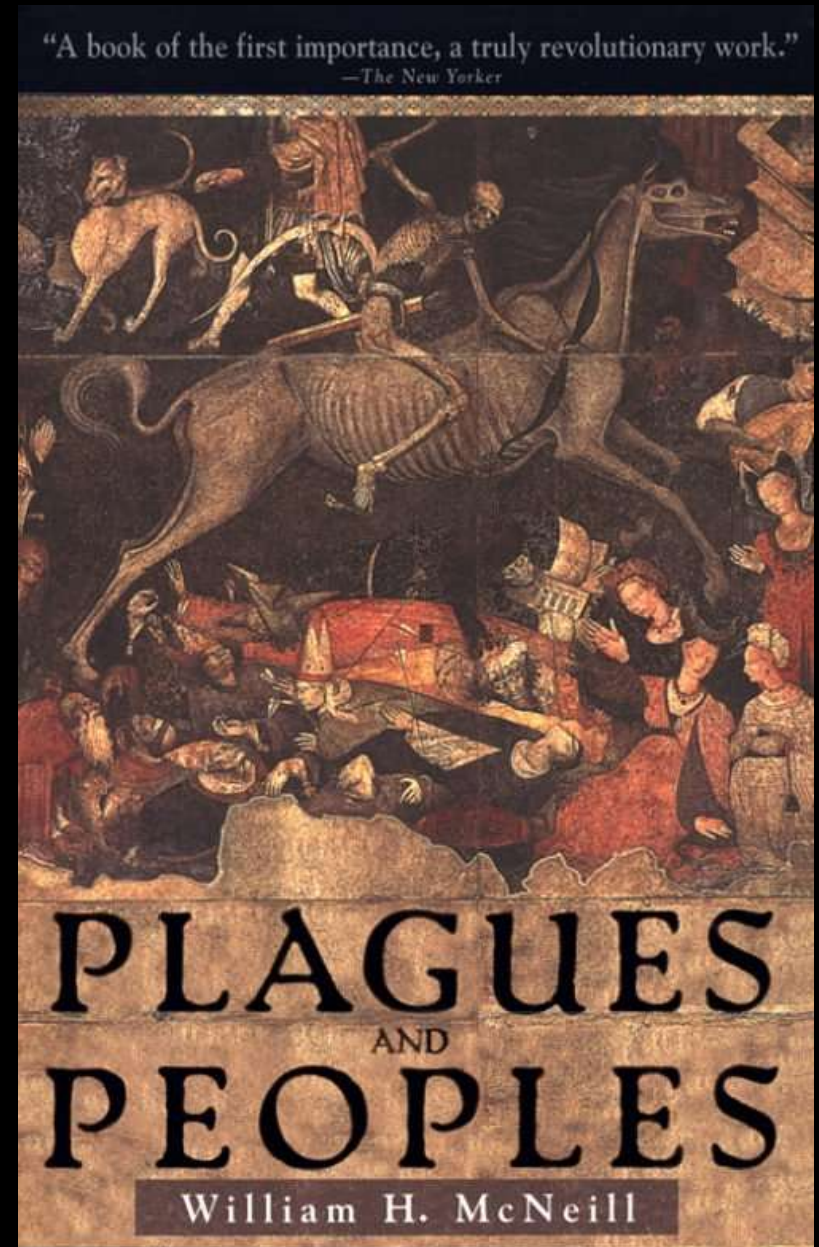
# Let's begin by looking at radical imbalances of the past...

“Skill and knowledge, though they have profoundly transformed ordinary encounters with disease for most of humankind, have not and in the nature of things never can extricate humanity from its age-old position....

Birth control may in time catch up with death control. Something like a stable balance between human numbers and resources may then begin to define itself.”

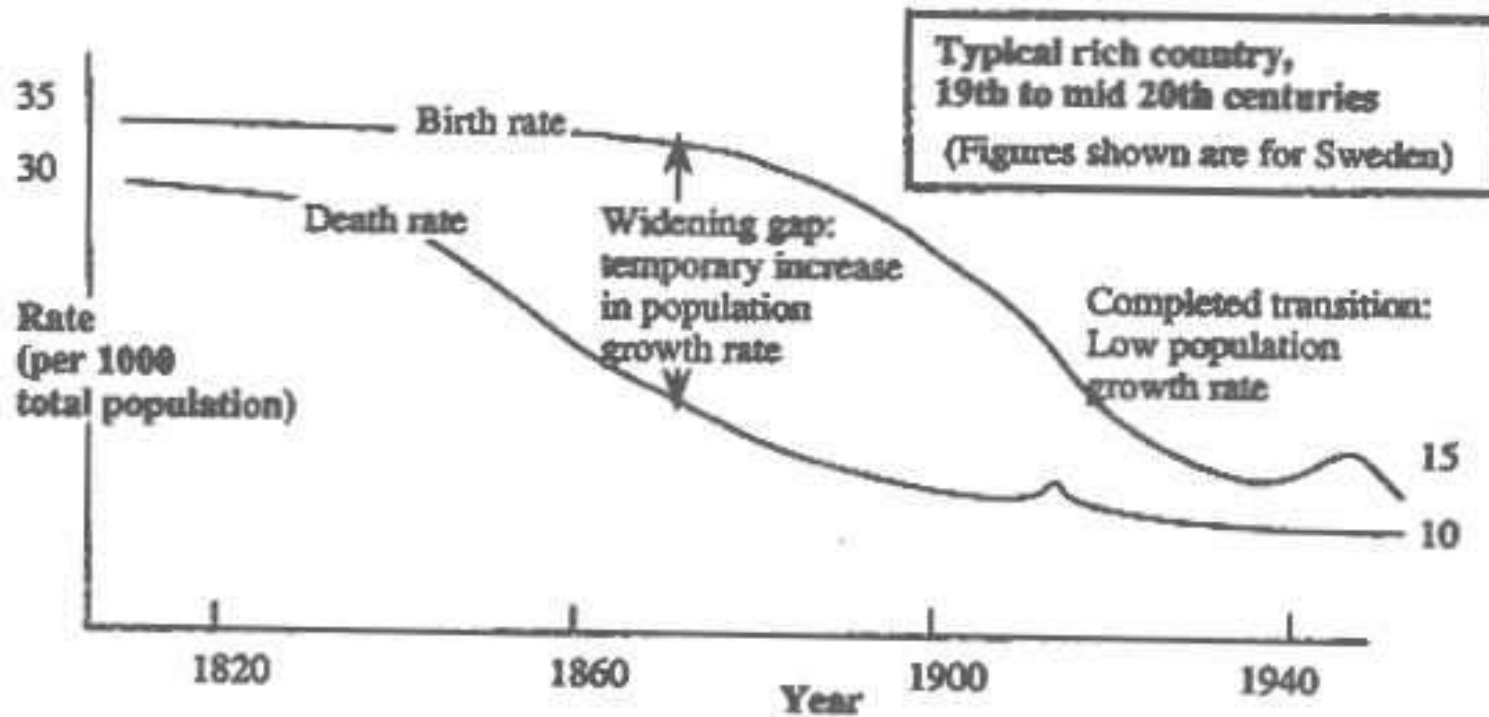
Wm. McNeill

*But we are no where near this yet.*



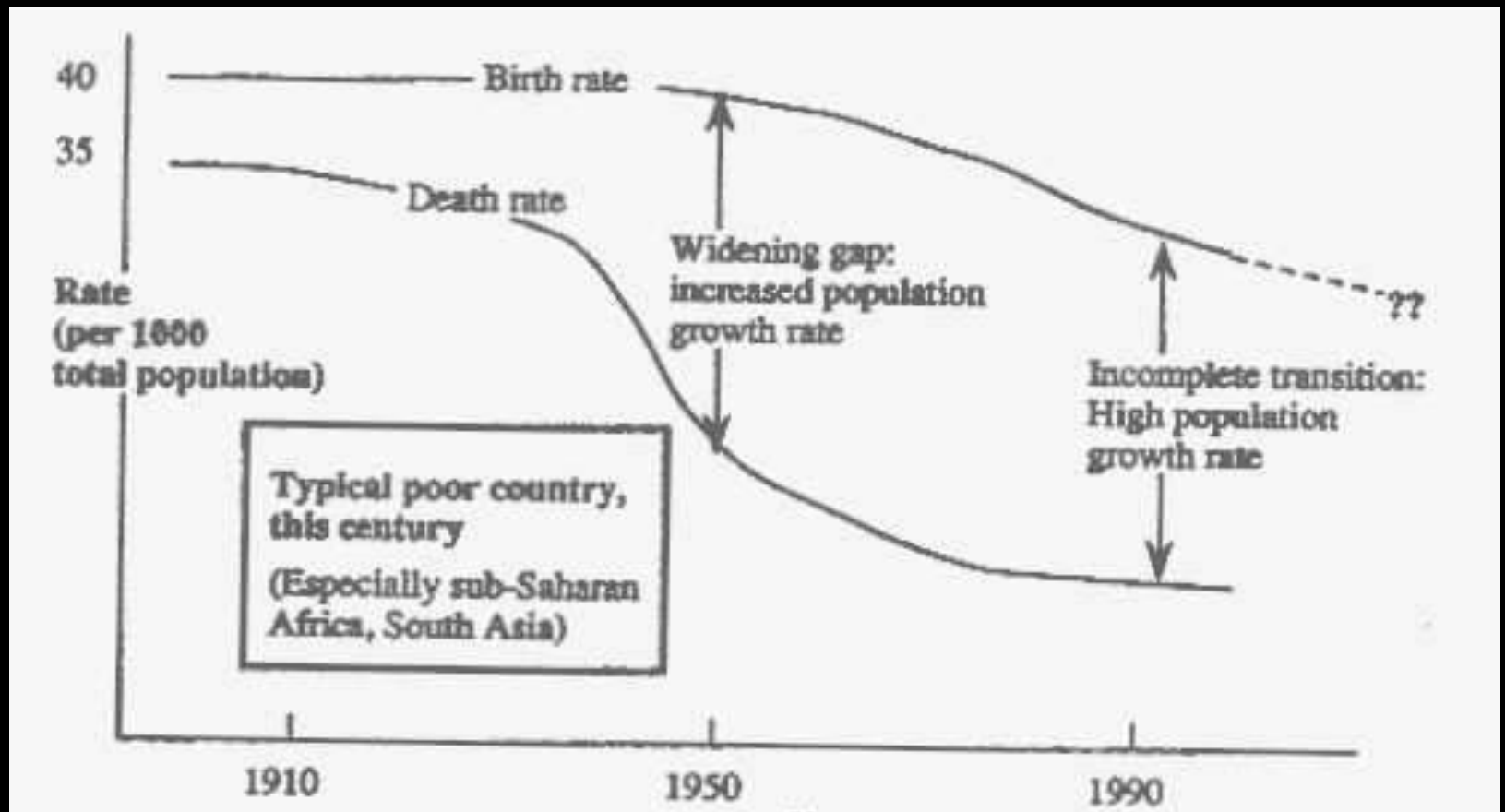


# The “Demographic Transition”





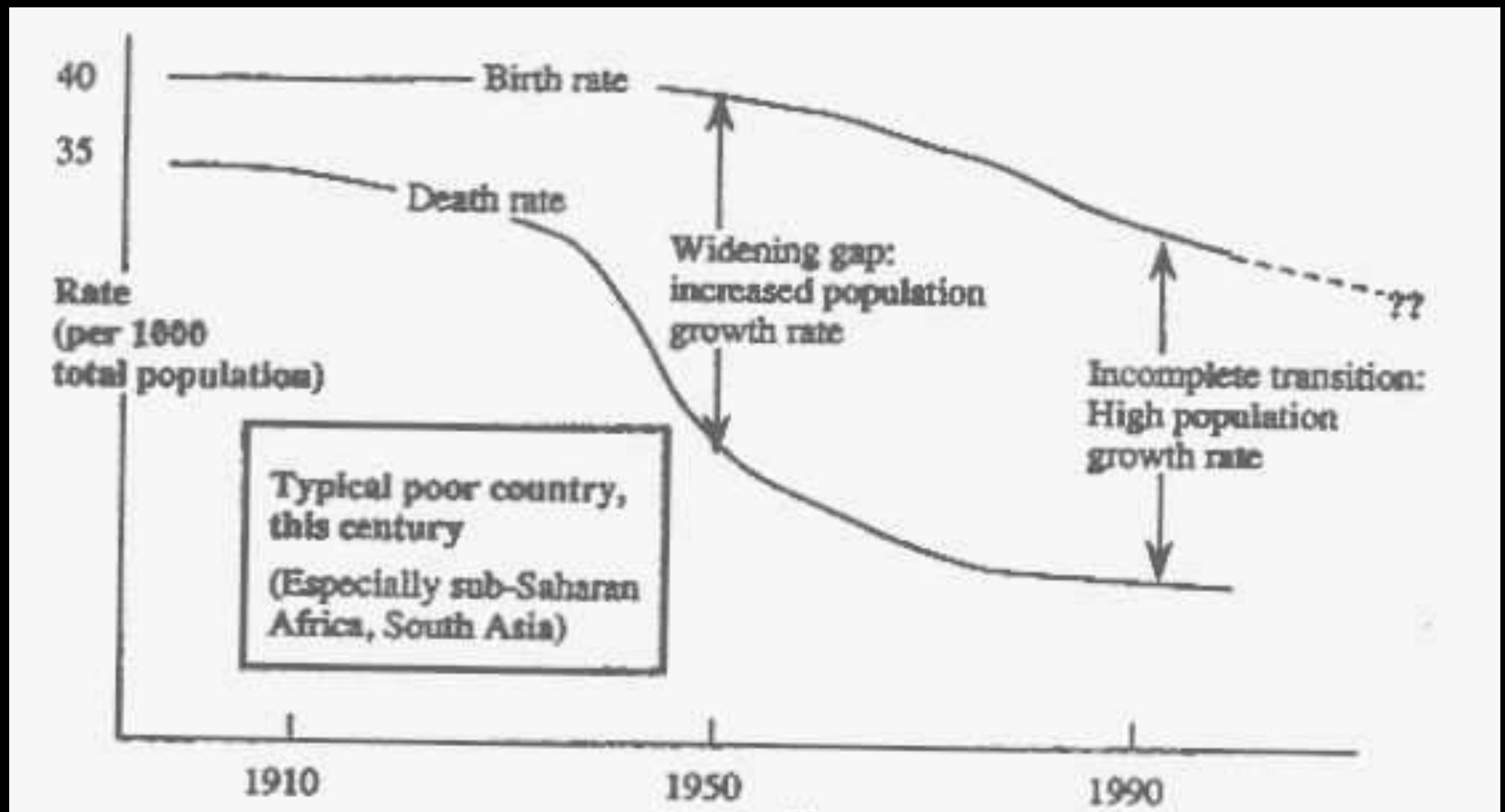
## What about the 'Third World' -- i.e.. the two-thirds world, really the four-fifths world?





**What about the 'Third World' -- i.e.. the two-thirds world, really the four-fifths world?**

**What 'transition' is occurring here?**





"A book of the first importance, a truly revolutionary work."  
—The New Yorker



# PLAGUES AND PEOPLES

William H. McNeill

“... for the present and short-range future, it remains obvious that humanity is in course of one of the most massive and extraordinary ecological upheavals the planet has ever known. Not stability but a sequence of sharp alterations and abrupt oscillations in existing balances ...can be expected in the near future as in the recent past.”

“Ingenuity, knowledge, and organization alter but cannot cancel humanity’s vulnerability...”

Wm McNeill



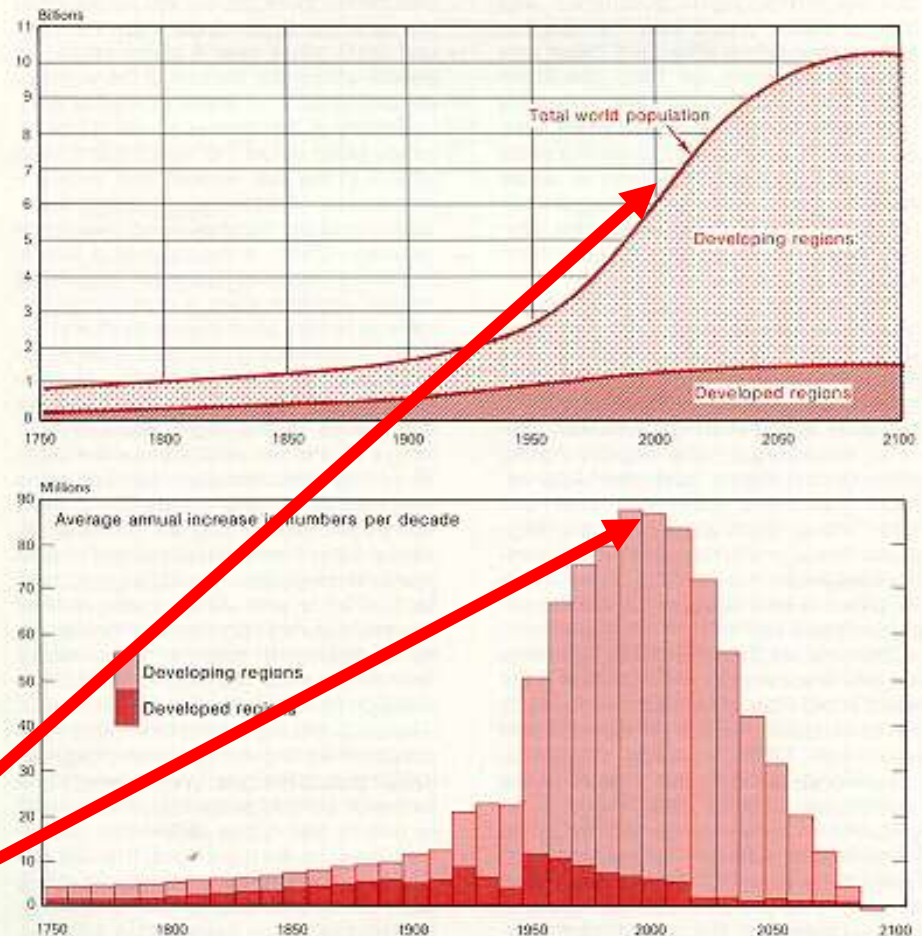
Clearly, there are widely differing assessments of our circumstances and widely moral differing positions on how we ought to behave collectively.

This, in part, derives from a different 'lived experience'...

...as you might expect, judgments about "the population problem" are often linked to one's position in the human population

**explosion.**

Figure 1. World, Developing and Developed Regions, Population Growth: 1750-2100



Source: Thomas W. Merrick, with PRB staff, "World Population in Transition," *Population Bulletin*, Vol. 41, No. 2 (April 1986) Figure 1, p. 4



# World Population to Hit 11 Billion in 2100 Projects New Study

Posted on [September 20, 2014](#) | [Leave a comment](#) | [Edit](#)

[Anastasia Pantsios](#) | September 19, 2014 3:56 pm





# Global Population May Surpass 13 Billion by End of Century

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# OVERSHOOT

The Ecological Basis of Revolutionary Change

---

carrying capacity: maximum permanently supportable load.

cornucopian myth: euphoric belief in limitless resources.

drawdown: stealing resources from the future.

cargoism: delusion that technology will always save us from

**overshoot:** growth beyond an area's carrying capacity, leading to

crash: die-off.

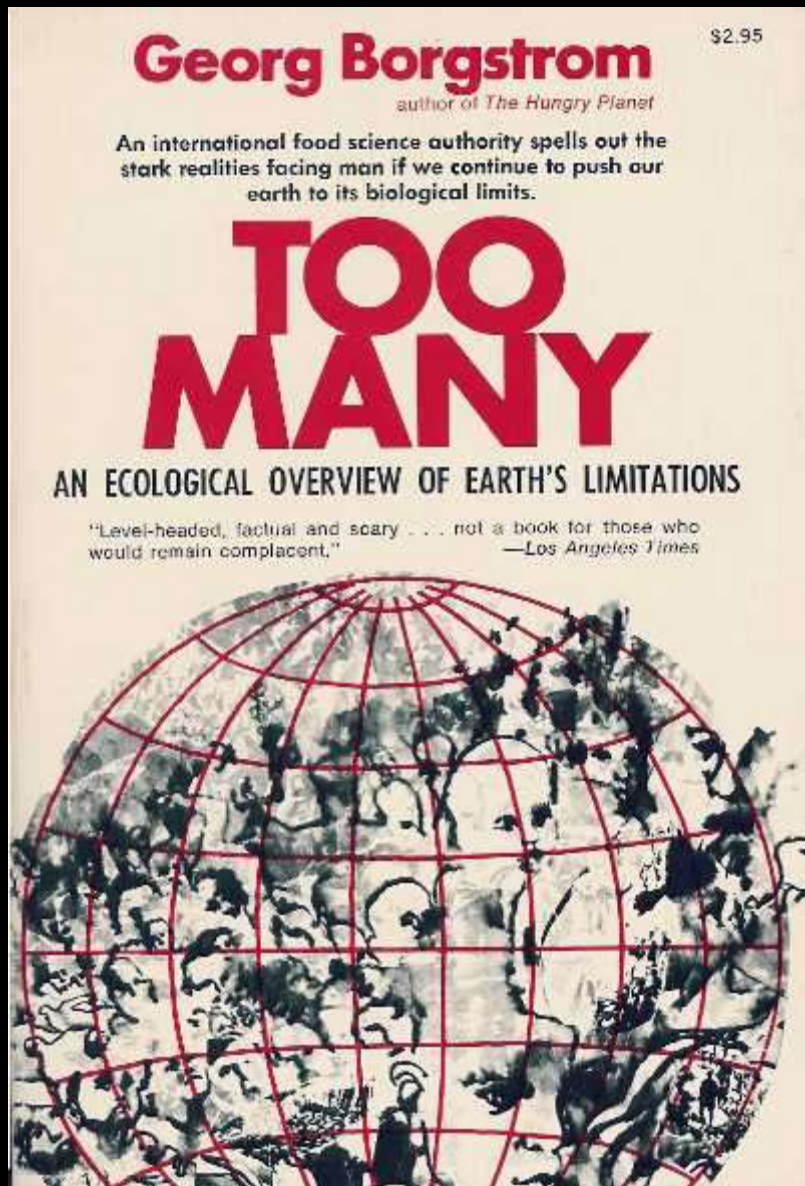
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**William R. Catton, Jr.**

Foreword by Stewart Udall

**Some authors  
have written  
about how the  
human  
community has  
“overshot” the  
carrying  
capacity of the  
earth.**





These perspectives are not new. They have been stated with increasing urgency since Thomas Malthus's first *Essay on Population* in the late eighteenth century.

Both Thomas Malthus and many who have written since have portrayed this as a moral issue. Tim Weiskel - 22



**THE  
IMMORALITY  
OF  
LIMITING  
GROWTH**

**EDWARD WALTER**

**But not all people agree with the morality expressing the need for limits.**

**Indeed, some argue that it is immoral to limit human growth and the economic growth that seems to accompany it.\***

**This argument often comes from conservative religious leaders on the one hand or techno-scientific salvationists - - perhaps the leaders of the most pervasive and persuasive form of religious belief in our Western culture, if not the world.**



Why has the human community side-stepped or ignored the “population” problem?

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## Agriculture pioneer Borlaug dies



**Norman Borlaug, the man known as the father of the Green Revolution in agriculture, has died in the US state of Texas aged 95.**

Prof Borlaug won the Nobel Peace Prize in 1970 for agricultural innovation and the development of high-yield crops.

The Green Revolution helped world food production more than double between 1960 and 1990 with Asia, Africa and Latin America in particular benefiting.

The Nobel Institute said he had helped save hundreds of millions of lives.

Prof Borlaug died late on Saturday evening at his home in Dallas from complications with cancer, said a spokesperson for Texas A&M University, where he had worked.

**'A better place'**

In the early 1960s Prof Borlaug realised that creating short-stemmed varieties would leave food plants more energy for growing larger heads of grain.

Borlaug won the Nobel Peace Prize and US Congressional Gold Medal



Q: Why has the human community side-stepped or ignored the “population” problem?

A: Because of our fanciful understanding of the ecosystem.

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BBC

"Green Revolutionary  
Norman Borlaug Dies."

NPR News  
Weekend Edition, Sunday  
13 September 2009

"Agriculture pioneer Borlaug dies." BBC  
News Online, (13 September 2009 07:37  
UK 06:37 GMT, Sunday).



<http://www.climate-talks.net/2008-ENVRE130/Audio/20090913-NPR-Borlaug-dies.htm>





**BBC, Newshour, 13  
September 2009**

**<http://www.climate-talks.net/2008-ENVRE130/Audio/20090913-BBC-Borlaug-Newshour-obit.mp3>.**

**Norman Borlaug  
(1914 – 2009)**



# Population Growth Requires Second Green Revolution

Norman Borlaug Interview



Norman Borlaug accepting Congressional Gold Medal from President George W. Bush (July 17, 2007)



Norman Borlaug (March 25, 1914 - September 12, 2009) is known as the father of the Green Revolution.

His work with high-yield, disease-resistant wheat varieties is credited with saving as many as a billion people from starvation worldwide.

Borlaug was awarded the Nobel Peace Prize in 1970 in recognition of

his contributions to world peace through increasing food supply.





"Greatest Man to Ever Live: Norman Borlaug."  
YouTube - CommonReason, (13 September 2009).

<http://www.climate-talks.net/2008-ENVRE130/Video/20090913-YouTube-Borlaug-Promoter.htm>



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## The Nobel Peace Prize 1970 Norman Borlaug

The Nobel Peace Prize 1970

Norman Borlaug

## Biography



A central figure in the "green revolution", **Norman Ernest Borlaug** (March 25, 1914- ) was born on a farm near Cresco, Iowa, to Henry and Clara Borlaug. For the past twenty-seven years he has collaborated with Mexican scientists on problems of wheat improvement; for the last ten or so of those years he has also collaborated with scientists from other parts of the world, especially from India and Pakistan, in adapting the new wheats to new lands and in gaining acceptance for their production. An eclectic, pragmatic, goal-oriented scientist, he accepts and discards methods or results in a constant search for more fruitful and effective ones, while at the same time avoiding the pursuit of what he calls "academic butterflies". A vigorous man who can perform prodigies of manual labor in the fields, he brings to his work the body and competitive spirit of the trained athlete, which indeed he was in his high school and college days.

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#### HAVE YOUR SAY!



**What do you hope to achieve in the future?**

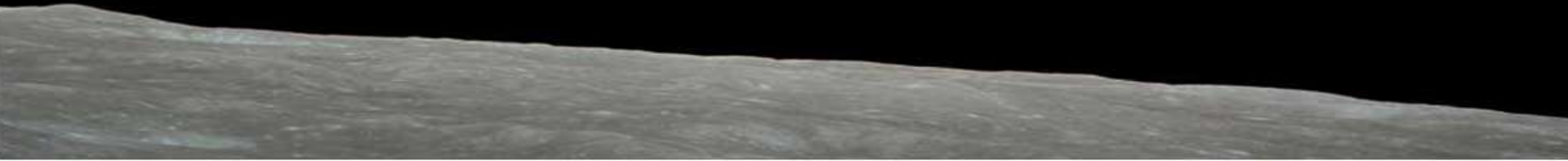






They know this because...

**There is no “Planet B.”**





**They know this because...**

**There is no “Planet B.”**

**We only have one Earth.**





**They know this because...**

**There is no “Planet B.”**

**We only have one Earth.**

**We only get one chance.**





**They know this because...**

**There is no “Planet B.”**

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## Earth's Changing Climate: What is Causing It? What Will It Mean for You?



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# Thank you....



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