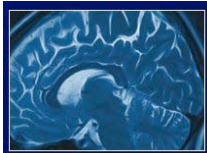


A Whole Life



A Integrated Approach to Sustainable Well-being

Donal MacCoon, Ph.D.



*The Waisman Laboratory
for Brain Imaging and Behavior*



Madison Psychiatric Associates

sustainable**wellbeing**.org



cai guo-qiang on the roof, transparent monument
the metropolitan museum of art, new york, usa, 2006

“One does not become
enlightened
by imagining figures of light
but by making the darkness
conscious.

This procedure, however,
is disagreeable and
therefore not very popular.”

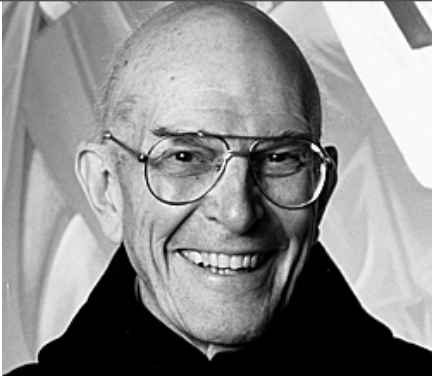
– Carl Jung “The Philosophical Tree” (1945).
In CW 13: Alchemical Studies, p. 335



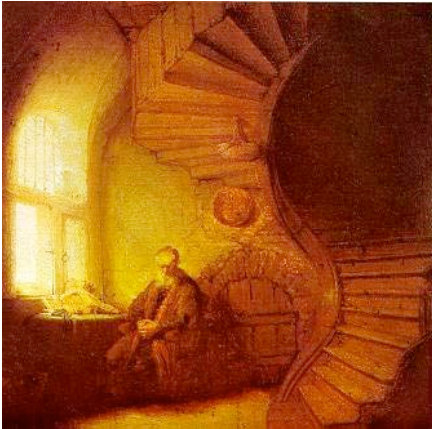
Mindfulness

- Paying attention, on purpose, non-judgmentally
- Being aware of sensations, thoughts, emotions occurring right now without judgment
- Focus on breath, count

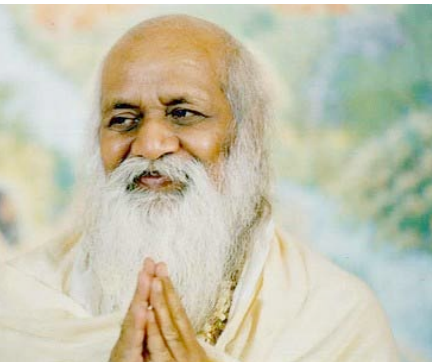




Father Thomas Keating



The Kabbalist, Rembrandt



Maharishi Mahesh Yogi

Types of Meditation

- Centering prayer
- Kabbalah
- Transcendental
- Buddhism
 - Zen
 - Tibetan
- Rishwan/Diamond
- Mindfulness (e.g., MBSR)



Dalai Lama



A. Hameed Ali



John Kabat-Zinn

“Spirituality and speed do not go together”



“I do only one thing at a time...
I’m not thinking about anything else...
that I have too much [to do]
totally present in that moment...
in that way I do not feel stress.”

Satish Kumar



Silence

What are we integrating?

A Whole Life



To what end?



An Integrated Approach
to Sustainable Well-being

What are we integrating?

Mind, Body, Spirit
Self, Community, Planet
7 generations



To what end?

Resolving BIG problems through
Sustainable Well-being (SWB)

How?

Lifestyle change
Decreased emotional reactivity
Mindfulness as one way



What are we integrating?

Mind, Body, Spirit

A Whole Life

Self, Community, Planet

7 generations



To what end?

Resolving BIG problems through
Sustainable Well-being (SWB)

An Integrated How? A
to Sustainable W

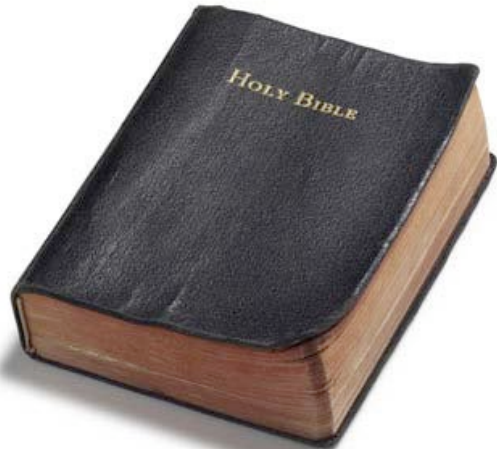
Lifestyle change

Decreased emotional reactivity

Mindfulness as one way



h
ng



“And God said, Let us make man in our image, after our likeness: and let them have **dominion** over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.”

- Genesis, 1:26 (King James version)

- [a. obs. F. dominion (in Godef.), ad. L. type *domini{omac}n-em, deriv. of domini-um property, ownership f. domin-us lord.]

The power or right of governing and controlling; sovereign authority; lordship, sovereignty; rule, sway; control, influence. [OED]

- What responsibilities come with dominion?

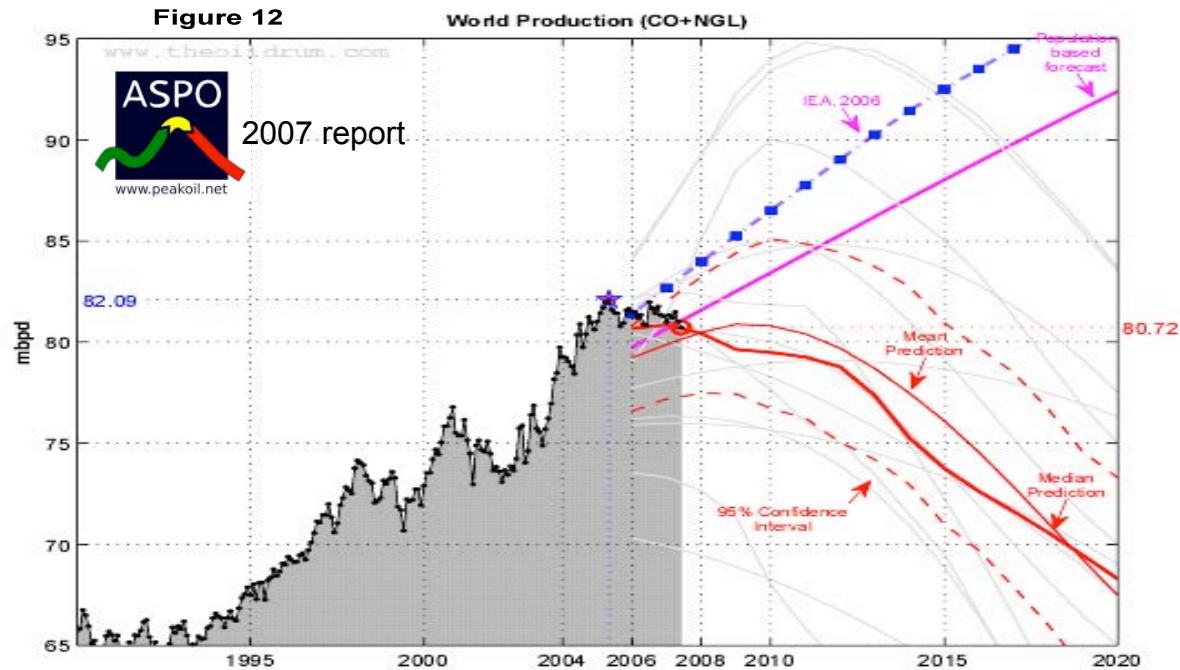
a few problems



2007 Nobel Prize
IPCC & Al Gore

- Water scarcity
 - 75-250 million by 2020 in Africa
 - Up to 50% decline in agriculture
- Ecosystem: 20-30% extinctions
- Food shortages
- Coasts: .4 - 1.4 m rise in sea level is best case stabilization scenario
- Health: malnutrition, disease, heat/floods/droughts
 - WHO estimate: 150k annual deaths (McMichael, 2001; McMichael et al., 2004)

Peak oil & natural gas



- Never run out
- Is cheap oil significant?
 - 400 g/yr to feed each American [1]
 - Work of 1 g of oil in agriculture = 120 hrs of human labor [2]
 - \$483,840/yr (\$10.08/hr, [3]) to maintain food production w/o oil

[1] Food, Land, Population and the U.S. Economy, Pimentel, David and Giampietro, Mario, Cornell University, College of Agriculture and Life Sciences, Carrying Capacity Network, 11/21/1994

[2] Food, Land, Population and the U.S. Economy, Pimentel, David and Giampietro, Mario, Cornell University, College of Agriculture and Life Sciences, Carrying Capacity Network, 11/21/1994

[3] United States Dept of Labor, Bureau of Labor Statistics, May 9, 2008



- Widespread use of human-made chemicals begins in 1950's (Vomsaal, 1996)

What we don't know about chemicals

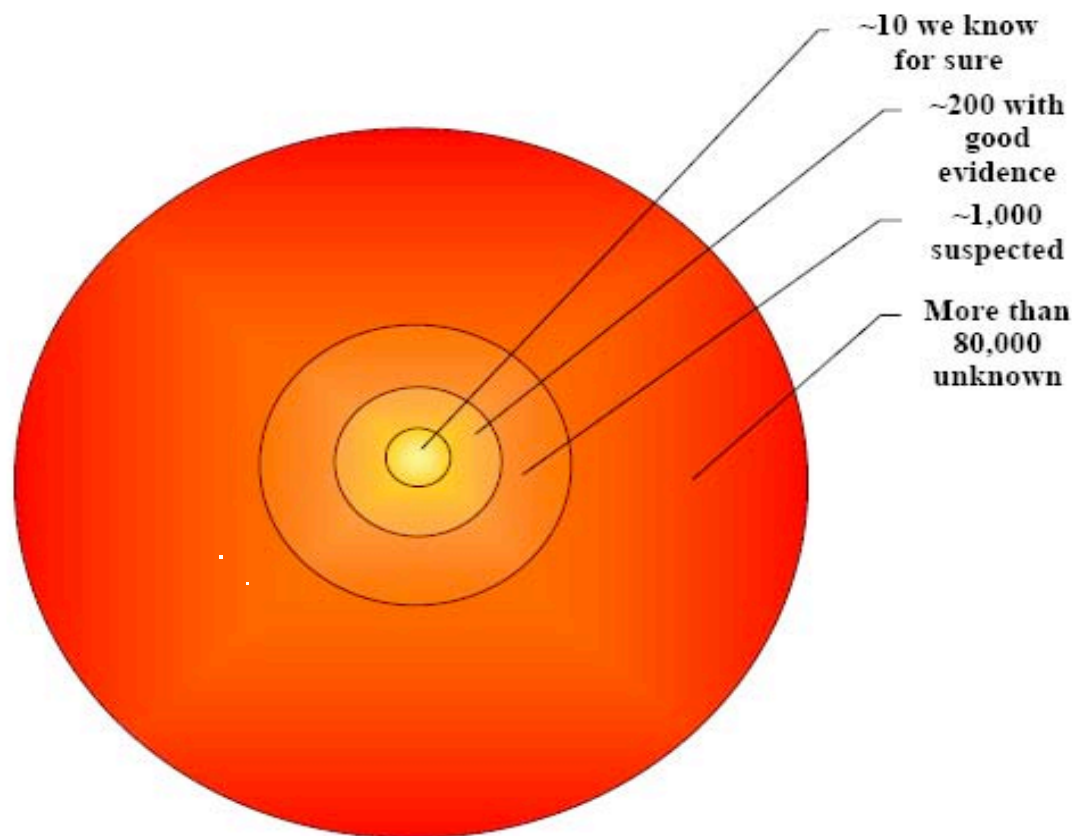


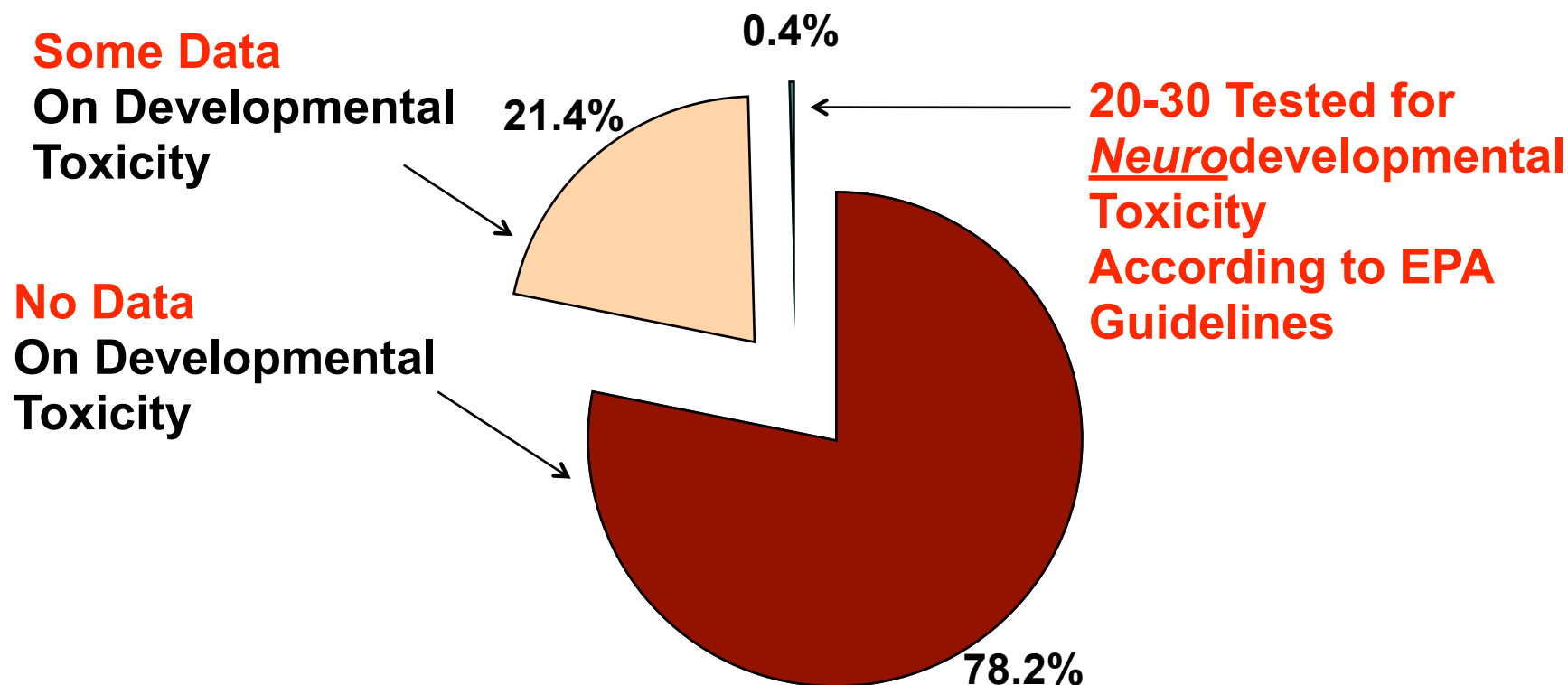
Figure 2.



The Collaborative on Health & the Environment (CHE)
Consensus Statement 2007

CHE info courtesy of Dr. Lucille Marchand, UW- Madison

Status of Developmental Toxicity Testing for the 2,863 Chemicals Produced *Above 1 million pounds/year*





Body Burden: The Pollution in Newborns

A benchmark investigation of industrial chemicals, pollutants and pesticides in umbilical cord blood

*Environmental Working Group, July 14, 2005
10 newborns, \$10,000/baby for study*

287 chemicals detected:

- **180 cause cancer in humans or animals**
- **217 are toxic to the brain and nervous system**
- **208 cause birth defects or abnormal development in animal tests**

<http://www.ewg.org/reports/bodyburden2>

See also: Centers for Disease Control and Prevention. (2005) Third National Report on Human Exposure to Environmental Chemicals. Atlanta (GA): CDC Available at: <http://www.cdc.gov/exposurereport/report.htm>

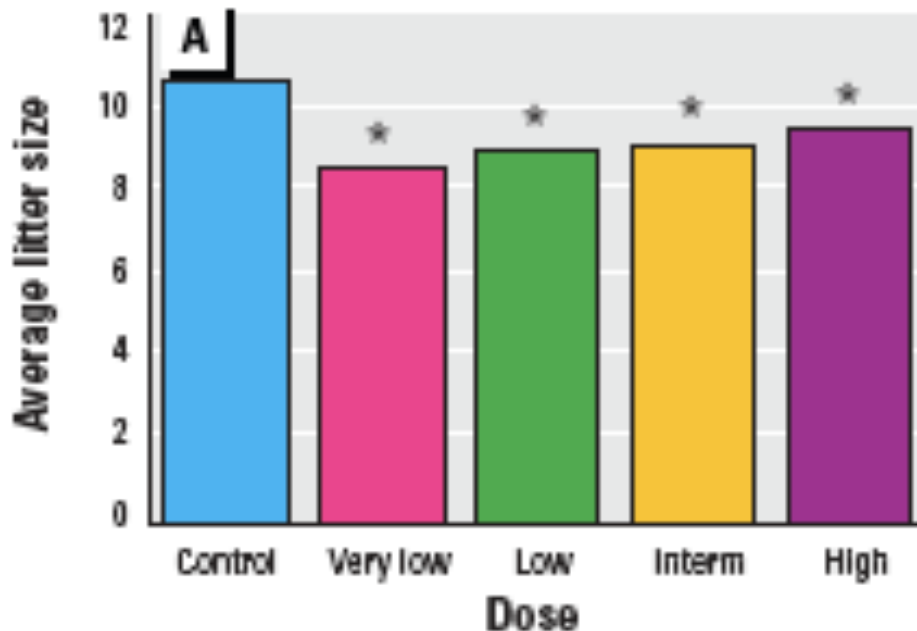
Slide courtesy of Dr. Martha Herbert, Harvard



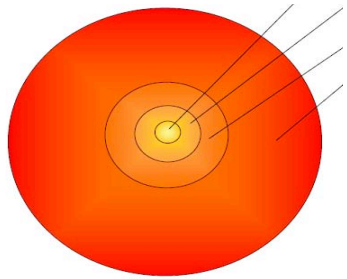
Interactions & low doses

- aldicarb (insecticide), atrazine (herbicide), & nitrate (fertilizer)
 - Aggression
 - Thyroid
 - Immune

Porter, Jaeger, & Carlson (1999)



- Low doses can matter more (Cavieres, Jaeger, & Porter, 2002)



How many 2 & 3-way interactions from 80k chemicals?

- Over 85 trillion (85,303,200,000,000)
- 50,683 lifetimes just to count them
(at 2 per sec)

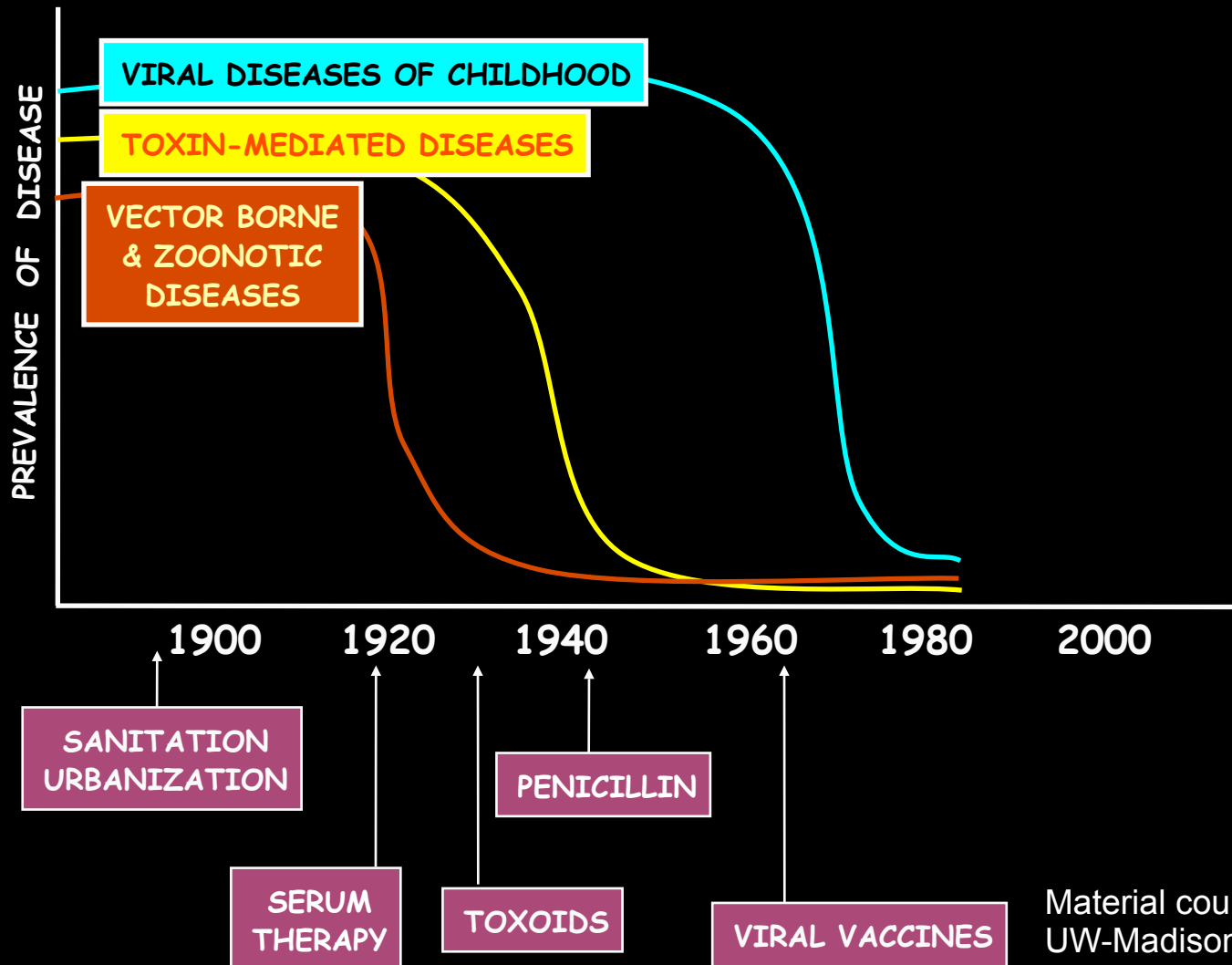
Last lifetime being infection free?

“One can think of the middle of the 20th century as the end of the most important social revolutions in history – the virtual elimination of infectious disease as a significant factor in social life.”

Sir M. Burnet, 1962
Nobel Laureate

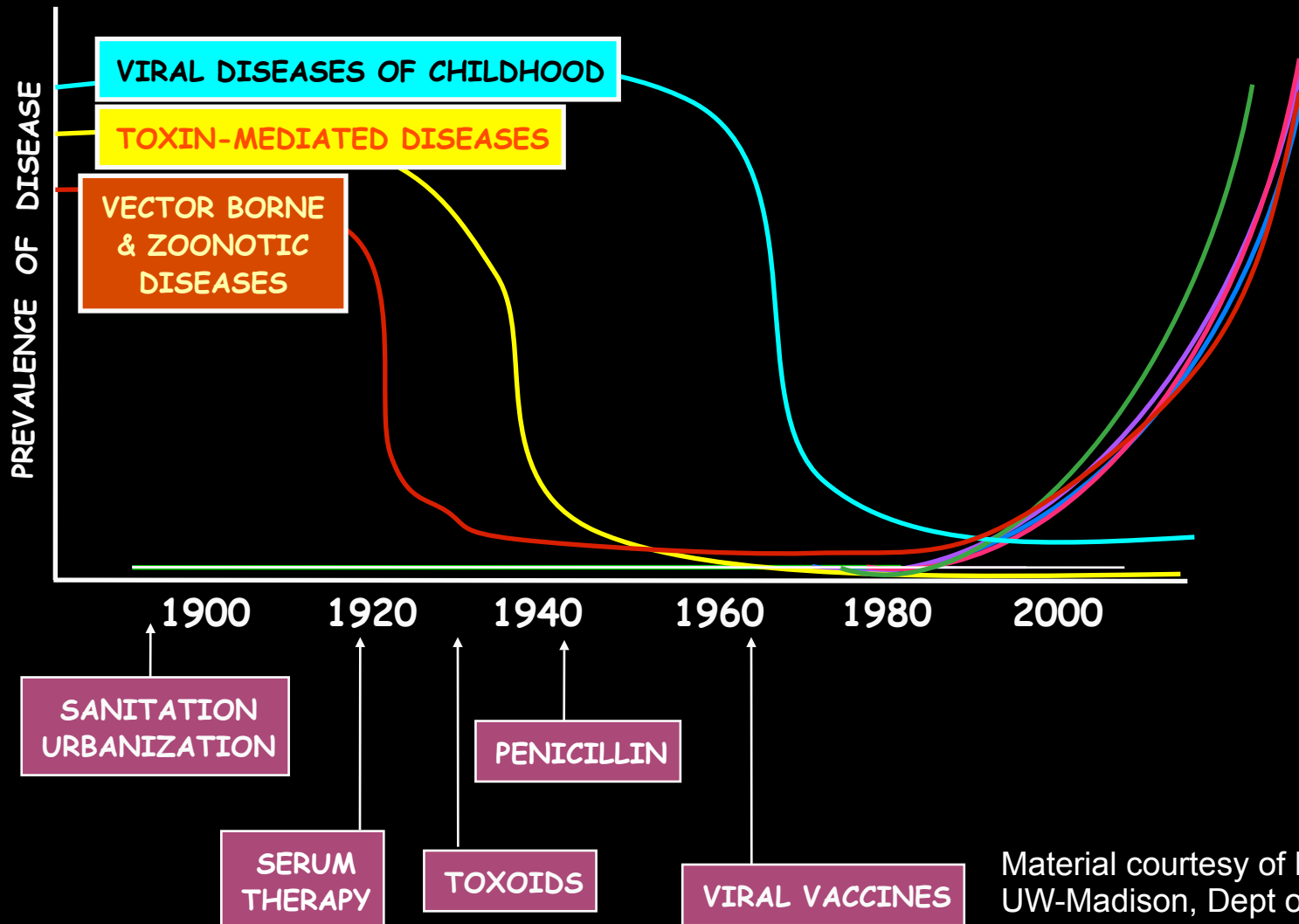
Material courtesy of Dr. George Mejicano,
UW-Madison, Dept of Medicine

Emerging Infectious Diseases



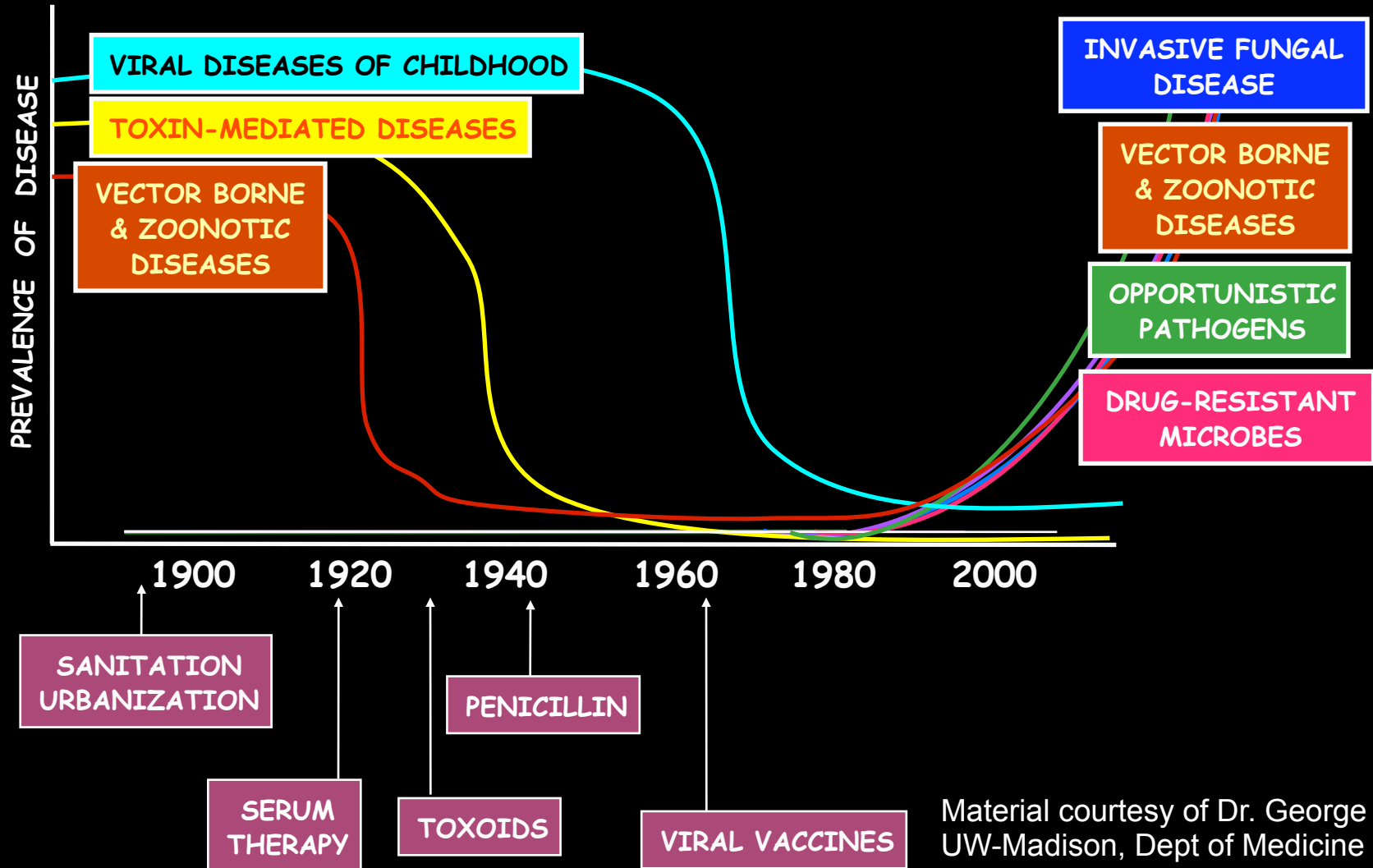
Material courtesy of Dr. George Mejicano, UW-Madison, Dept of Medicine

Emerging Infectious Diseases



Material courtesy of Dr. George Mejicano, UW-Madison, Dept of Medicine

Emerging Infectious Diseases



Current antibiotic resistant bacteria

- Acinetobacter
- S. pneumoniae
- VRE
- MRSA, VISA, & VRSA
- MDR-TB, XDR-TB
 - Airborne
 - South Africa: 52 of 53 died (WHO, 2006)

INVASIVE FUNGAL
DISEASE

VECTOR BORNE
& ZOONOTIC
DISEASES

OPPORTUNISTIC
PATHOGENS

DRUG-RESISTANT
MICROBES

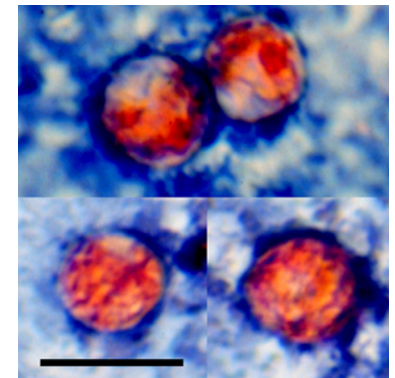
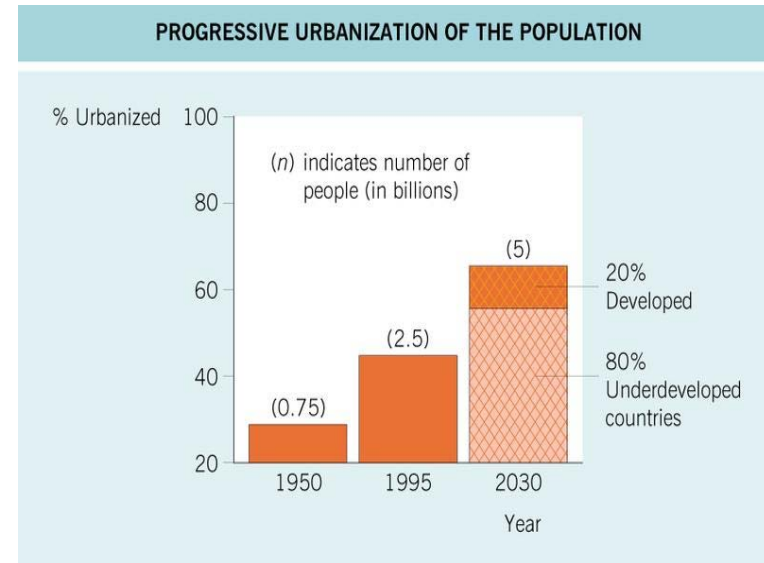
CDC, WHO

Photo courtesy of Dr. George Mejicano,
UW-Madison, Dept of Medicine



Major Factors Contributing to the Emergence of Infectious Diseases

- Human demographics and behavior
 - urbanization
- Industry and commerce
 - Over use of antibiotics in animals creates drug-resistant bacteria
 - Huge farms: animals close proximity
 - Non-local food: cyclospora parasite



Material courtesy of Dr. George Mejicano,
UW-Madison, Dept of Medicine

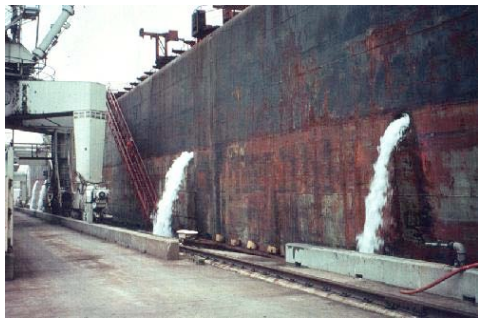


Courtesy Kellogg Schwab, Johns Hopkins

Swine Factory Creates Airborne MDR Bacteria

- Most antibiotics are not used to treat disease but to increase growth and feeding efficiency
- *Enterococcus* and other bacteria isolated from air sample at swine feeding facility
- 98% resistant to 2 or more antibiotics used in humans (and approved for use in swine feed)
- 0% resistant to vancomycin (not legal for swine feed)

Environ Health Perspect 113:137-142 (2005)

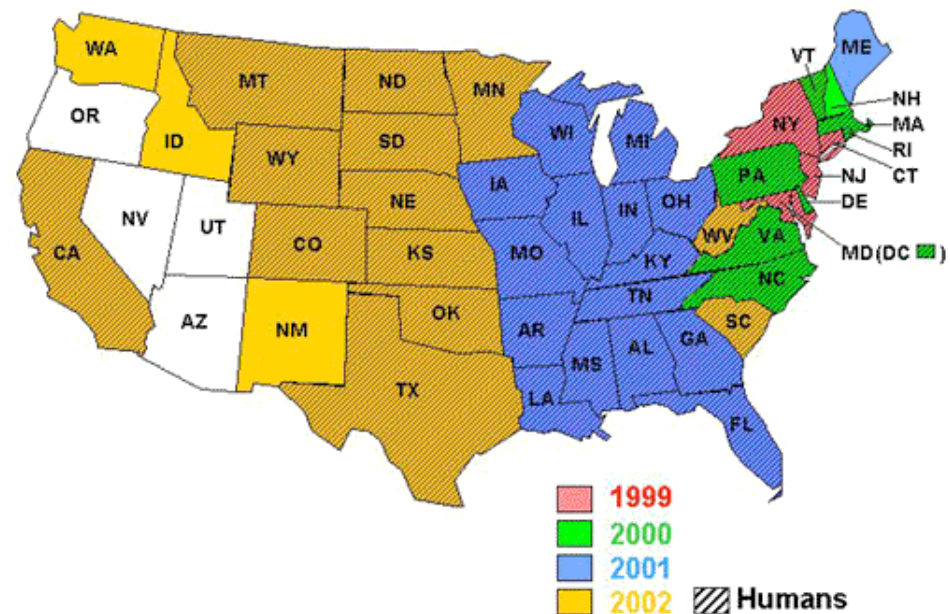


Commerce & Travel



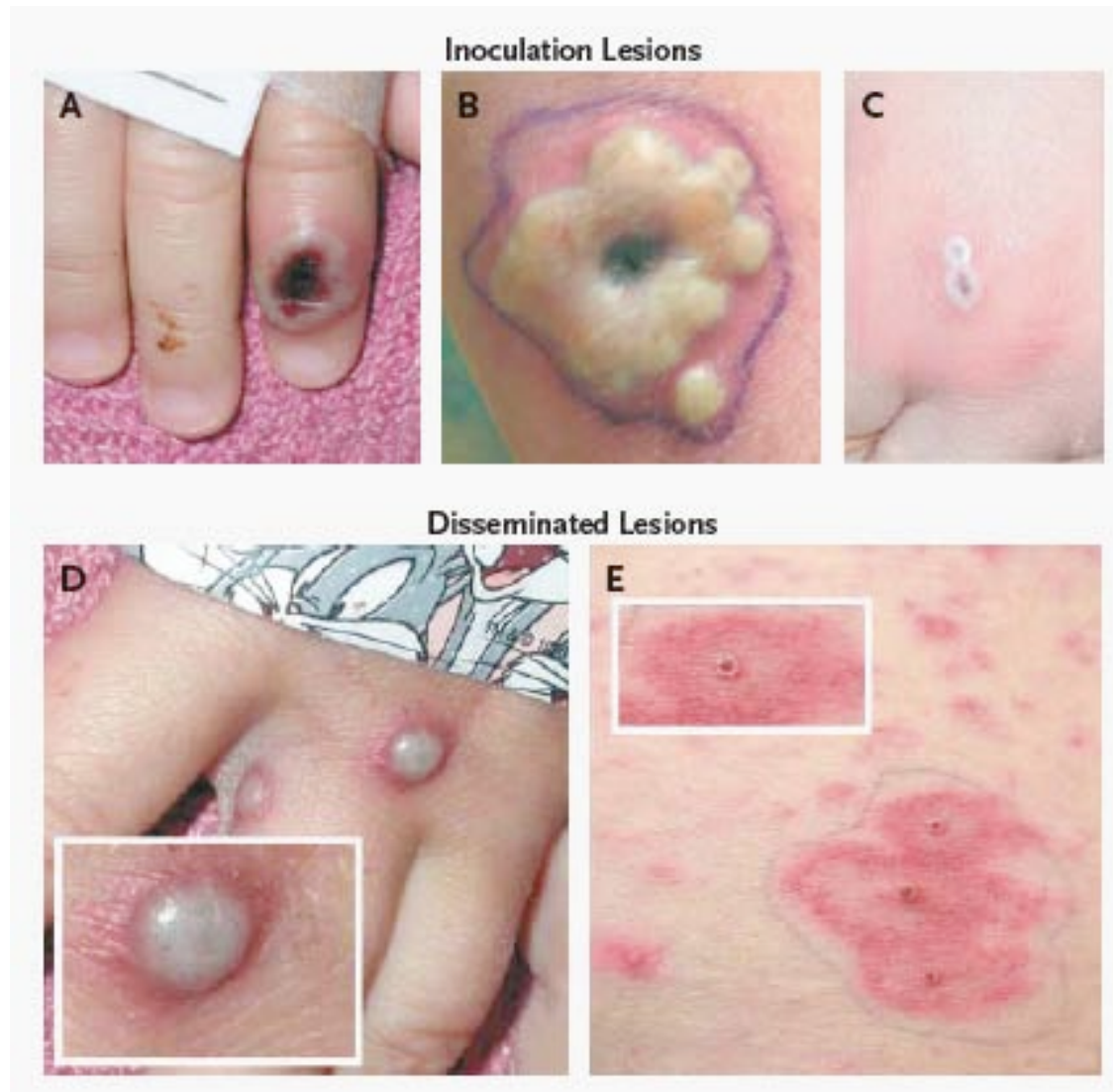
- Ship ballast water contains cholera
- West Nile Virus
 - Mosquito arrives by plane on an abnormally hot July in 1999
 - By 2002, birds have spread it across U.S.
- Climate change story
 - e.g., Malaria & mosquito incubation time (Patz & Olson, PNAS, 2006)

West Nile Virus in the United States, 1999 - 2002



Some material courtesy of Dr. George Mejicano, UW-Madison, Dept of Medicine

New infectious Disease in U.S. + Drug resistance?



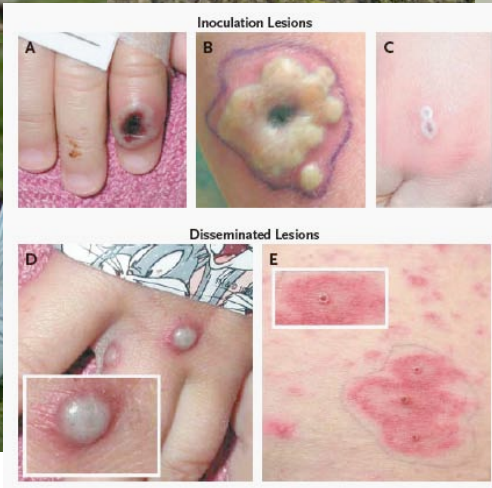
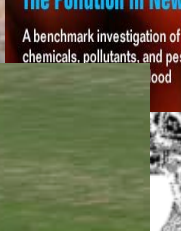
[NEJM 2004: 350(4): 342-50]

Material courtesy of Dr. George Mejicano,
UW-Madison, Dept of Medicine

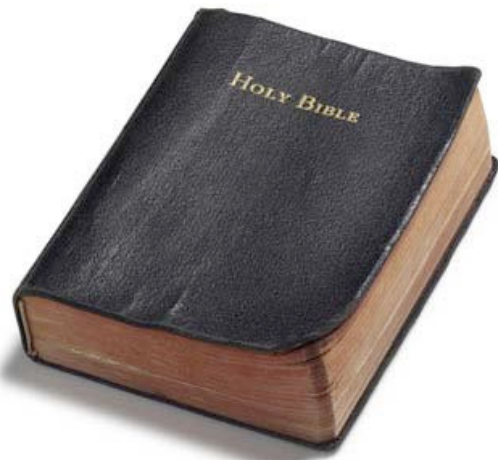


Spanish Flu (1918-1919)

- 20-100 million died, Samoa lost 25%
- Killed more people than WWI (8.5 m)
- Not if, but when
- 62 million deaths today



modern life is toxic



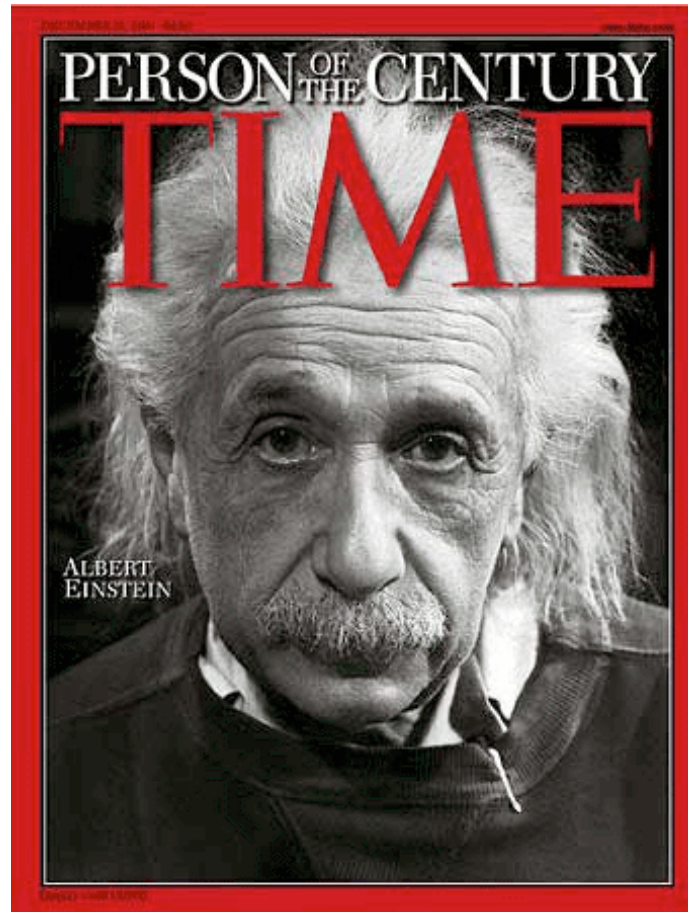
What does the Bible say about these problems?

What does dominion mean in the context of the rest of the Bible?

- What are our responsibilities as human-beings?
- As Christians?
- To what extent are we stewards?



“When the depression ended,
we stopped dancing” (Joe Bonus)



“One cannot alter a condition with the same mind set that created it in the first place.”

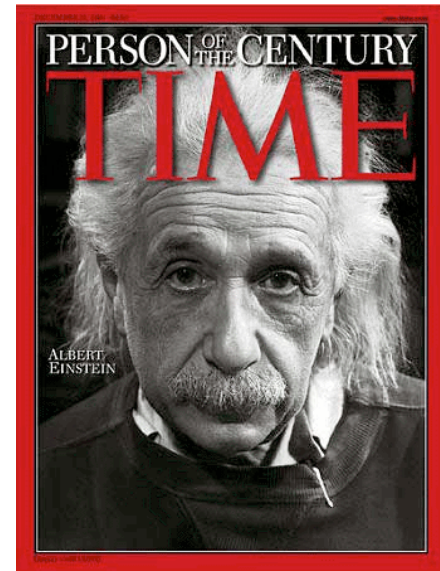
that mind-set is...

THEN

- One problem at a time
- Separate from nature
- Specialization
- Technology/reason/
knowledge will save us

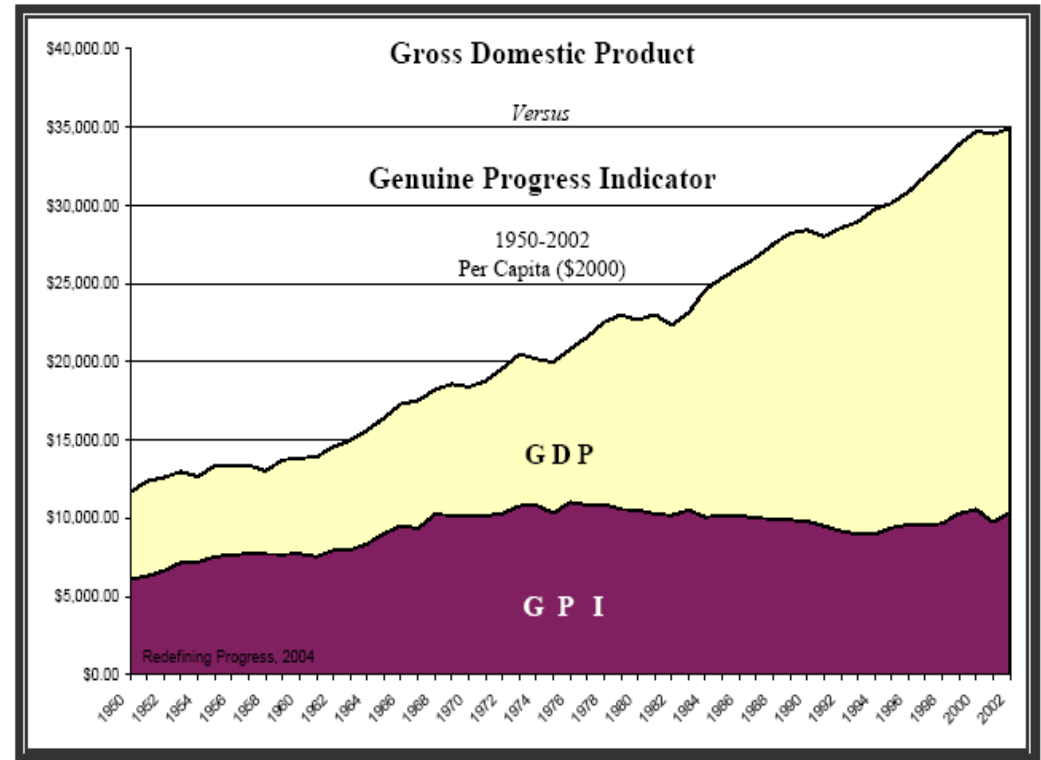
NOW

vs. solve by making it bigger
vs. part of
vs. integrating across fields
vs. importance of integrating
emotion for wisdom

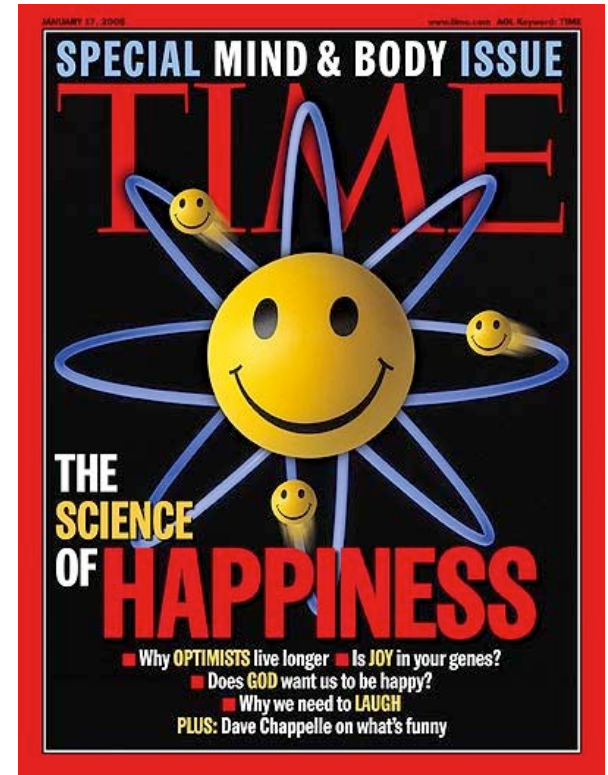
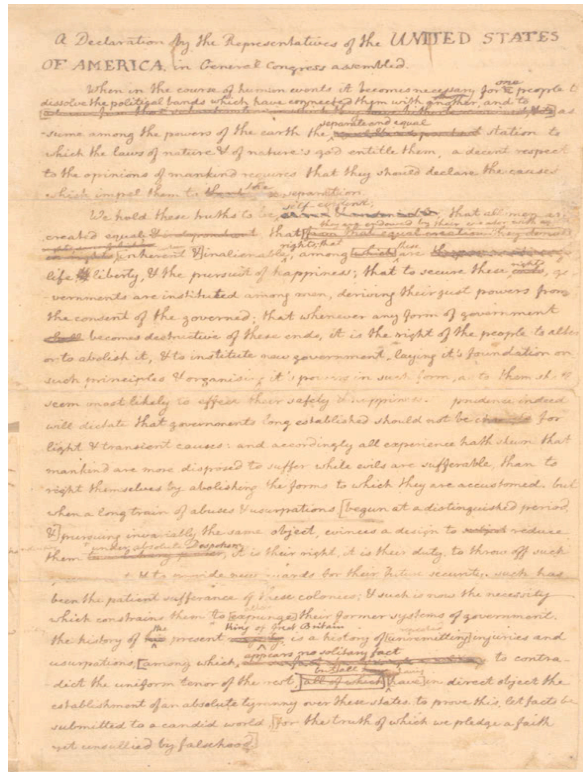


GDP vs. other measures

- GDP
 - Muggings & divorce good for GDP
 - Services with no \$ exchange don't count
- GPI
 - Destructive \$ subtracted not added: CO2, commuting, loss of leisure time, unfair income distribution
 - Volunteer & house work, etc. included



Gross Production vs. Genuine Progress, 1950 to 2002
(Redefining Progress, 2006)



“Salud, amor, y pesetas, y tiempo para gozarlos”

It goes 7.4 miles!

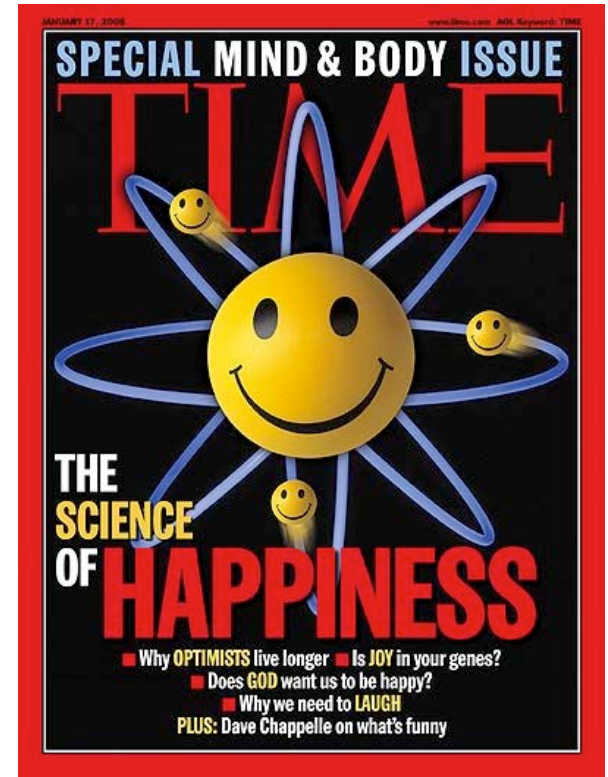


- Denominator
- per hour?
 - til it dies?
 - per gallon?

A Declaration by the Representatives of the UNITED STATES OF AMERICA, in General Congress assembled.

When in the course of human events it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth, the separate and equal station to which the laws of nature and of nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, that whenever any Form of Government becomes destructive of these ends, it is the right of the people to alter or to abolish it, & to institute new Government, laying its foundation on such principles & organizing it in such form, as to them shall seem most likely to effect their safety & happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light & transient causes; and accordingly all experience hath shewn that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses & usurpations, begun at a distinguished period, & pursuing invariably the same object, evinces a design to reduce them to absolute Despotism, it is their right, it is their duty, to throw off such Government, & to provide new Guards for their future security. Such has been the patient sufferance of these Colonies; & such is now the necessity which constrains them to alter their former system of Government. The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute Tyranny over these States. To prove this, let facts be submitted to a candid world. For the truth of which we pledge a faith not unswerving by falsehood.



Denominator?

Sustainable Well-Being

(Mental & Physical Health) * Longevity

Ecological Footprint



Sustainable Well-Being

(Mental & Physical Health) * Longevity

Ecological Footprint



Sustainable Well-Being

(Mental & Physical Health) * Longevity

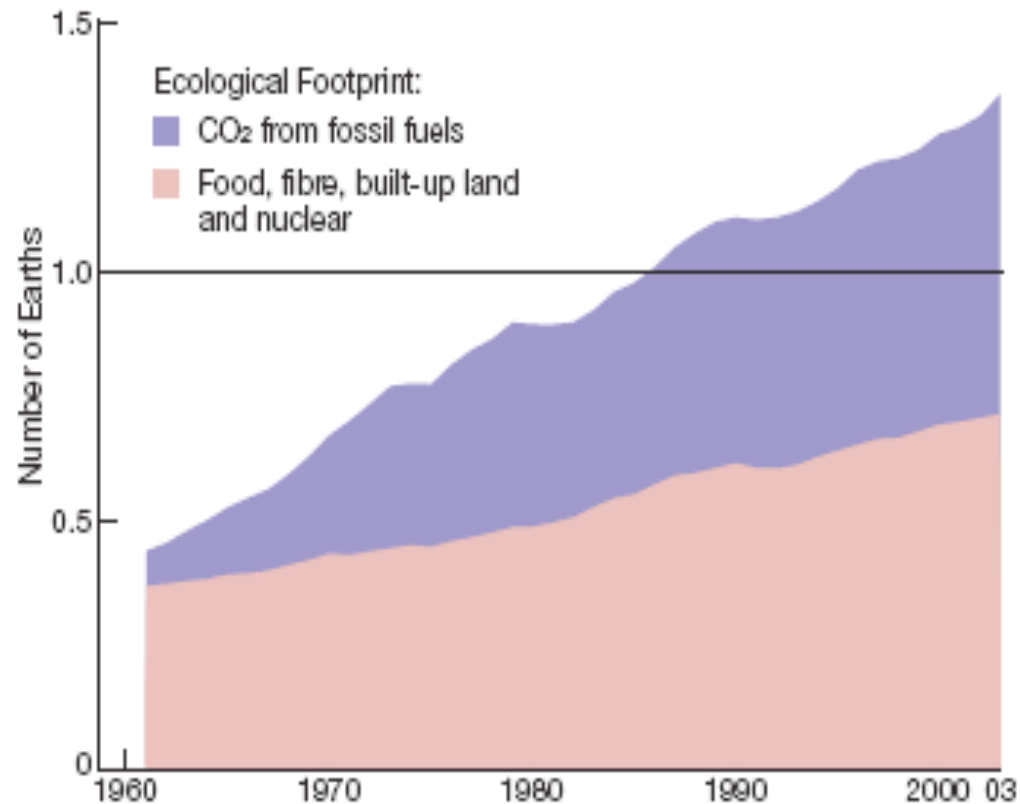
Ecological Footprint





How much of the Earth's resources does your lifestyle require?

Fig. 1: **HUMAN DEMAND ON THE BIOSPHERE, 1961–2003**



Happiness

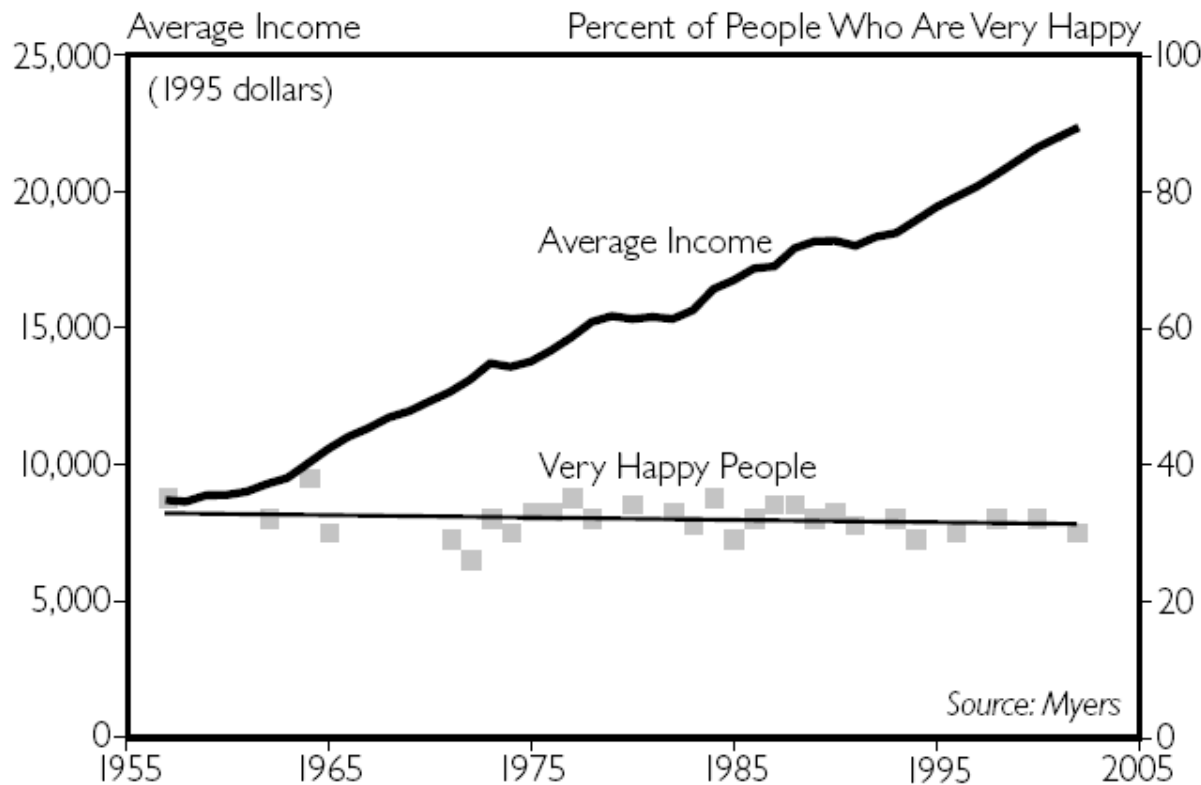


Figure 8-1. Average Income and Happiness in the United States, 1957-2002

Happiness has not increased since 1950 despite doubled standards of living [1]

House Size [2,3]

1955: 1170 sq ft
1975: 1645 sq ft
2004: 2330 sq ft

Amish

1-2%, 5-10 Xs less than Baltimore, MD (Egeland & Hostetter, 1983; Egeland, Hostetter, & Eshelman, 1983)

[1] "State of the World: 2004" Worldwatch Institute; [2] Center for Sustainable Systems Residential Building Fact Sheet; [3] Nat'l Assoc. of Home Builders

Life Sat	Life Exp	EF	HPI	Rank
7.4	77.4	9.5	28.8	150

How are we doing?


	Life Sat	Life Exp	EF	HPI	Rank
Vanuata	7.4	68.6	1.1	68.2	1
Costa Rica	7.5	78.2	2.1	66	3
Cuba	6.3	77.3	1.4	61.9	6
Switzerland	8.2	80.5	5.3	48.3	65
UK	7.1	78.4	5.4	40.3	108
Sweden	7.7	80.2	7	38.2	119
France	6.6	79.5	5.8	36.4	129
Lithuania	4.7	72.3	3.9	29.3	149
USA	7.4	77.4	9.5	28.8	150
UAE	7.4	78	9.9	28.2	154
Ukraine	3.6	66.1	3.3	22.2	174
Zimbabwe	3.3	36.9	1	16.6	178

Sustainable Well-Being

(Mental & Physical Health) * Longevity

Ecological Footprint





Life Sat	Life Exp	EF	HPI	Rank
7.4	77.4	9.5	28.8	150

Well-being: Physical Health

24th in world for disability adjusted life expectancy

"Basically, you die earlier and spend more time disabled if you're an American rather than a member of most other advanced countries"

Life Sat	Life Exp	EF	HPI	Rank
7.4	77.4	9.5	28.8	150

Q: Why?

- Some groups (e.g., Native Americans, inner city poor) have extremely poor health, more characteristic of a poor developing country rather than a rich industrialized one
- HIV kills or disables more in U.S. than in most other advanced countries
- U.S. a leader for cancers relating to tobacco
- A high coronary heart disease rate
- High levels of violence, especially of homicides, when compared to other industrial countries (Crime is up 300% from 1950-1980 & still above 1950 levels; Layard, 2005)

A: Social Justice & Lifestyle



Well-being: Mental Health

Life Sat	Life Exp	EF	HPI	Rank
7.4	77.4	9.5	28.8	150

Table 2. Twelve-Month Prevalence of World Mental Health Composite International Diagnostic Interview/Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*

Country	% (95% Confidence Interval)				
	Anxiety	Mood	Impulse-Control	Substance	Any
Americas					
Colombia	10.0 (8.4-11.7)	6.8 (6.0-7.7)	3.9 (3.2-4.7)	2.8 (2.0-3.7)	17.8 (16.1-19.5)
Mexico	6.8 (5.6-7.9)†	4.8 (4.0-5.8)	1.3 (0.9-1.8)‡	2.5 (1.8-3.3)	12.2 (10.5-13.8)‡
United States	18.2 (16.9-19.5)	9.6 (8.8-10.4)	6.8 (5.9-7.8)	3.8 (3.2-4.5)	28.4 (24.7-28.0)
Europe					
Belgium	6.9 (4.5-9.4)	6.2 (4.8-7.8)§	1.0 (0.3-1.8)‡	1.2 (0.6-1.9)‡‡	12.0 (9.6-14.3)
France	12.0 (9.8-14.2)	8.5 (6.4-10.6)§	1.4 (0.7-2.0)‡	0.7 (0.3-1.2)‡‡	18.4 (15.3-21.5)
Germany	6.2 (4.7-7.6)	3.6 (2.8-4.3)§	0.3 (0.1-0.6)‡	1.1 (0.4-1.7)‡‡	9.1 (7.3-10.8)
Italy	5.8 (4.5-7.1)	3.8 (3.1-4.5)§	0.3 (0.1-0.5)‡	0.1 (0.0-0.2)‡‡	8.2 (6.7-9.7)
Netherlands	8.8 (6.6-11.0)	6.9 (4.1-9.7)§	1.3 (0.4-2.2)‡	3.0 (0.7-5.2)‡‡	14.9 (12.2-17.6)
Spain	5.9 (4.5-7.3)	4.9 (4.0-5.8)§	0.5 (0.2-0.8)‡	0.3 (0.0-0.5)‡‡	9.2 (7.8-10.6)
Ukraine	7.1 (5.6-8.6)†‡	9.1 (7.3-10.9)§	3.2 (2.4-4.0)†‡‡	6.4 (4.8-8.1)‡‡	20.5 (17.7-23.2)
Middle East and Africa					
Lebanon	11.2 (8.9-13.5)	6.6 (4.9-8.2)	1.7 (0.8-2.8)†‡*	1.3 (0.0-2.8)	16.9 (13.6-20.2)
Nigeria	3.3 (2.4-4.2)	0.8 (0.5-1.0)	0.0 (0.0-0.1)†‡**	0.8 (0.3-1.2)	4.7 (3.6-5.8)
Asia					
Japan	5.3 (3.5-7.0)†	3.1 (2.2-4.1)	1.0 (0.4-1.5)†‡**††	1.7 (0.3-3.0)	8.8 (6.4-11.2)
People's Republic of China					
Beijing	3.2 (1.8-4.6)†				
Shanghai	2.4 (0.9-3.9)†				

Source: WHO World Mental Health Survey Consortium (2004), *JAMA*

Sustainable Well-Being

Well-being

Resources to get WB



Resources Used

Life Sat	Life Exp	EF	HPI	Rank
7.4	77.4	9.5	28.8	150

- U.S. uses 6.8 planets worth of resources
- We use more energy/person than any other country (except UAE)
- U.S. & allies outspend all non-allies militarily
- “Providing adequate food, clean water, and basic education for the world’s poorest could all be achieved for less than people spend annually on...

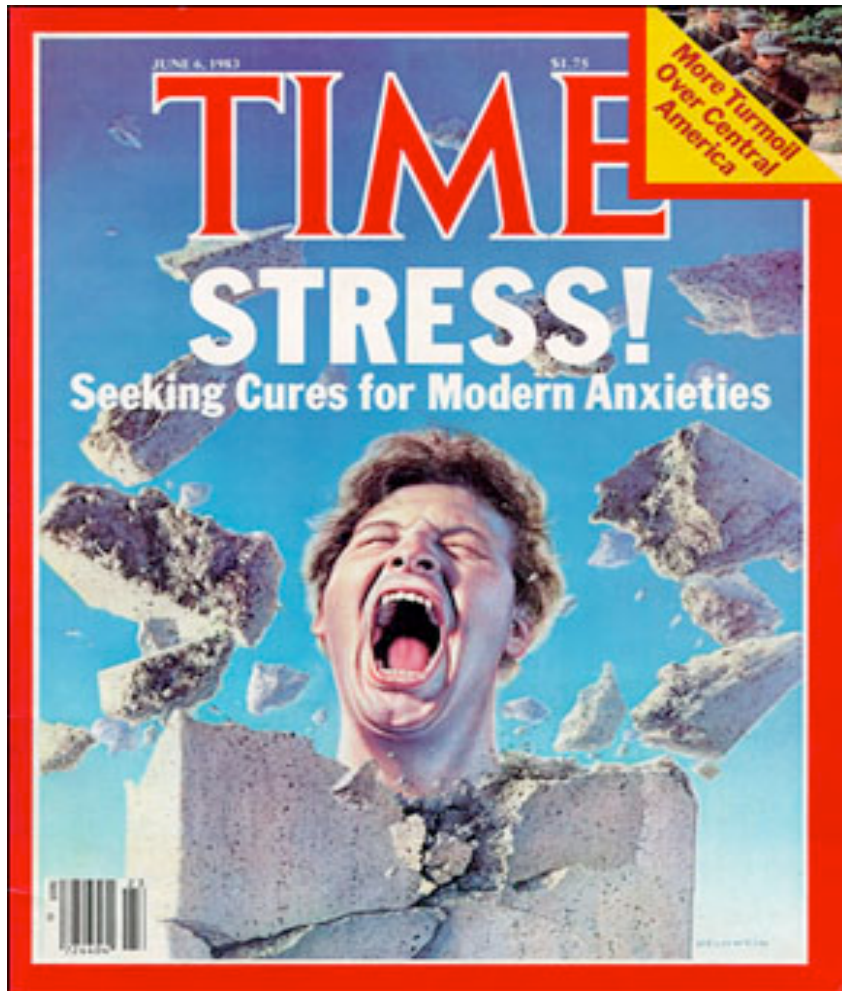
makeup, ice cream, and pet food” (p.10, State of the World, 2004)



Sustainable Well-Being

(Mental & Physical Health) * Longevity

Ecological Footprint



Work more, achieve less, &
destroy the planet in the bargain

What are we integrating?

Mind, Body, Spirit
Self, Community, Planet
7 generations



To what end?

Sustainable Well-being = $\frac{\text{Well-being}}{\text{EF}}$

How?

Lifestyle change
Decreased emotional reactivity
Mindfulness as one way



Mindfulness effective for...

- **Anxiety, depression, stress, burnout** (e.g., Cohen-Katz, Wiley, et al., 2005; Ma & Teasdale, 2004; Teasdale, Segal, Williams, et al., 2000)
- **Chronic pain** (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985)
- **Substance abuse** (Bowen, Witkiewitz, Dillworth, et al., 2006)
- **Arthritis** (Pradhan et al., 2007)
- **Diabetes** (Gregg, Callaghan, et al., 2007)
- **Fibromyalgia** (Sephton et al., 2007; Grossman, et al., 2007)
- **Psoriasis** (Kabat-Zinn et al., 1998)



Mindfulness effective for...

- Positive resting frontal alpha-asymmetry (Davidson, et al., 2003; Barnhofer et al., 2007)
- **Immune Function** (Davidson, Kabat-Zinn et al, 2003)



...and different types of people

- **Cancer patients** (Specia, Carlson, et al., 2000; Monti, Peterson, et al., 2005; Carlson, Specia, et al., 2007)
- **Health care professionals** (Shapiro, et al, 2005)
 - **Medical Students** (Shapiro, et al., 1998)
 - **Nurses** (Cohen-Katz, Wiley, et al ., 2005)
- **Women with heart disease** (Tacon, McComb, Caldera, Randolph, 2003)
- **Prisoners** (Bowen, Witkiewitz, Dillworth, et al., 2006)
- **Borderline Personality Disorder** (DBT, Linehan, 1993)





Mindfulness

- Being aware is the act of integrating, remembering all parts of ourselves
- welcoming them into awareness without judgment





Integrating parts of ourselves

- Authenticity associated with less depression & anxiety, lower stress, greater subjective vitality, & lower physical Sxs (Ryan, LaGuardia, & Rawsthorne, 2005)
- More distinct one is across different roles, less well-being (Sheldon, Ryan, et al. JPSP, 1997)

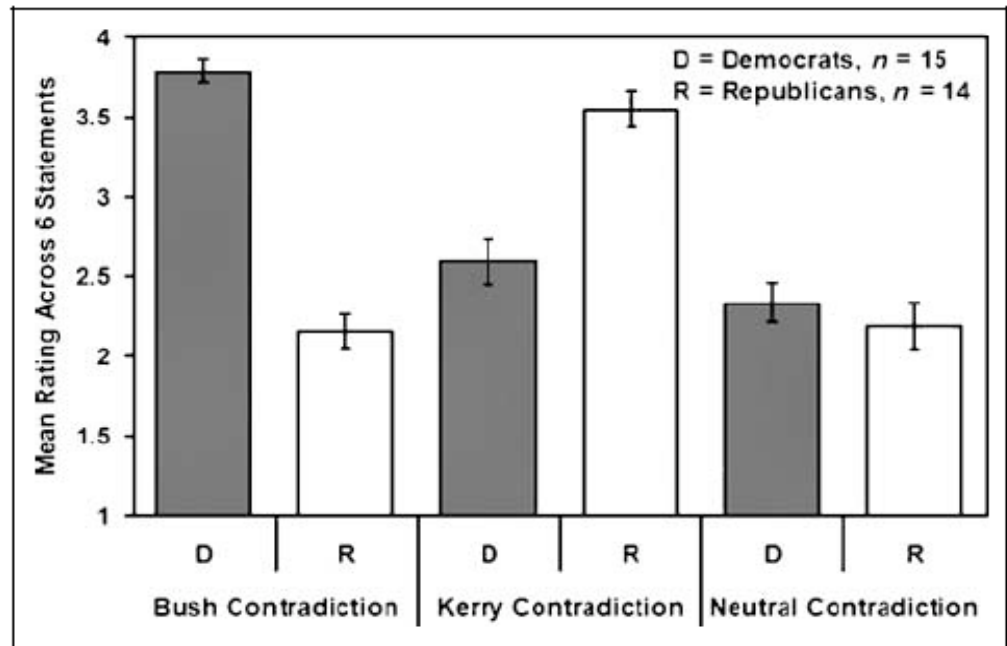


Reactivity as Barrier

- Repression
 - Report low anxiety but exhibit anxious physiology (Weinberger, et al., 1973, JAP)
- Defensive Deniers
 - higher (and medically significant) cardiovascular reactivity associated with higher distress relative to genuinely healthy individuals (Shedler, Mayman, et al., 1993)

Bounded rationality vs. Motivated reasoning

- All decisions are emotional
- Democrats & Republicans read statements about Bush, Kerry, or Tom Hanks (for ex)
- Consistently identified contradictions in “other” candidate but not own

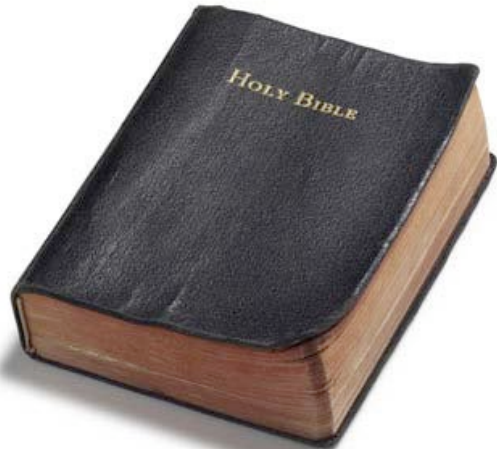


- Negative emotion registered when contradiction was introduced
- With time to reach biased conclusion, negative affect gone
- “brain converges on solutions that minimize negative and maximize positive affect states” (Westin, et al., 2006, Jo of Cog Neuro, p. 1947)

Beyond Self



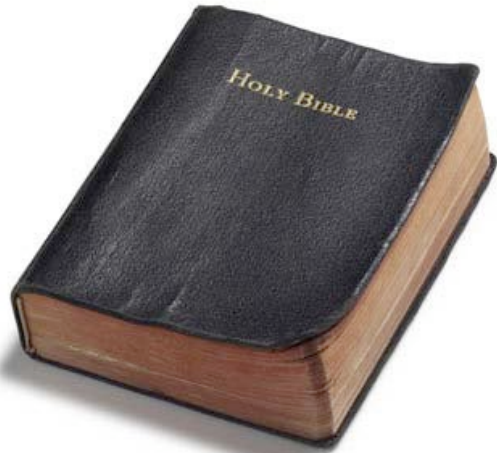
The Big Us



Mathew 22:37 Jesus replied: " 'Love the Lord your God with all your heart and with all your soul and with all your mind.' 38 This is the first and greatest commandment.

39 And the second **is like it**: 'Love your neighbor as yourself.'

40 All the Law and the Prophets hang on these two commandments." (New International Version of the Bible)



Love your neighbor as yourself.

Law of interdependence?

Are my thoughts, emotions, & sensations
separate from yours?

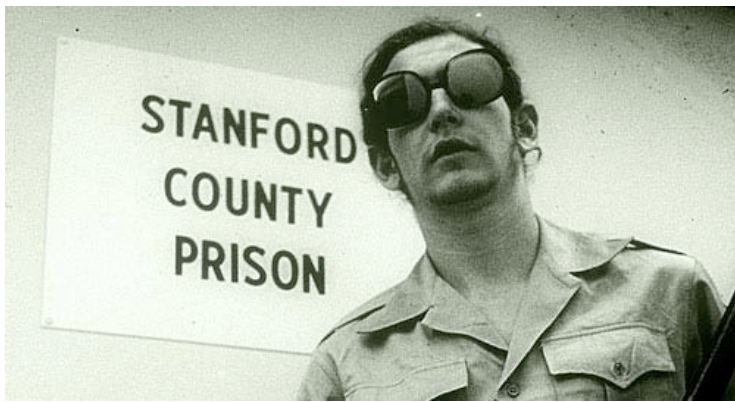
Row Boat

Top Bottom

We are not separate from our context

- Depleting fishery (resource dilemma task)
- 10/30 words on sentence completion task either cooperation or neutral words
- Those primed subliminally for cooperation = those with conscious cooperation goal > neutral words for fish returned to common resource

Bargh, Gollwitzer et al. (2001, Expt 2)



Stanford Prison Experiment

- Participants randomly assigned to “prisoner” or “guard” roles in mock prison setting
- Study prematurely terminated “when it became apparent that many of the ‘prisoners’ were in serious distress and many of the ‘guards’ were behaving in ways which brutalized and degraded their fellow subjects”
- “Volunteer prisoners suffered physical and psychological abuse...while volunteer guards were exposed to the new self-knowledge that they enjoyed being powerful and had abused this power to make human beings suffer.”

Zimbardo (1973); Expt: Haney, Banks, & Zimbardo (1973)



Neurally connected: Mirror Neuron System

- Observing an action = Doing that action
- Experiencing disgust & observing someone's disgust both activate anterior insula (Wicker, Keysers, et al., 2003, Neuron)
- Empathy: to put oneself in the place of others

Buccino & Amore (2008, Neuropsychiatry)



Empathy, Compassion, & Fairness

- Empathy: High functioning autistic individuals have less activation in MNS areas than controls when imitating emotional facial expressions (Depretto, et al, 2006, Nat Neurosci)
- Compassion: AC & Anterior insula activate when partner feeling pain (Singer, et al., 2004, Science)
- Fairness: AC & Anterior insula activated when neuroeconomic games are played fairly or not (Singer, et al., 2006, Nature)

Permaculture

- “a set of techniques and principles for designing sustainable human settlements”
 - Permanent culture + permanent agriculture
 - Bill Mollison & David Holmgren (1970’s)
- “...vision is of people participating in and benefitting from an abundant, nurturing natural world”
- Focus on relationships -- interconnections -- among plants, animals, & buildings

Hemenway, Toby (2001). *Gaia's Garden: A Guide to Home-Scale Permaculture*. Vermont: Chelsea Green Publishing Company, p. 4.



- Mows the lawn
- Feeds itself
- Fertilizes its food
- Smart enough to avoid fertilizer
- Gives milk and meat
- Reproduces itself

An aerial photograph showing a diverse landscape. In the top left, there's a large, open field with some trees. To its right is a rectangular field, possibly a farm. Below the top-left field is a wooded area. In the bottom left, there's a large area divided into many small plots, likely a community garden. To the right of the garden is a residential development with several houses and a parking lot. The text labels are overlaid on the image in white boxes.

5-acre prairie
restoration

5-acre organic CSA farm

Community Gardens
5 acres (320 plots)

Troy Co-housing
30 units, mixed income

Troy Co-housing

- Lifespan design
- Universal design
- Green space
- Promote community
- Green built & energy star
- Low operating costs
- Affordable: 20 (of 30) units permanently at affordable housing rates
- 2007 Livable Community Award from AARP & NAHB





Sunday, April 5, 2009



GROWING TOGETHER



"In summer, me and
my friend Lonzo
planted some bright
orange carrots.
I hope there is always
a garden for all the
Vera Court kids."
Tesha Lynn Bell

troy gardens





Vision


Troy Gardens is a welcoming cohousing community where we cultivate sustainability and meaningful connections with one another and the land through celebration, cooperation, and open communication.



Sunday, April 5, 2009

- 
- An aerial photograph of a suburban neighborhood. The houses are arranged in a grid-like pattern with winding streets. Many houses have solar panels on their roofs. There are green lawns, trees, and parking lots with several cars. A white box with a black border is overlaid on the left side of the image, containing a bulleted list.
- Children
 - Social
 - Digesting information


Ecovillage at Ithaca, NY



Song (30 houses)

Frog Common House

Frog (30 houses)

- 
- 800, 1000, 1200, 1500 sq ft
 - Resources = ~14 acres/person (EF 1.0)
 - 25 acres = avg (EF 1.0; 56% of avg American)

Sharing...

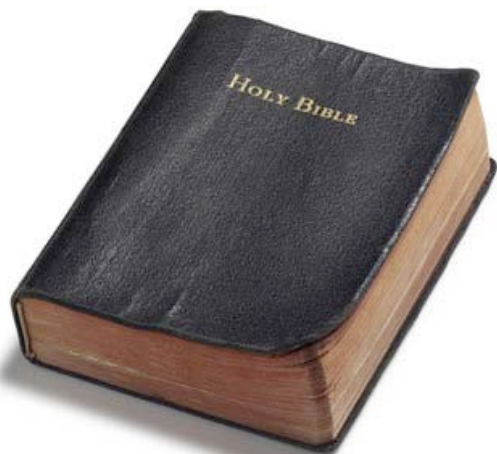
- Meals
- Childcare
- Cars?
- Financing to increase renewables?
- Homes to increase density?
- Largest obstacles?
 - Intending to change
 - Emotional reactivity prevents getting along

Getting along requires that...

(A) Everyone do it our way

(B) We learn to be non-reactive so we can...

- Pay attention to others by paying attention to ourselves
- Communicate well with people who annoy us, drive us crazy, etc.



What would Jesus do?

- Dominion - Love thy neighbor as thyself
- How interdependent are we?
- If we are not integrated within ourselves, how well can we love our neighbor?
- What are our responsibilities as human-beings?
- As Christians?
- To what extent are we stewards?

Life is Sweet



sustainable**wellbeing**.org

Thank you

- Greg Reeb
- Rizwan Ahmad