



How to Embrace an Aspirational Technology

Environment and Nanotech





Overview

- Section 1: Dreams of technology
- Section 2: Case study in social permission
- Section 3: How technology moves values
- Section 4: Where to from here?





Yes, caution is wise.





What is needed as a basis for good risk management practices?

- 1 Knowledge / Evidence base (limited number of scientifically validated publications)
- 2 Risk assessment schemes (for particles, products, processes, ...)
- 3 Monitoring of long-term effects
- 4 Generally accepted and low cost measurement methods and standards for exposure assessment
- 5 Nomenclature / metrology (internationally agreed terminology, reference materials and risk metrics)

SOURCE: ALLIANZ





Dreams of Technology





But first, dreams of politics





From this...







**Don't give them what you think they want.
Give them what they never thought was
possible.**

-Orson Welles





Our thirty-year goal is to have such exquisite control over the genetics of living systems that instead of growing a tree, cutting it down, and building a table out of it, we will ultimately be able to grow the table.

– **Rodney Brooks**, director of Artificial Intelligence Laboratory, MIT





To What End?

- What type of world do you want to live in?
- What are the core values that drive your work?
- What do you want to be remembered for?





Case Study in Social Permission









And then something happened...

- Environment never ranks in the top ten of voter concerns
- No major victories in the last 20 years
- Threat of environmental devastation is greater than ever





What Happened?

- Policy became the focus
 - Complaint-based activism
 - Issue organizing
 - Society changed
-
- Not just environmentalism – all liberal movements – and a cautionary tale





Social Values and Technology

a cautionary tale





“In the 1970’s Americans saw the modern world and decided they didn’t like it.”

**Michael Adams
Founder, Environics**





Father of family must be master in his own house

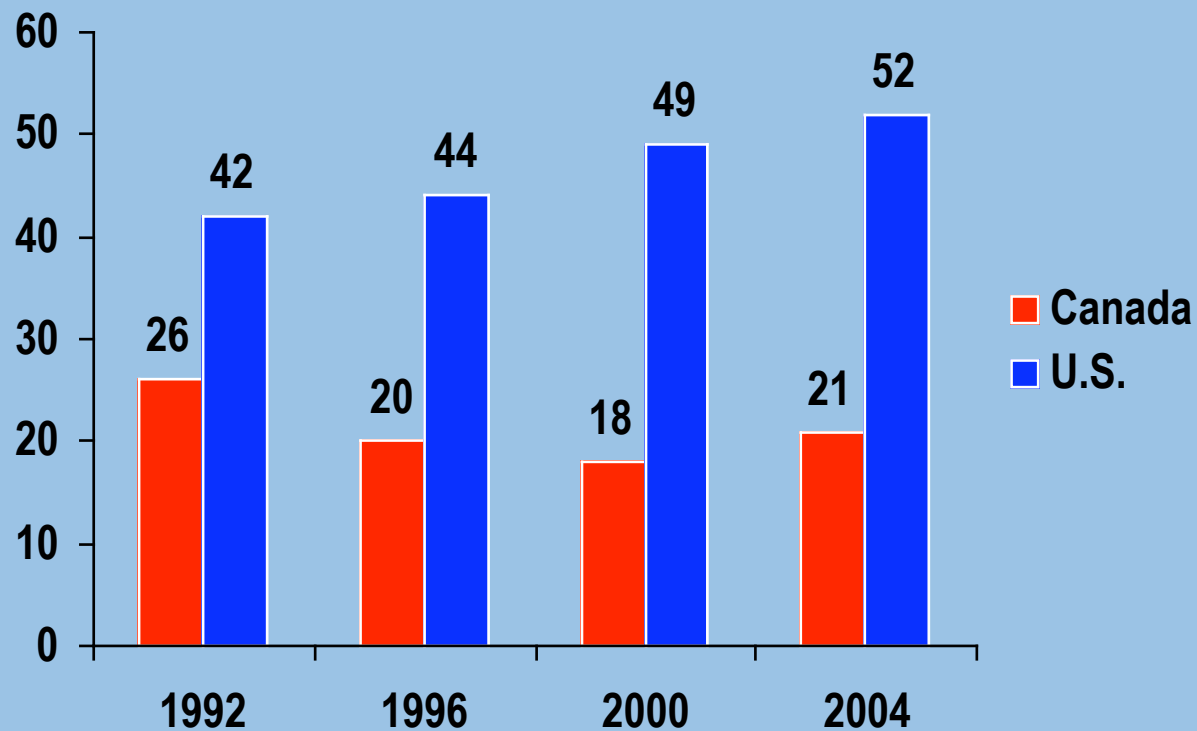
Canada and the United States - Agree 1992, 1996, 2000 & 2004





Father of family must be master in his own house

Canada and the United States - Agree 1992, 1996, 2000 & 2004





What are Social Values?

A person's mental posture or fundamental world view...that sets the context in which they react to situations, events, opportunities and challenges.

Formed early in life, usually fixed by one's mid-teens. Shaped by one's upbringing, family life, schooling, community and cultural influences.

*Social Values research courtesy of
American Environics and the Breakthrough Institute*



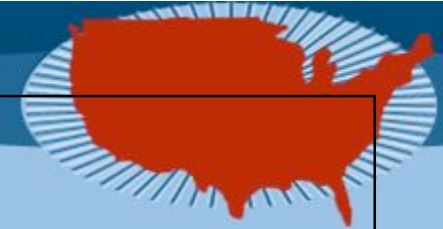
114 Social Values

- Acceptance of Violence
- Active Government
- Adaptability to Complexity
- Adaptive Navigation
- Advertising as Stimulus
- American Dream
- Anomie/Aimlessness
- Attraction for Crowds
- Aversion to Complexity
- Brand Apathy
- Buying on Impulse
- Celebrating Passages
- Civic Apathy
- Civic Engagement
- Community Involvement
- Concern for Appearance
- Confidence in Advertising
- Confidence in Big Business
- Confidence in Small Business
- Cultural Assimilation
- Culture Sampling
- Discerning Hedonism
- Discriminating Consumerism
- Duty
- Ecological concern
- Ecological Fatalism
- Effort Toward Health
- Emotional Control
- Enthusiasm for Technology
- Entrepreneurialism
- Equal Relationship with Youth
- Ethical Consumerism
- Everyday Ethics
- Everyday Rage
- Faith in Science
- Fatalism
- Fear of Violence
- Financial Security
- Flexible Families
- Flexible Gender Identity
- Gender Parity
- Global Consciousness
- Heterarchy
- Holistic Health
- Importance of Aesthetics
- Importance of Brand
- Importance of Spontaneity
- Intuition & Impulse
- Interest in the Unexplained
- Introspection & Empathy
- Joy of Consumption
- Just Deserts
- Largesse Oblige
- Living Virtually
- Look Good Feel Good
- Meaningful Moments
- More Power for Business
- More Power for Media
- More Power for Politics
- Multiculturalism
- Mysterious Forces
- National Pride
- Need for Status
- Recognition
- Networking
- Obedience to Authority
- Ostentatious Consumption
- Parochialism
- Patriarchy
- Penchant for Risk
- Personal Challenge
- Personal Control
- Personal Escape
- Personal Expression
- Primacy of the Family
- Propriety
- Protection of Privacy
- Pursuit of Intensity
- Racial Fusion
- Rejection of Authority
- Rejection of Order
- Religion a la Carte
- Religiosity
- Saving on Principle
- Search for Roots
- Selective Use of Personal Services
- Sensualism
- Sexism
- Sexual Permissiveness
- Skepticism of Advertising
- Social Responsibility
- Social Intimacy
- Spiritual Quest
- Technological Anxiety
- Time Stress
- Traditional Family
- Traditional Gender Identity
- Vitality
- Voluntary Simplicity
- Work Ethic
- Xenophobia



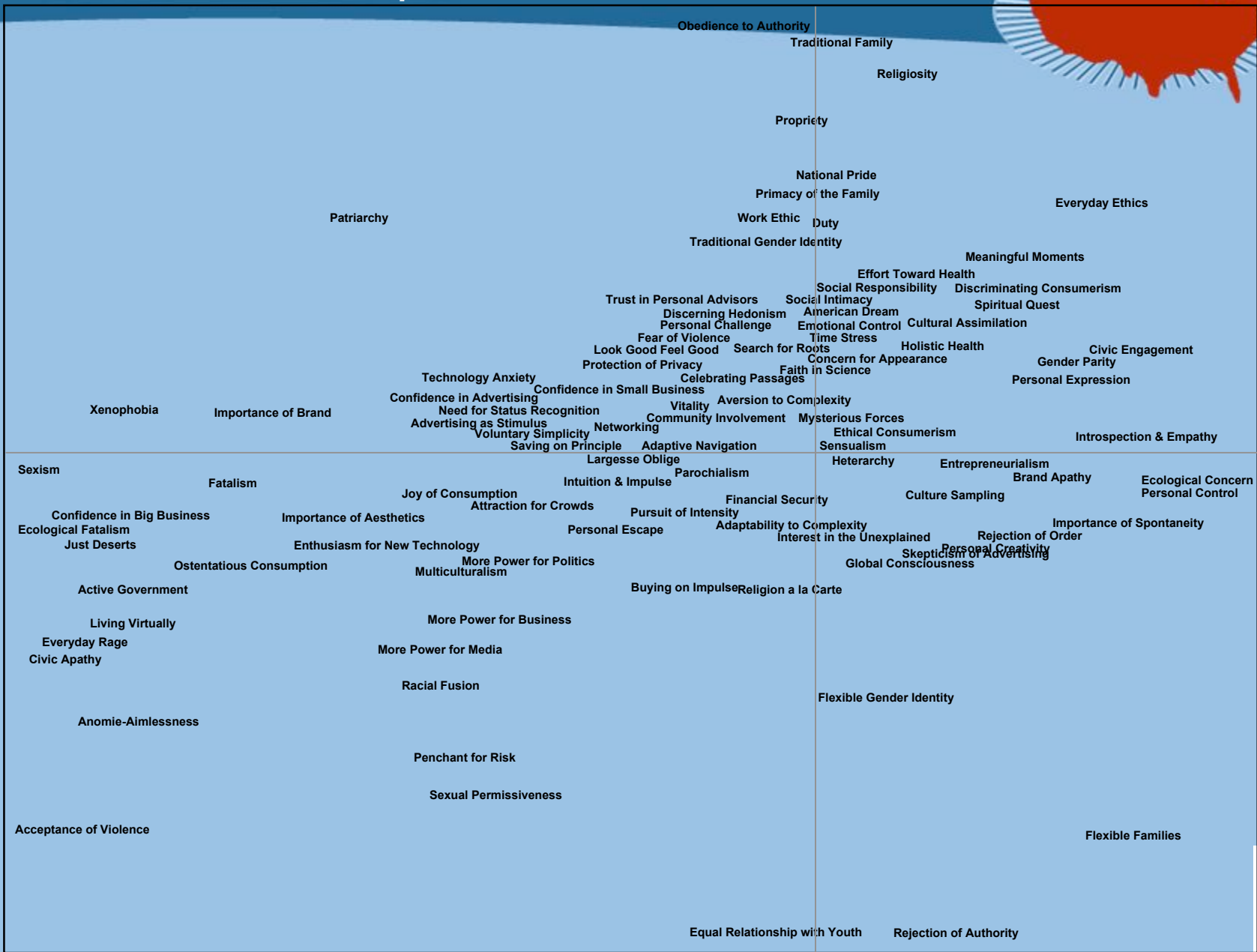
The U.S. Socio-Cultural Map

AUTHORITY



SURVIVAL

FULFILLMENT



INDIVIDUALITY



The U.S. Socio-Cultural Map



AUTHORITY



Status & Security



Authenticity & Responsibility

SURVIVAL

FULFILMENT



Exclusion & Intensity



Idealism & Autonomy

INDIVIDUALITY



AUTHORITY

Status & Security

Authenticity & Responsibility

Year of Study



SURVIVAL

FULFILMENT

1992

2000

1996

1992

1996

2000



Exclusion & Intensity

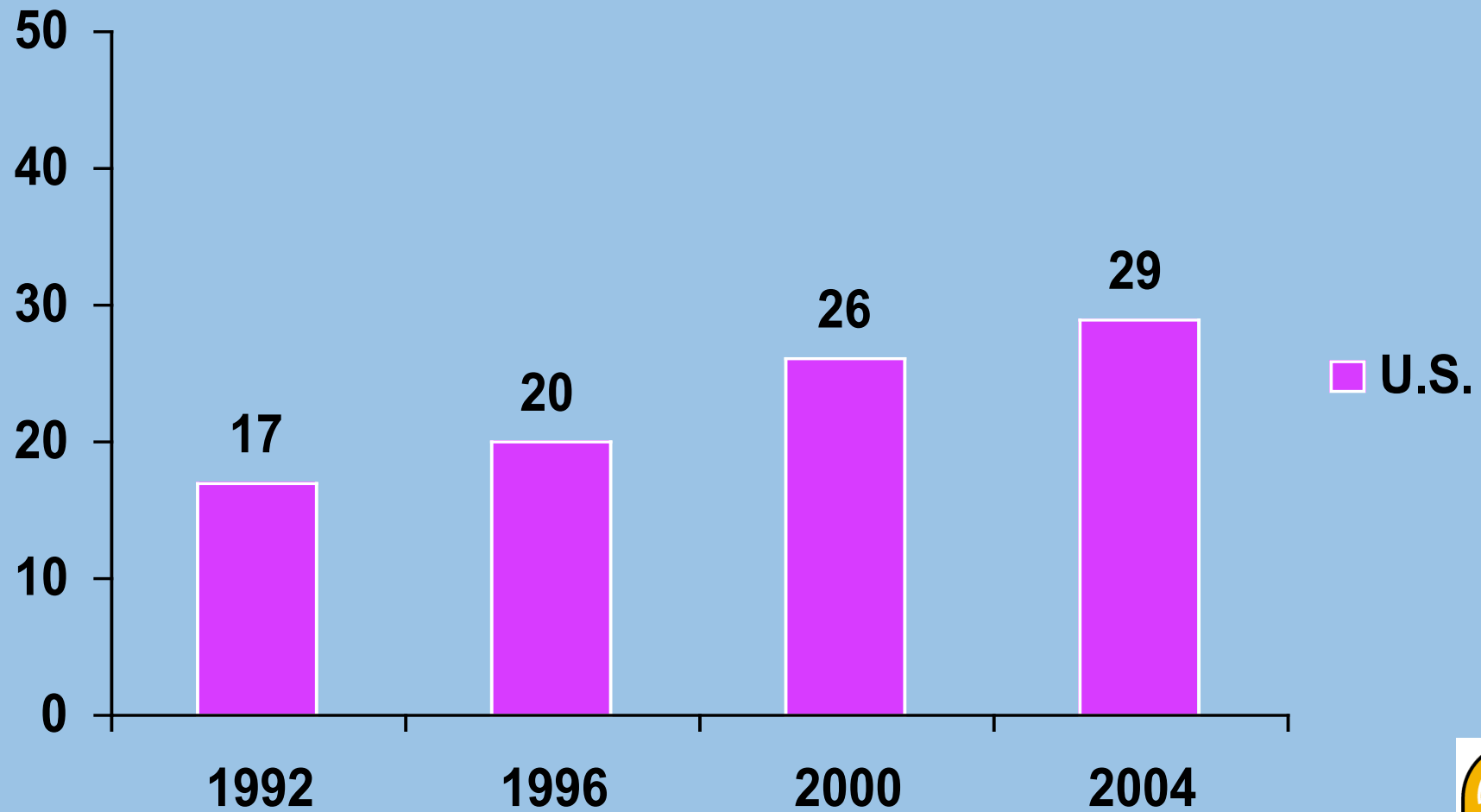
Idealism & Autonomy

INDIVIDUALITY



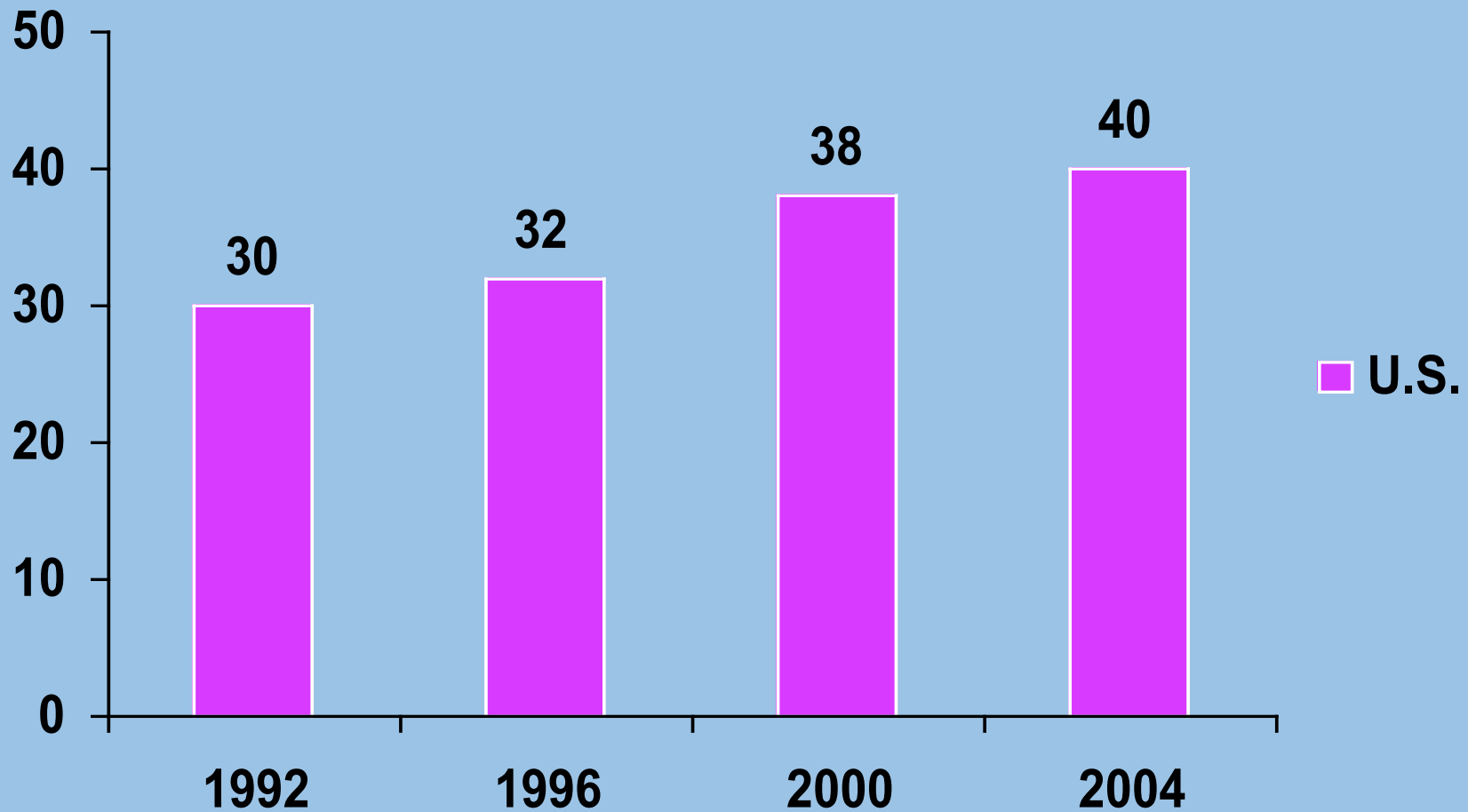


Pollution necessary to preserve jobs



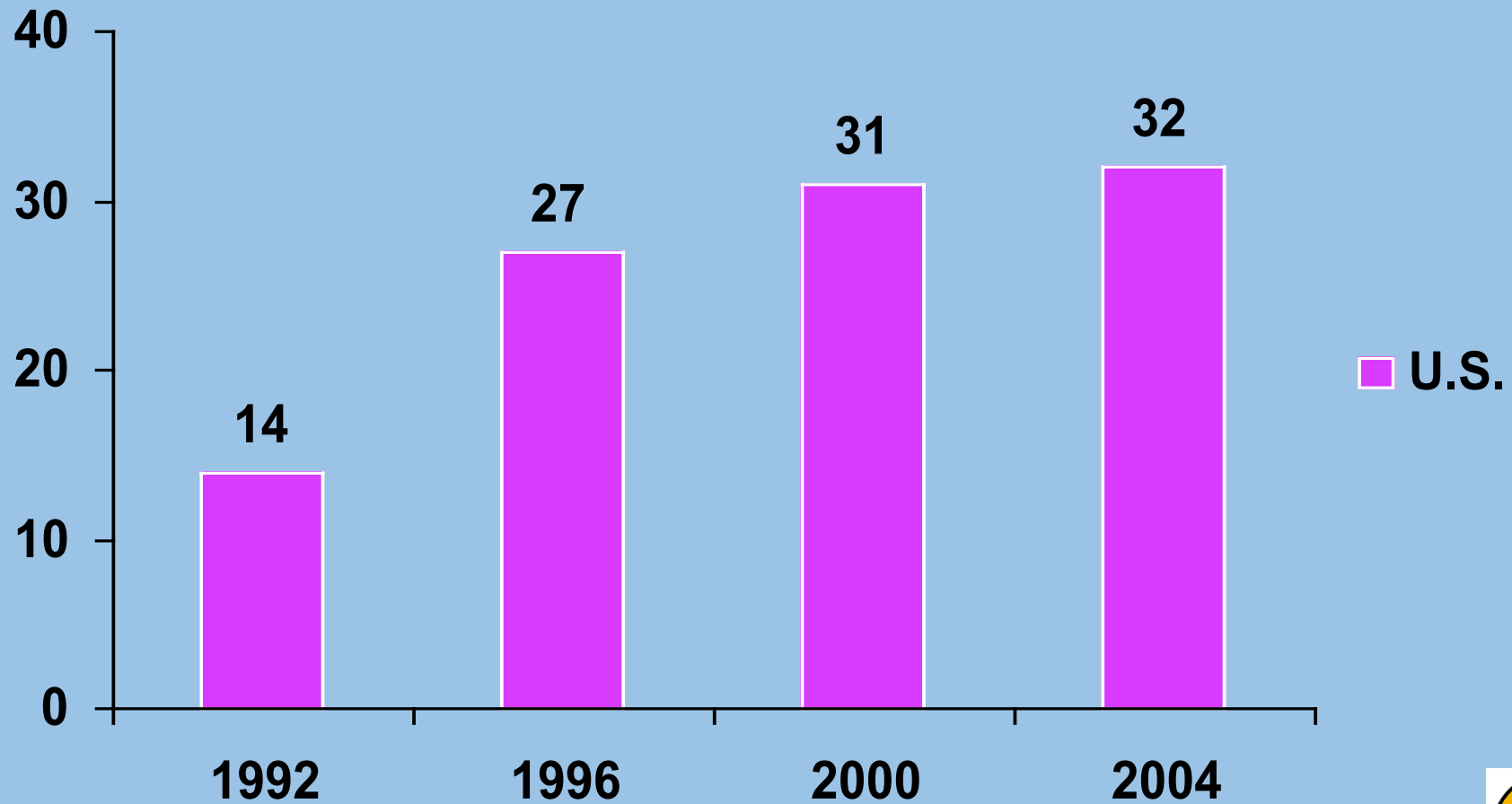


Men are naturally superior



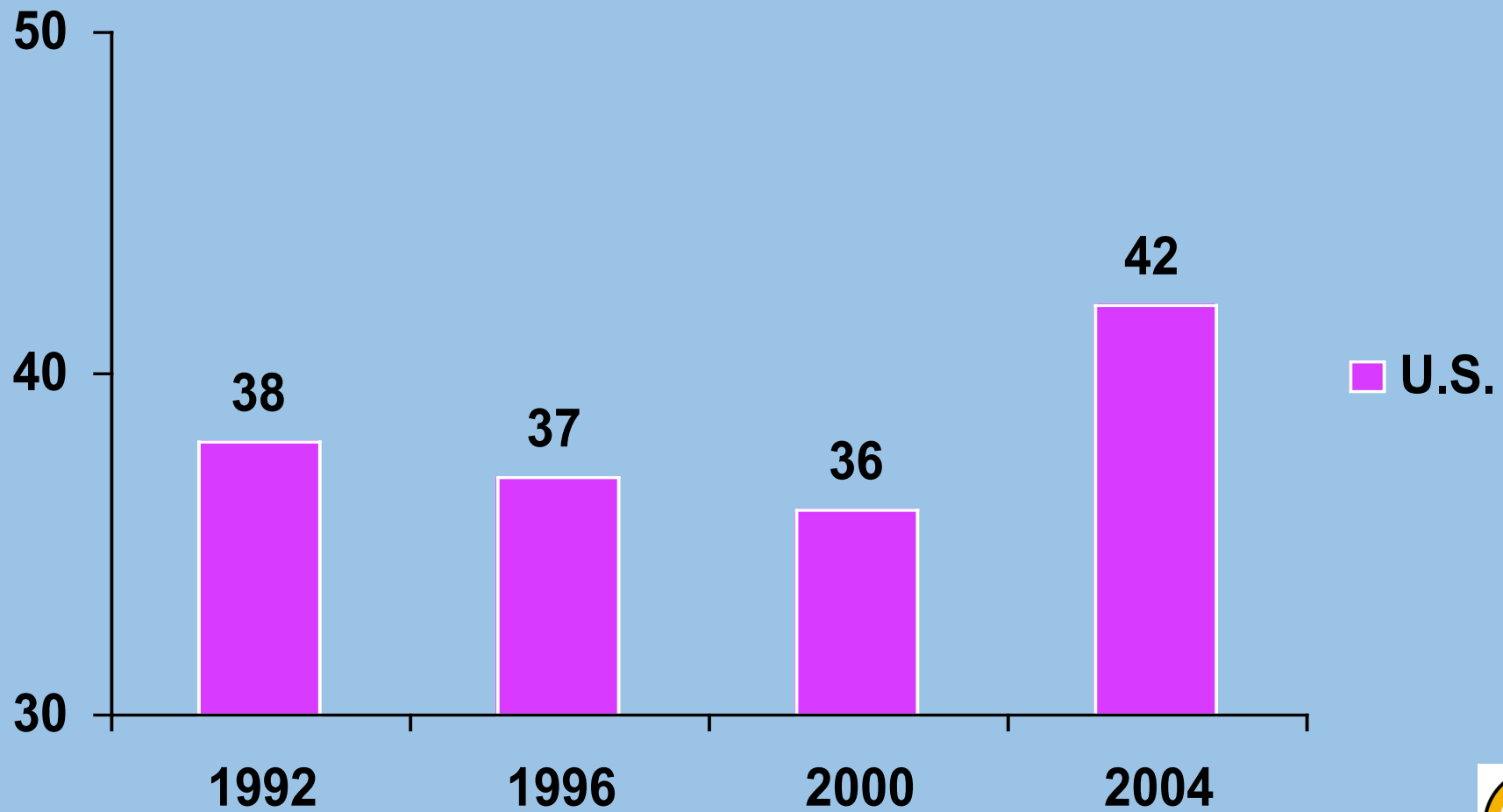


To relieve tension, a little violence is OK





Important that people admire things I own





Why?

- Diminishment of the American Dream
- Growth in American fundamentalism
- Middle-class economic malaise
- Response to technology





Where to from here?





#1 Don't Blow it

- World needs you to succeed
- Incredible opportunity to reduce human suffering
- Inspiring chance to expand the possible
- Encourage social regulation and debate





#2 Forget Buck Rogers

- “Organic Manufacturing”
- Growing rather than building
- Offer solutions not technologies





#3 Increase Investment

- Federal government is under-investing – 10-fold increase in public research needed
- With investments come responsibilities
- Don't underestimate climate change





“The 20th century will be chiefly remembered by future generations not as an era of political conflicts or technical innovations but as an age in which human society dared to think of the welfare of the whole human race as a practical objective.”
-- Arnold Toynbee

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