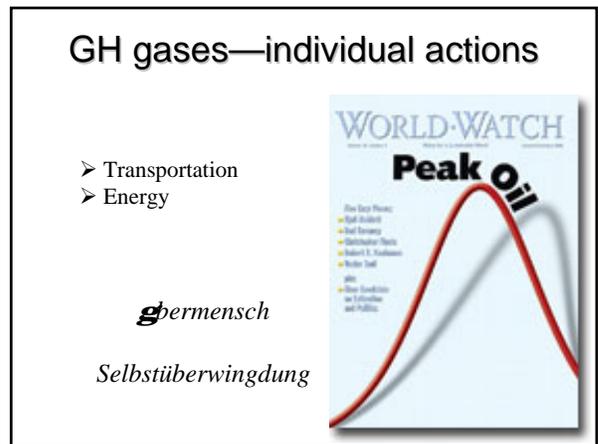


### Pessimism?

“There is no point to intellectual and political work if one were a pessimist. Intellectual and political work require, nay, demand, optimism.”\*

Air pollution  
Water pollution  
Ozone depletion  
Veal consumption

\*Edward Said (quoted by Joseph Massad, 2003, *Al-Ahram*)



## Extinction

Outcomes

- Reduced ecosystem services (valued at \$33 trillion/year)
- Reduced inspiration
- Reduced flexibility
- Reduced beauty

Drivers

- Loss of habitat
- Ecological footprint
- Homogenization

Solutions

- \$30 billion\* (~70%)
- Individual actions

\*E.O. Wilson (2002, *The Future of Life*)

## Consumption

Outcomes

- Intergenerational inequity
- Distinct social classes
- Economic “growth”

Drivers

- Neoclassical economics
- Marketing
- Human desire

Solutions

- Steady-state economy
- Shift subsidies
- Individual actions

## Extinction—individual actions

- Support conservation organizations
- Reduce ecological footprint (1% → 40%)
- Lifestyle change (as if lives depended on it)




## Hard-wired for simplicity

Flight or fight (i.e., survival)

Procreation

Acquisition

## Consumption

Consume:

1. To do away with completely; destroy
- 2a. To spend wastefully; squander
- 2b. Use up
3. To waste or burn away; perish

## Neoclassical economics

“It’s the economy, stupid”\*

Goal of economic growth is never questioned

Positive discount rate devalues future

\*James Carville (Clinton administration)

## Consumption

- Enough paved roads in U.S. to circle globe 157 times\*
- U.S. military expenditures to protect Middle East oil: \$30-60 billion/year\*
- Value of Middle East oil: \$20 billion\*
- Water consumed by showering once/day for one year: 5,000 gal+
- Water required to grow one pound of beef in the U.S.: 2,600-5,000 gal+



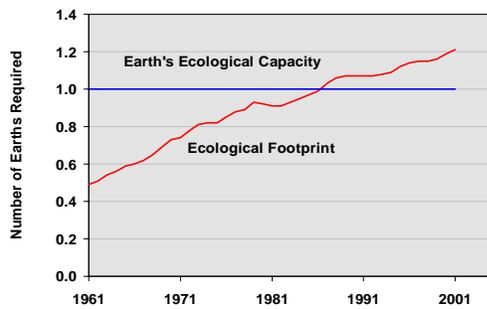
\*Lester Brown (2003, *Plan B*)  
\*John Robbins (2001, *Food Revolution*)

## Consumption—individual actions

- Reduce/Reuse/Recycle
- Think globally, eat locally
- Re-connect with nature



## Consumption



## Human population

### Outcomes

- Increased demands on ecosystem services
- Reduced quality of life
- Underlies other forces

### Drivers

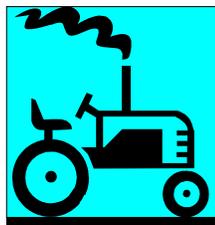
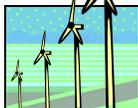
- Natural selection
- Individualist ethic
- Denial

### Solutions

- Socioeconomic policies
- Revised worldview
- Individual actions

## Consumption—shift subsidies

- Prices reflect total cost (e.g., gasoline > \$8/gal; coal ~ \$0.60/Kwh vs. solar ~ \$0.05/Kwh and wind ~ \$0.03/Kwh)\*
- Stop subsidizing destructive practices
- Begin subsidizing constructive practices

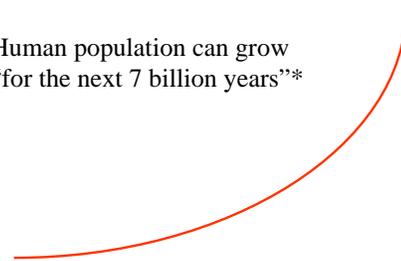


ANWR oil vs.  
Great Plains wind

\*Lester Brown (2006, *Plan B 2.0*)

## Denial?

Human population can grow  
“for the next 7 billion years”\*



\*Myers & Simon (1994, *Scarcity or Abundance: A Debate on the Environment*)

## The energy myth

Biosphere II – unlimited energy, human carrying capacity of 6-8\*

Global carrying capacity of 6-9 billion hard-working vegetarians

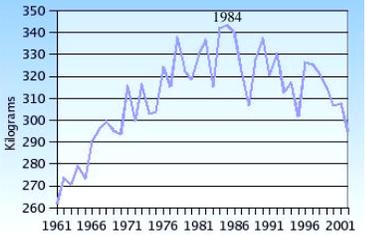
\*Odum and Odum (2001, *A Prosperous Way Down*)

## Population—individual actions

- Minimize reproductive output
- Support alternative lifestyles
- Find community




## Global food supply



Per Capita Grain Production\*



\*Worldwatch Institute (2003, *Vital Signs*)

## Population—two paths

Stabilizing population

- Decrease fertility
- Increase mortality

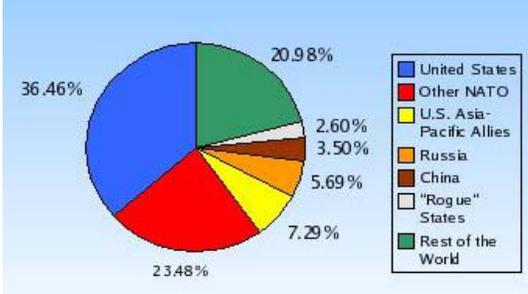


## Individualistic ethic

Formalized in our founding documents:

e.g., *unalienable* right to life, liberty, and the pursuit of happiness

## Military expenditures\*



Region	Percentage
United States	36.46%
Other NATO	20.98%
U.S. Asia-Pacific Allies	2.60%
Russia	3.50%
China	5.69%
"Rogue" States	7.29%
Rest of the World	23.48%

\*Worldwatch Institute (2003, *Vital Signs*; 2001 data)

## U.S. expenditures, world needs\*

Military: >\$500 billion/yr

International aid: \$10 billion/yr

Needed to reach basic social goals:  
\$68 billion/yr

- Education
- Nutrition
- Health care
- Reproductive services

\*Lester Brown (2006, *Plan B 2.0*)

## Envisioning the future

- Environmental protection
- Social justice
- Human economy
- Building design, livable space

Conservation biologists  
Political scientists  
Sociologists  
Anthropologists  
Economists  
Environmental scientists

Engineers  
Architects  
Urban planners  
Artists  
Philosophers

## Envisioning the future

Suppose you had had the revolution . . . , and you had the kind of society you wanted. How would you live, you personally, in that society? Start living that way now! Whatever you would do then, do it now. When you run up against obstacles, people, or things that won't let you live that way, then begin to think about how to get over or around or under that obstacle, or how to push it out of the way, and your politics will be concrete and practical.\*

\*Paul Goodman (1970, quoted by John Holt, *What Do I Do Monday?*)