Europe will never be like America. Europe is a product of history. America is a product of philosophy.
(Margaret Thatcher)
What the Modern Age knew

New York, September 2001

Afghanistan, November 2001

Iraq, December 2003
What the Modern World knew

- Spread of democracy

(Economist, 2010)
What the Modern World knew

• The world powers
  – Before WWI: Austria, Ottomans, Holland, Germany, France, Britain, Russia, USA
  – After WWI: Holland, Germany, France, Britain, Soviet Union, USA
  – After WWII: USA, Soviet Union
  – After Cold War: USA
What the Modern World knew

- USA Economy of the 2000s

<table>
<thead>
<tr>
<th>Leading exporters in the world merchandise trade 2002</th>
<th>Leading importers in the world merchandise trade 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>Country</td>
</tr>
<tr>
<td>1</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
</tr>
<tr>
<td>4</td>
<td>France</td>
</tr>
<tr>
<td>5</td>
<td>China</td>
</tr>
<tr>
<td>6</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>7</td>
<td>Canada</td>
</tr>
<tr>
<td>8</td>
<td>Italy</td>
</tr>
<tr>
<td>9</td>
<td>Netherlands</td>
</tr>
<tr>
<td>10</td>
<td>Belgium</td>
</tr>
<tr>
<td>21</td>
<td>Sweden</td>
</tr>
<tr>
<td>Others</td>
<td>42,7</td>
</tr>
</tbody>
</table>

World: 100

What the Modern World knew

- USA Economy of the 2000s
  - 1948-68: The incomes of both the 10% richest people and the rest increase by 80% ("Bretton Woods age", average GDP growth 4%)
  - 1969-82: Income stagnation (4% real income decline across the board, 2.5% GDP growth and 6.8% inflation)
  - 1983-99: Rapidly widening income inequality with the 10% getting 106% richer and the rest stagnating at 17% richer (Ronald Reagan’s tax cuts + Paul Volcker’s high interest rates, 3.67% average GDP growth)
What the Modern World knew

• USA Economy of the 2000s
  – 2000-12: Income stagnation (Alan Greenspan’s stock market bubble and housing bubble, 1.6% average GDP growth, gold prices rising dramatically from Bretton Woods’ $35/oz to $1600/oz)
  – The income gains of the 10% richest between 1948 and 2012 outpace those of the rest by 205% to 72%
What the Modern World knew

- USA Economy of the 2000s

U.S. Trade in Goods and Services
1991-2005
(Balance of Payments Basis)

In US$Billions

Data Source: US Census Bureau Foreign Trade Division
http://www.census.gov/foreign-trade/statistics/historical/gands.txt
What the Modern World knew

- USA Economy of the 2000s
What the Modern World knew

- USA Economy of the 2000s

2005
Red = debtors
Blue = creditors
What the Modern World knew

- USA Economy of the 2000s

---

Crude Oil Prices
2007 Dollars

- OPEC 10% Quota Increase
- Asian Econ Crisis
- PDVSA Strike
- Iraq War
- Asian Growth
- Weaker Dollar
- Iranian Revolution
- Series of OPEC Cuts
- 4.2 Million Barrels
- Suez Crisis
- Yom Kippur War
- Oil Embargo
- Gulf War
- U.S. Price Controls
- 9/11

U.S. 1st Purchase Price (Wellhead)
"World Price"
Avg U.S. $24.98
Avg World $27.00
Median U.S. & World $19.04

http://www.wtrg.com
What the Modern World knew

CRUDE OIL PRICES
2006 DOLLARS

$100

$80

$60

$40

$20

$0

1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907

U.S. FIRST PURCHASE (Wellhead)  World Price

http://www.wtrg.com
What the Modern World knew

• USA Economy of the 2000s
  – Oil consumption

http://www.wtrg.com
What the Modern World knew

- USA Economy of the 2000s
  - Gas prices adjusted for inflation (1999 dollars)
    - 1950 $0.37/gallon
    - 1955 $0.53
    - 1960 $0.63
    - 1965 $0.76
    - 1970 $0.65
    - 1975 $1.05
    - 1980 $3.21
    - 1985 $3.72
    - 1990 $1.98
    - 1995 $1.50
What the Modern World knew

USA Economy of the 2000s

- Gas prices adjusted for inflation (2008)

[Graph of Gasoline Prices 1918-2008 Adjusted for Inflation]

- Inflation Adjusted Gas Price in 2008 Dollars
- Nominal Gas Price
- Average Annual Gas Price

Note: Prices are Average Annual prices not Peak Prices so peaks are smoothed out considerably

Source of Data: US Energy Information Administration
CPI-U Inflation index: www.bls.gov

http://www.inflationdata.com
What the Modern World knew

- USA Economy of the 2000s
  - Deflationary pressures
  - Information Technology leading to ever higher productivity
    - ERP, SCM, CRM, eCommerce
  - Soaring energy prices
  - Worldwide distribution of labor ("offsourcing")
  - Concentration of wealth at the top
  - Downward pressure on wages
What the Modern World knew

• USA Economy of the 2000s
  – Mechanization of agriculture yielded cheap agricultural products that ordinary folks could afford
  – Globalization of manufacturing yields cheap manufacturing goods that ordinary folks can afford
  – Emphasis on the ordinary person: mechanization and globalization are steps in the continuing process of making goods affordable for the ordinary person
What the Modern World knew

- USA Economy of the 2000s
  - USA population increased by 250% in the 20th century (Britain’s rose by less than 60%)
  - USA population grows faster than in China
What the Modern World knew

- Post Cold-War World

- Trade surplus
- Rising standards of living
- Increasing stability

Huge trade deficit
Collapsing currency
Decline standards of living
What the Modern World knew

**Persons on Payroll: 1980 to 2002**

<table>
<thead>
<tr>
<th>Company</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reynolds Tobacco</td>
<td>-90.2%</td>
</tr>
<tr>
<td>Exxon + Mobil*</td>
<td>-72.2%</td>
</tr>
<tr>
<td>General Motors</td>
<td>-53.1%</td>
</tr>
<tr>
<td>Chevron + Texaco*</td>
<td>-50.5%</td>
</tr>
<tr>
<td>Kodak</td>
<td>-46.0%</td>
</tr>
<tr>
<td>Xerox</td>
<td>-44.3%</td>
</tr>
<tr>
<td>Bristol-Myers + Squibb*</td>
<td>-43.9%</td>
</tr>
<tr>
<td>CSX Railroad</td>
<td>-43.0%</td>
</tr>
<tr>
<td>DuPont</td>
<td>-41.9%</td>
</tr>
<tr>
<td>Goodyear</td>
<td>-36.3%</td>
</tr>
<tr>
<td>Campbell Soups</td>
<td>-34.2%</td>
</tr>
<tr>
<td>Sears</td>
<td>-25.9%</td>
</tr>
<tr>
<td>Boeing</td>
<td>+55.3%</td>
</tr>
<tr>
<td>Procter &amp; Gamble</td>
<td>+67.2%</td>
</tr>
<tr>
<td>Pfizer</td>
<td>+137.9%</td>
</tr>
<tr>
<td>American Airlines</td>
<td>+144.2%</td>
</tr>
<tr>
<td>Hewlett-Packard</td>
<td>+147.4%</td>
</tr>
<tr>
<td>United Parcel Service</td>
<td>+224.3%</td>
</tr>
<tr>
<td>McDonald's</td>
<td>+253.0%</td>
</tr>
<tr>
<td>Intel</td>
<td>+395.0%</td>
</tr>
<tr>
<td>Federal Express</td>
<td>+2,620.6%</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>+4,714.8%</td>
</tr>
</tbody>
</table>

What the Modern World knew

- USA Federal budget 2003
What the Modern World knew

Chart 8-1. U.S. R&D Expenditures Exceed Those of the Rest of the G-7 Nations Combined

In billions of dollars (1999)

United States

Canada
Italy
United Kingdom
France
Germany
Japan

Source: National Science Foundation
What the Modern World knew

- USA debt (2003): $6.8 debt
- Debt per person: $24,000
What the Modern World knew

- USA dollar
What the Modern World knew

Household debt in G7
as % of personal disposable income, 2001

Source: OECD
What the Modern World knew

• USA in 2004: the world’s undisputed military and economic superpower
  – Global presence: maintains 700 military installations abroad
  – Military superpower: spends as much on defense as the next 20 nations combined
  – (but this is only 4% of its gross domestic product)
  – USA share of total world product is 30%, up from 20% in the 1980s
  – The American stock markets account for 36% of global market value
  – Power of Knowledge: 75% of all Nobel laureates in the sciences, economics, and medicine do research in the USA
What the Modern World knew

- USA - military spending

**How modest**
Military spending, 2013, $bn

<table>
<thead>
<tr>
<th>Country</th>
<th>Military Spending ($bn)</th>
<th>As % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>618.7</td>
<td>3.8</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td>4.1</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td></td>
<td>9.3</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Britain</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>India</td>
<td></td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: SIPRI

Economist.com
What the Modern World knew

• Great Recession (2008-10)
  – Low interest rates
    • The “dot-com” crash (2000): ~70% drop in the NASDAQ
    • The Federal Reserve lowers interest rates to 1%
    • The speculative frenzy shifts from the stock market to real estate
What the Modern World knew

• Great Recession (2008-10)
  – Affordable housing
    • The Community Reinvestment Act (1977) encourages banks to lend money to the poor
    • The Housing and Community Development Act (1992) requires government agencies Fannie Mae and Freddie Mac to provide affordable housing loans
    • Fannie Mae makes a “trillion-dollar commitment” (1993) to increase financing for affordable housing
What the Modern World knew

• Great Recession (2008-10)
  – Affordable housing
    • Loans to higher-risk borrowers
    • Subprime mortgages grow from 5% of total originations in 1994 to 20% ($600 billion) in 2006
    • Subprime lending in minority neighborhoods
  • 2007: The value of US subprime mortgages hits $1.3 trillion
What the Modern World knew

• Great Recession (2008-10)
  – Household debt
    • Housing bubble of the 2000s: housing prices nearly double between 2000 and 2006
    • However, between 2000 to 2007 the median household income stays flat
    • U.S. households become increasingly indebted: the ratio of debt to disposable personal income rises from 77% in 1990 to 127% at the end of 2007
What the Modern World knew

• Great Recession (2008-10)
  – Financial deregulation
    • Anti-regulatory crusader Phil Gramm's banking deregulation bill (1995) removes Depression-era barriers between commercial banks, investment banks, insurance companies, and securities firms
    • Phil Gramm's "Commodity Futures Modernization Act" (2000) deregulates "credit default swaps" (CDS)
    • Total investment by financial institutions in CDS by 2008: $65 trillion
    • Wall Street's financial innovations: mortgage-backed security (MBS) and collateralized debt obligation (CDO)
What the Modern World knew

- Great Recession (2008-10)
  - Crash and bailout
    - Sep 2008: Stock market crash and bank failures due to the vulnerability of CDS to troubled mortgages
    - Oct 2008: Lehman Brothers liquidated
    - Dec 2008: Treasury secretary Henry Paulson's "Emergency Economic Stabilization Act" rescues his former Wall Street colleagues
What the Modern World knew

• Great Recession (2008-10)
  – Crash and bailout
    • 2009-11: More than one million families lose their foreclosed homes (8% of all homes in the USA) and millions of people lose their jobs
    • 2006-12: US households lose over $7 trillion in home equity
    • 2005-09: Median wealth falls by 66% among Hispanic households, 53% among Black households, 16% among White households
    • 2009: Unemployment peaks at 10%
# What the Modern World knew

## Top companies by market capitalization in 2001

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Market Capitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Electric (USA)</td>
<td>455</td>
</tr>
<tr>
<td>2</td>
<td>Microsoft (USA)</td>
<td>316</td>
</tr>
<tr>
<td>3</td>
<td>Exxon Mobil (USA)</td>
<td>298</td>
</tr>
<tr>
<td>4</td>
<td>Pfizer (USA)</td>
<td>265</td>
</tr>
<tr>
<td>5</td>
<td>Citigroup (USA)</td>
<td>255</td>
</tr>
<tr>
<td>6</td>
<td>Wal-Mart Stores (USA)</td>
<td>231</td>
</tr>
<tr>
<td>7</td>
<td>Intel (USA)</td>
<td>224</td>
</tr>
<tr>
<td>8</td>
<td>BP Amoco (Britain)</td>
<td>198</td>
</tr>
<tr>
<td>9</td>
<td>American International Group (USA)</td>
<td>194</td>
</tr>
<tr>
<td>10</td>
<td>AOL Time Warner (USA)</td>
<td>190</td>
</tr>
<tr>
<td>11</td>
<td>IBM (USA)</td>
<td>187</td>
</tr>
<tr>
<td>12</td>
<td>Vodafone Group (Britain)</td>
<td>180</td>
</tr>
<tr>
<td>19</td>
<td>Royal Dutch Petroleum (Holland)</td>
<td>130</td>
</tr>
<tr>
<td>20</td>
<td>Coca-Cola (USA)</td>
<td>128</td>
</tr>
<tr>
<td>21</td>
<td>Toyota (Japan)</td>
<td>127</td>
</tr>
<tr>
<td>23</td>
<td>Nokia Oyj (Finland)</td>
<td>118</td>
</tr>
<tr>
<td>25</td>
<td>Philip Morris Companies (USA)</td>
<td>113</td>
</tr>
</tbody>
</table>
What the Modern World knew

- The largest companies of 2003 by revenues
  - Walmart  $260b
  - British Petroleum $230b
  - Exxon Mobil $220b
  - Royal Dutch Shell $200b
  - General Motors $190b
  - Ford $160b
  - Daimler Chrysler $150b
  - Toyota $150b
  - General Electric $130b
What the Modern World knew

- The largest companies of 2007 by revenues

The world’s biggest companies
Revenues, 2007, $bn

- Wal-Mart Stores (US) $12.7
- Exxon Mobil (US) $40.6
- Royal Dutch Shell (Netherlands) $31.3
- BP (Britain) $20.8
- Toyota Motor (Japan) $15.0
- Chevron (US) $18.7
- ING Group (Netherlands) $12.6
- Total (France) $18.0
- General Motors (US) $38.7
- ConocoPhillips (US) $11.9
- Daimler (Germany) $5.4
- General Electric (US) $22.2

Source: Fortune
What the Modern World knew

• The World’s top car manufacturers in 2003
  – General Motors: 8.59 million
  – Toyota: 6.78 million
  – Ford: 6.54
  – Volkswagen: 5.02
  – Daimler-Chrysler: 4.36
  – PSA/Peugeot/Citroen: 3.29
  – Hyundai: 3.05
  – Nissan: 2.97
  – Honda: 2.91
  – Renault: 2.39
What the Modern World knew

- The World’s top car manufacturers in 2008
  - Toyota (Japan)
  - General Motors (USA)
  - Volkswagen (Germany)
  - Hyundai (Korea)
  - Ford
  - Honda
What the Modern World knew

- USA auto market (2008)

AUTOMAKERS' U.S. MARKET SHARE
Full-year figures; 2009 is Jan. through Aug.

Source: MotorIntelligence.com
THE NEW YORK TIMES
What the Modern World knew

Unequal shares

World defence spending
% of total, 2006

- US: 45.7%
- Britain: 5.1%
- France: 4.6%
- China: 4.3%
- Japan: 3.8%
- Germany: 3.2%
- Russia: 3.0%
- India: 2.1%
- Rest of world: 28.3%

Total: $1.2trn*

Sources: SIPRI; IMF WEO; UN World Population Prospects

World GDP
% of total, 2006

- US: 27.5%
- Britain: 4.9%
- France: 4.6%
- China: 5.5%
- Japan: 9.1%
- Germany: 6.0%
- Russia: 2.0%
- India: 1.8%
- Rest of world: 38.6%

Total: $48.2trn

World population
% of total, 2005

- US: 4.6%
- Britain: 0.9%
- France: 0.9%
- China: 20.2%
- Japan: 2.0%
- Germany: 1.3%
- Russia: 2.2%
- India: 17.4%
- Rest of world: 50.5%

Total: 6.5bn

*2005 prices
What the Modern World knew

Debt grew in most mature economies

Domestic private and public sector debt\(^1\) by country
% of GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>CAGR(^2), %</th>
<th>Change, p.p.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>UK(^3)</td>
<td>3.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Spain</td>
<td>4.1</td>
<td>7.4</td>
</tr>
<tr>
<td>S. Korea</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>France</td>
<td>1.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Italy</td>
<td>2.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Switzerland</td>
<td>N/A</td>
<td>0.8</td>
</tr>
<tr>
<td>US</td>
<td>0.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Germany</td>
<td>5.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Canada</td>
<td>0.3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

1 "Debt" is defined as all credit market borrowing including loans and fixed-income securities.
2 Compound annual growth rate. Where data are unavailable, the longest possible period is used.
3 Even after removing foreign lending by UK banks, UK debt/GDP remains higher than every country except Japan.

SOURCE: Central banks; Haver Analytics; McKinsey Global Institute
What the Modern Age knew

• Flattening of the world
  – The fall of the European empires after World War II creates dozens of independent countries
  – The new countries experiment with fascism and communism, the two systems promoted by the two superpowers USA and Soviet Union, both fearful of democracy during the Cold War
  – Both systems create a lot of poverty around the world
  – The fall of communism (1989) turns most poor countries into democratic capitalist countries
What the Modern Age knew

• Flattening of the world
  – Because they are poor, these countries offer a very cheap labor force
  – Because labor is cheaper there, Western multinationals offsource jobs to the developing world
  – Progress in computers (personal computers) and telecommunications (the Internet) speeds up this process
  – Fundamentally, communism was a blessing to capitalism because it created so much poverty worldwide for capitalists to exploit
What the Modern Age knew

• Flattening of the world
  – Collapse of communism turns the whole world into one giant capitalist economy
  – Lower cost of computers and of telecommunications turn every household into a consumer and producer of digital content
  – Internet and World-wide Web vastly increase the ability to communicate digital information
  – Low wages in the developing world foster outsourcing of Western jobs
  – It is not only capitalism that spreads worldwide but also high-tech and lifestyle
What the Modern Age knew

• The Asian century
  – 1945: A former European colony (USA) wins the world war
  – The old order (Europe ruling the world) makes no more sense
  – Asian and African colonies gain independence from Europe
  – Japan, Taiwan, Korea, former European colonies and eventually China abandon the European model and adopt the USA model
  – The new Asian nations begin to outperform Europe
What the Modern Age knew

• The Asian century
  – 1970: Japan overtakes all European countries and becomes the third economic power after USA and USSR
  – 2007: China overtakes all European countries and becomes the third economic power after USA and Japan
What the Modern Age knew

The Asian century

Source: International Monetary Fund

ANNUAL G.D.P.

$15 trillion

projections

UNITED STATES

JAPAN

CHINA

ANNUAL PER CAPITA G.D.P.

$50,000

UNITED STATES

JAPAN

projections

CHINA

THE NEW YORK TIMES
What the Modern Age knew

- GDP per capita

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>$38,972</td>
</tr>
<tr>
<td>Japan</td>
<td>$38,559</td>
</tr>
<tr>
<td>Brunei</td>
<td>$37,053</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>$30,755</td>
</tr>
<tr>
<td>South Korea</td>
<td>$19,505</td>
</tr>
<tr>
<td>Taiwan</td>
<td>$17,040</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>$8,502</td>
</tr>
<tr>
<td>Malaysia</td>
<td>$8,141</td>
</tr>
<tr>
<td>Thailand</td>
<td>$4,115</td>
</tr>
<tr>
<td>China</td>
<td>$3,315</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$2,246</td>
</tr>
</tbody>
</table>
What the Modern Age knew

• The Asian century
  – The Age of the Pacific
    • Japan, China, Asean, Australia, India
    • The combined gross product of Asian-Pacific countries increases from 7.8% of world GDP in 1960 to 16.4% in 1982 and to over 20% in 2000
    • USA trade shifts from Europe to Asian-Pacific
What the Modern Age knew

• The Asian century
  – The Age of the Pacific

The Asia-Pacific region is now the engine room of world economic growth. By 2015, it is forecast that Asia’s economies will account for 45 per cent of world GDP (PPP*), significantly more than the United States and Europe combined.

(Economist, May 2006)
What the Modern Age knew

• The Asian century
  – The Age of the Pacific

Steel production (tonnes 2005)
What the Modern Age knew

• The Asian century
  – The Age of the Pacific
    • USA, China, India in 2007
What the Modern Age knew

- The Asian century
What the Modern Age knew

• The Asian century
  – China:
    • Socialist market economy: free-market economic reforms are overseen by the communist one-party state
    • 11% yearly GDP growth rate in the 2000s
- The Asian century
  - China: the largest dictatorship in the world is providing its citizens with the best education in the world.
What the Modern Age knew

- The Asian century
  - China vs Japan

<table>
<thead>
<tr>
<th>Armed forces</th>
<th>Japan</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submarines</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>Destroyers</td>
<td>41</td>
<td>27</td>
</tr>
<tr>
<td>Fighters</td>
<td>310</td>
<td>1,320</td>
</tr>
<tr>
<td>Battle tanks</td>
<td>876</td>
<td>9,840</td>
</tr>
<tr>
<td>Active personnel</td>
<td>237,000</td>
<td>2,255,000</td>
</tr>
</tbody>
</table>

Military expenditure:
- Japan: $46.3bn (0.9% of GDP)
- China: $86.2bn (2% of GDP)

Source: SIPRI

Source: IHS Jane's
What the Modern Age knew

- The Asian century

<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Population</th>
<th>Per capita GDP</th>
<th>GDP*</th>
<th>Fortune Global 500 companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New York</td>
<td>19.4 mln</td>
<td>$73,300</td>
<td>$16,500,000,000</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>London</td>
<td>8.6 mln</td>
<td>$65,800</td>
<td>$16,500,000,000</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Tokyo</td>
<td>36.7 mln</td>
<td>$41,300</td>
<td>$16,500,000,000</td>
<td>51</td>
</tr>
<tr>
<td>4</td>
<td>Paris</td>
<td>10.5 mln</td>
<td>$56,900</td>
<td>$16,500,000,000</td>
<td>34</td>
</tr>
<tr>
<td>5</td>
<td>Hong Kong</td>
<td>7.1 mln</td>
<td>$44,000</td>
<td>$16,500,000,000</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Chicago</td>
<td>9.2 mln</td>
<td>$63,300</td>
<td>$16,500,000,000</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Los Angeles</td>
<td>12.7 mln</td>
<td>$62,900</td>
<td>$16,500,000,000</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Singapore</td>
<td>4.8 mln</td>
<td>$47,900</td>
<td>$16,500,000,000</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Sydney</td>
<td>4.4 mln</td>
<td>$48,900</td>
<td>$16,500,000,000</td>
<td>3</td>
</tr>
</tbody>
</table>

*Source: Foreign Affairs*
What the Modern Age knew

- The Asian century
  - Middle East
What the Modern Age knew

• The Asian century
  – Middle East
What the Modern Age knew

• The Asian century

Investment in Parts of Asia Is Growing Fast...

Factory investment continues to pour into China, but foreign investment is rising even faster in neighboring Vietnam and India. Nearby Thailand has attracted somewhat less investment because of worries about its political stability.

Foreign direct investment

<table>
<thead>
<tr>
<th>Country</th>
<th>'04</th>
<th>'07</th>
<th>Change from '06</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>50</td>
<td>80</td>
<td>+14%</td>
</tr>
<tr>
<td>India</td>
<td>20</td>
<td>40</td>
<td>+72%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>10</td>
<td>20</td>
<td>+136%</td>
</tr>
<tr>
<td>Thailand</td>
<td>30</td>
<td>20</td>
<td>-25%</td>
</tr>
</tbody>
</table>

Note: Data is for mainly manufacturing investments and seldom includes investments to buy securities, real estate or service sector businesses.

Sources: China Ministry of Commerce; India Secretariat for Industrial Assistance; Vietnam General Administration of Foreign Trade; Thailand Ministry of Finance.
What the Modern Age knew

• The Asian century
  – Revival of the city-state: Singapore, Dubai
  – Revival of the multi-ethnic state: USA, Western Europe, Russia, China, India (exceptions: Islamic world, Japan, South Korea, Latin America)
What the Modern Age knew

- Exporting the American dream/ Part3
  - 2002: Japan and South Korea combined deliver 75% of the world's shipbuilding
  - 2002: South Korea's Samsung is the second semiconductor manufacturer in the world after Intel and Japan's Toshiba is third, passing Texas Instruments
  - 2004: "Taipei 101" in Taiwan becomes the tallest building in the world
  - 2005: The Ambani brothers of India split their business empire
  - 2005: China's Lenovo acquires IBM's personal computer business
  - 2006: Lakshmi Mittal's Luxembourg-based ArcelorMittal is world's largest steel-maker
What the Modern Age knew

- Exporting the American dream/ Part3
  - 2007: The world's largest vendors of personal computers are HP, Dell, Taiwan's Acer, China's Lenovo and Japan's Toshiba
  - 2008: India’s Tata acquires Jaguar
  - 2009: Anil Ambani and Mukesh Ambani of India are the 6th and 7th richest persons in the world, having built Reliance into a business conglomerate
  - 2009: India's Infosys sets up the largest corporate university in the world at Mysore
  - 2009: Japan's Toyota overtakes General Motors to become the largest car maker in the world
  - Nov 2009: Mainland China is the largest auto market in the world
What the Modern Age knew

• Exporting the American dream/ Part 3
  – 2010: South Korea's Hyundai-Kia passes Ford to become the fourth automaker in the world after Toyota, General Motors and Volkswagen
  – 2010: India's Bharti Airtel is the 5th largest telecom operator in the world
  – 2010: Lakshmi Mittal is the richest person in Europe
  – 2010: Taiwan’s Quanta Computer is the largest manufacturer of notebook computers in the world
  – 2011: India’s exports of goods are double the exports of services (textiles and agricultural products account for less than 20%)
What the Modern Age knew

- Russia
What the Modern Age knew

- Russia
  - Loss of member states
  - Loss of allies
  - NATO and EU expansions
What the Modern Age knew

• NATO
What the Modern Age knew

- Russia
  - Chechnya
  - Georgia (South Ossetia and Abkhazia)
  - Moldova (Transdnestr)
  - Ukraine (Crimea)
What the Modern Age knew

- Russia
  - Former sphere of influence
What the Modern World knew

- Economic boom of the Third World

GDP per-capita 2006

GDP growth 2006
What the Modern World knew

- Economic boom of the Third World
  - For centuries, western European economies had been able to realize bigger profits than the economies of Asia, Africa, Latin America
  - During the Cold War, the regimes of developing countries were pawns in the war, more interested in power than in economics
  - With the end of the Cold War, the more democratic new regimes of developing countries focused on the economy and profit
  - At the same time, western Europe focused less on economics and more on social welfare
What the Modern World knew

• Economic boom of the Third World
  – The profits of developing countries started rising faster than the profits of western Europe
  – For the first time in centuries, the economies of developing countries grew faster than the western European economies
  – Exception: Latin America
What the Modern World knew

• Economic boom of the Third World
  – Exports
What the Modern World knew

• Economic boom of the Third World
  – Poverty

![Poverty Chart]

Source: World Bank, World Development Indicators
What the Modern World knew

• Latin America
  – Spared the two world wars and the Islamic war
  – but a casualty of the Cold War
  – Fragile democracies and frequent military coups
  – The army as the ethical protector of the state
  – Anti-American sentiment (Mexico, Argentina)
  – Constantly flirting with communism (Cardenas, Castro, Allende, Chavez)
What the Modern World knew

• Latin America: Free-trade treaties
What the Modern World knew

- World GDP
What the Modern World knew

- World trade
What the Modern World knew
What the Modern World knew

The 2012 Legatum Prosperity Index
What the Modern World knew

- From communication technology to world peace
What the Modern World knew

- World’s population in 2000 (official census):
  - China: 1,261,832,482
  - India: 1,014,003,817
  - United States: 275,562,673
  - Indonesia: 224,784,210
  - Brazil: 172,860,370
  - Russia: 146,001,176
  - Pakistan: 141,553,775
  - Bangladesh: 129,194,224
  - Japan: 126,549,976
  - Nigeria: 123,337,822
What the Modern World knew

- World’s population in 2000:
  - 1. China 1,286,975,468
  - 2. India 1,049,700,118
  - 3. USA 290,342,554
  - 4. Indonesia 234,893,453
  - 5. Brazil 182,032,604
  - 6. Pakistan 150,694,740
  - 7. Russia 144,526,278
  - 8. Bangladesh 138,448,210
  - 9. Nigeria 133,881,703
  - 10. Japan 127,214,499
  - 11. Mexico 104,907,991
  - 12. Philippines 84,619,974
  - 13. Germany 82,398,326
  - 14. Vietnam 81,624,716
  - 15. Egypt 74,718,797
  - 16. Iran 68,278,826
  - 17. Turkey 68,109,469
  - 18. Ethiopia 66,557,553
  - 19. Thailand 64,265,276
  - 20. France 60,180,529
  - 21. Britain 60,094,648
  - 22. Italy 57,998,353
  - 23. Congo 56,625,039
What the Modern World knew

- **World’s population**
  - 1950 2,555,982,611  Growth rate: 1.47%
  - 1960 3,039,433,944
  - 1970 3,706,601,448  Growth rate: 2%
  - 1980 4,453,863,820
  - 1990 5,277,725,410
  - 2000 6,081,002,937
  - 2050 9,309,051,539  Growth rate: 0.5%

U.S. Census Bureau 2007
What the Modern World knew

<table>
<thead>
<tr>
<th>World’s population</th>
<th>World’s population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  India  1,807,878,574</td>
<td>16 Vietnam  107,772,641</td>
</tr>
<tr>
<td>2  China  1,424,161,948</td>
<td>17 Japan  93,673,826</td>
</tr>
<tr>
<td>3  USA  420,080,587</td>
<td>18 Sudan  88,227,761</td>
</tr>
<tr>
<td>4  Nigeria  356,523,597</td>
<td>19 Turkey  86,473,786</td>
</tr>
<tr>
<td>5  Indonesia  313,020,847</td>
<td>20 Afghanistan  81,933,479</td>
</tr>
<tr>
<td>6  Bangladesh  279,955,405</td>
<td>21 Iran  81,490,039</td>
</tr>
<tr>
<td>7  Pakistan  277,554,980</td>
<td>22 Germany  73,607,121</td>
</tr>
<tr>
<td>8  Brazil  228,426,737</td>
<td>23 Yemen  71,278,172</td>
</tr>
<tr>
<td>9  Congo  203,039,557</td>
<td>24 France  69,809,351</td>
</tr>
<tr>
<td>10  Mexico  147,907,650</td>
<td>25 Thailand  69,268,817</td>
</tr>
<tr>
<td>11  Philippines  147,630,852</td>
<td>26 Tanzania  66,843,312</td>
</tr>
<tr>
<td>12  Ethiopia  144,716,331</td>
<td>27 Kenya  65,175,864</td>
</tr>
<tr>
<td>13  Uganda  128,007,514</td>
<td>28 Colombia  64,977,344</td>
</tr>
<tr>
<td>14  Egypt  127,563,256</td>
<td>29 Britain  63,977,435</td>
</tr>
<tr>
<td>15  Russia  109,187,353</td>
<td>30 Madagascar  56,513,827</td>
</tr>
<tr>
<td></td>
<td>31 Iraq  56,360,779</td>
</tr>
<tr>
<td></td>
<td>32 Burma  54,430,334</td>
</tr>
<tr>
<td></td>
<td>33 Nepal  53,293,874</td>
</tr>
<tr>
<td></td>
<td>34 Morocco  50,871,553</td>
</tr>
<tr>
<td></td>
<td>35 Italy  50,389,841</td>
</tr>
<tr>
<td></td>
<td>36 Saudi Arabia  49,706,851</td>
</tr>
</tbody>
</table>
What the Modern World knew

- World’s population
  - The Christian world
    - Russia -35 million
    - Germany -9 million
    - France +9 million but mostly ethnic
    - Britain +3 million but mostly ethnic
    - Italy -7 million
    - ...
  - USA +130 million
What the Modern World knew

• World’s population
  – At current GDP and population growth or decrease the Christian world will have a very high GDP per capite, the African and Middle Eastern countries will have a very low GDP per capite and in many cases not enough resources to feed their population
  – Pressure on emigration towards Europe from Africa and the Middle East
  – Bangladesh and Pakistan will have more people than the whole of Europe including Russia
What the Modern World knew

Metropolitan areas
(in thousands)
2003

<table>
<thead>
<tr>
<th>City</th>
<th>Metropolitan Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tôkyô</td>
<td>31 240.1</td>
</tr>
<tr>
<td>New York-Philadelphia</td>
<td>30 441.9</td>
</tr>
<tr>
<td>México</td>
<td>21 503.7</td>
</tr>
<tr>
<td>Seoul</td>
<td>20 156.8</td>
</tr>
<tr>
<td>São Paulo</td>
<td>19 194.1</td>
</tr>
<tr>
<td>Jakarta</td>
<td>18 206.7</td>
</tr>
<tr>
<td>Ōsaka-Kôbe-Kyôto</td>
<td>17 648.9</td>
</tr>
<tr>
<td>Dilli</td>
<td>17 367.3</td>
</tr>
<tr>
<td>Mumbai</td>
<td>17 340.9</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>16 895.9</td>
</tr>
<tr>
<td>al-Qahira</td>
<td>16 244.7</td>
</tr>
<tr>
<td>Kolkata</td>
<td>14 362.5</td>
</tr>
<tr>
<td>Manila</td>
<td>14 083.3</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>13 238.6</td>
</tr>
<tr>
<td>Moskva</td>
<td>12 622.4</td>
</tr>
<tr>
<td>Shanghai</td>
<td>12 190.0</td>
</tr>
<tr>
<td>Rio de Janeiro</td>
<td>11 629.6</td>
</tr>
<tr>
<td>Tehrân</td>
<td>11 475.1</td>
</tr>
<tr>
<td>Paris</td>
<td>11 367.2</td>
</tr>
<tr>
<td>Rhein-Ruhr</td>
<td>11 291.1</td>
</tr>
<tr>
<td>London</td>
<td>11 229.2</td>
</tr>
<tr>
<td>Chicago-Milwaukee</td>
<td>11 098.6</td>
</tr>
</tbody>
</table>

http://www.gazetteer.de/st/statn.htm
What the Modern World knew

Where the living is pricey
Average price of flats in city centres
2007 latest, $’000, per sq metre

London: 108.2
New York: 66.5
Paris: 46.3
Hong Kong: 44.1
Tokyo: 46.4
Singapore: 27.5
Mumbai: 28.2
Geneva: 30.1
Zurich: 23.2
Frankfurt: 18
Shanghai: 21.5
Brussels: 17.2

Source: Global Property Guide
What the Modern Age knew

• Urbanization
  – 2007: Worldwide urban population passes 50%. The human race has become an urban race.
What the Modern Age knew

- Urbanization and wealth
What the Modern Age knew

• Supranationalism
  – European Union
  – ASEAN
  – Arab League
  – African Union
  – NAFTA

• Foreign aid by Western countries to non-Western countries (that share no linguistic, ethnic or religious bonds with the donors)
What the Modern Age knew

- Age of tourism
  - 2006: Tourism is the biggest industry in the world
    (11% of GDP, almost 9% of employment)
What the Modern Age knew

• Decline of religion
  – Europe: Reformation
    • leads to economic and military boom
  – Russia: Communism
    • leads to military boom and then (after the fall of communism) to economic boom
  – China: Communism
    • leads to military boom and then (after the fall of communism) to economic boom
  – India: 2000s
  – Islamic world: ?
The world’s abortion laws

*Prohibited altogether*
*Permitted to protect life and health*
*Permitted to protect mental health as well*
*Permitted on socio-economic grounds as well*
*Least restrictive*

Source: Centre for Reproductive Rights

Note: for more detailed information about additional grounds for abortion, by country, visit reproductiverights.org
What the Modern Age knew

• Condoleezza Rice's transformational diplomacy
  – Crash-program to democratize the world
    • Focus on the Arab world (least democratized region of the world)
  – Stop the spread of weapons of mass destruction
    • Alliance with other powers (EU, Russia, China) to disarm smaller countries (Arabs, Iran, North Korea)
  – Preemptive strike
    • Irrelevance of the United Nations
What the Modern Age knew

- **Nuclear powers of the 2000s**

  ![Graph showing strategic nuclear warheads around the world.](SOURCE: Federation of American Scientists; Nuclear Threat Initiative)
The Century of Women

Doctorate Degrees Awarded to Women in Selected Disciplines, 1966-2004
(Percentage of All Doctorate Degrees Awarded)
Gender Gap

More and more men are getting degrees in computer science. The number of women is rising less sharply.

Source: National Science Foundation
What the Modern Age knew

• The agricultural revolution spawned a food revolution
  – Overabundance of food
  – Prepared food
  – Genetically-modified crops
  – Obesity
  – Cardiovascular diseases
  – Diets
  – Gymns
What the Modern Age knew

- The food chain
What the Modern Age knew

- Biotech food

Most transgenic crop plantings are in the U.S. (below left), but since 2000, plantings have increased faster in developing nations than in industrial ones (below middle). A small number of crops and kinds of modification account for almost all the production (right).
What the Modern Age knew

**HUNGER HOT SPOTS**

The great majority of the world's underfed live in rural areas of developing countries. The highest percentage (see map below) are in Africa, although the Asia-Pacific region has the largest absolute number of poor and food-insecure people. Drought is the leading cause of hunger worldwide; in recent years, however, armed conflicts are precipitating an increasing number of food crises.

Scientific American
What the Modern Age knew

**OBESITY SPREADS ACROSS THE GLOBE**

People who are overweight (possessing a body mass index, or BMI, of 25 or higher) or obese (a BMI of 30 or higher) are now just as common in many developing countries as they are in the U.S., Canada and Europe. In large parts of Latin America, North Africa and the Middle East, the problem has triggered an upsurge in diabetes, heart disease and other illnesses. Obesity rates are also rising quickly in China, India and other Asian nations.
What the Modern Age knew

• Ethics of greed
  – 61% of USA Christians believe that God wants people to be wealthy (Time poll, 2006)
  – Prosperity Theology (mostly Pentecostal churches)
  – Megachurches for baby boomers
    • Joel Osteen's Lakewood in Houston
    • T.D. Jakes' Potter's House in south Dallas
    • Creflo Dollar's World Changers in Atlanta
  – Scientology
What the Modern Age knew

• USA crises of the 2000s
  – Afghanistan (Taliban)
  – Iraq (Saddam Hussein)
  – North Korea (nuclear program)
  – Iran (nuclear program)
  – Venezuela (leftist regime supporting other leftist regimes in Latin America)
What the Modern Age knew

- USA crises of the 2000s (as of August 2009)

### Longest Wars
Duration of major conflicts fought by the United States. On Thursday, the war in Afghanistan passes the 8-year mark.

- Vietnam War: 102 months
- American Revolution: 100 months
- Afghanistán War: 96 months
- Iraq War: 80 months
- U.S. Civil War: 48 months
- World War II: 45 months
- Korean War: 37 months
- War of 1812: 32 months
- U.S.-Mexican War: 21 months
- World War I: 20 months
- Spanish-American War: 3 months
- Persian Gulf War: 2 months

Source: Congressional Research Service
What the Modern Age knew

• Islamic terrorism
  – Afghanistan (1980s, after Soviet Union invasion)
  – Chechnya (1990s, after Russian crackdown on separatists)
  – Pakistan (2002, after being expelled from Afghanistan)
  – Iraq (2003, after USA invasion)
  – Somalia (2007, after Ethiopian invasion)
  – Yemen (2009, after being expelled from Pakistan)
What the Modern Age knew

- Islamic terrorism
What the Modern Age knew

- Islamic terrorism
  - Moscow (Sep 1999)
  - New York & Washington (Sep 2001)
  - Bali (Oct 2002)
  - Russia (2002-04)
  - Casablanca (May 2003)
  - Riyadh (May 2003)
  - Istanbul (Nov 2003)
  - Madrid (Mar 2004)
  - Iraq (2004-09)
  - London (Jul 2005)
  - Sharm el-Sheik (Jul 2005)
  - Amman (Nov 2005)
  - Afghanistan (2006-09)
  - Mumbai (Nov 2008)
  - Pakistan (2008-09)
Mars, January 2004

Husband Hill, Mars, September 2005
The first galaxies that developed after the Big Bang
(Hubble Telescope, 2004)
What the Modern Age knew

- Space Exploration
  - 2000: First mission to the International Space Station
  - 2001: the Voyager leaves the solar system
  - 2003: several unmanned space-crafts land on Mars
What the Modern World knew
What the Modern World Knew

• Net Economy
  – Amazon
  – Priceline
  – Ebay
  – Yahoo, Google
  – Evite
  – Craigslist
  – Skype
  – Snapfish
  – Travelocity, Priceline
  – Netflix
  – MySpace, Facebook, Twitter
What the Modern World Knew

• Net Economy
  – Death of the salesman
What the Modern World Knew

- Net Economy
  - Losers
    - Bookstores
    - Record stores
    - Travel agencies
    - Newspapers
    - TV News
What the Modern World Knew

- Net Society
  - E-commerce: decline of the brick-and-mortar store
  - E-mail: first innovation in written personal communication since the invention of mail
  - World-wide web: largest knowledge base in history
  - News websites: first major innovation in newscasting since tv news
What the Modern World Knew

• Net Society
  – Ultimate product of the USA’s concept of society
  – Little centralized state control
  – Individual creativity and enterprising spirit
  – Self-organizing Darwinian system
  – The state adapts to technological innovation, not vice versa
What the Modern World Knew

• Net Society
  – Social networking
Facebook in 2010, when it passed 500 million users
What the Modern World Knew
What the Modern World Knew

- New appliances
  - Ipod
  - Cellular phone
  - Blackberry
  - Play Station
What the Modern World Knew

- New appliances
What the Modern World Knew

• New appliances/ Age of the selfie
What the Modern World Knew

• How teenagers spend their time in the USA (2010)

Kaiser Family Foundation
What the Modern World Knew

- Computing
  - Computing spread from the mainframe (IBM world, 1960-70s) to the PC (Microsoft world, 1980-90s) to the Internet (Google world, 2000s), to the wireless mobile devices (? world)
What the Modern Age knew

- Skyscrapers
  - Taipei 101 Taipei 509m 2003
  - World Financial Center Shangai 460m 2005
  - Petronas Towers Kuala Lumpur 452m 1998
  - Asia Plaza Kaoshiung Taipei 431m 2008
  - Jin Mao Tower Shanghai 421m 1998
  - CITIC Plaza Guangzhou 391m 1997
  - Shun Hing Square Shenzhen 384m 1996
  - Central Plaza Hong Kong 374m 1992
  - Bank of China Tower Hong Kong 369m 1989
  - Emirates Office Tower Dubai 355m 2000
  - The Centre Hong Kong 350m 1998
  - Tuntex & Chien-Tai Tower Kaohsiung 348m 1997
What the Modern Age knew

- Skyscrapers
Skyscrapers

Dubai: www.scaruffi.com/monument/arabia/dubai.html
Hong Kong
New York
Shanghai
What the Modern Age knew

- Taipei 101
- Petronas Towers
- Freedom Tower
- Jongno Tower, Seoul
What the Modern Age knew

- Willis (formerly Sears) Tower
  - Chicago
  - 1974
  - 1,451 feet

- Petronas Towers
  - Malaysia
  - 1998
  - 1,483 feet

- Shanghai World Financial Center
  - Shanghai
  - 2008
  - 1,614 feet

- Taipei 101
  - Taiwan
  - 2004
  - 1,667 feet

- 1 World Trade Center
  - New York City
  - Under construction
  - 1,776 feet

- Shanghai Tower
  - Shanghai
  - Under construction
  - 2,073 feet

- Burj Khalifa
  - United Arab Emirates
  - 2010
  - 2,717 feet
What the Modern Age knew

- Norman Foster’s Millau bridge in southern France (2004)
What the Modern Age knew

- David Fisher’s rotating skyscraper in Dubai
What the Modern Age knew

- AIDS: 39.4 million people have AIDS in the world (UNAIDS, 2003)
  - North America 1
  - Latin America 2.1
  - Western Europe 0.6
  - Eastern Europe 1.4
  - East Asia 1.1
  - South Asia 7.1
  - North Africa/Middle East 0.5
  - Black Africa 25.4
What the Modern Age knew

- Leftists seize power in South America
What the Modern Age knew

• Anti-Americanism
  – Demagogues
    • Fidel Castro of Cuba
    • Hugo Chavez of Venezuela
    • Mahmoud Ahmadinejad of Iran
    • Vladimir Putin of Russia
    • Osama Bin Laden of Al Qaeda
What the Modern Age knew

• Anti-Americanism
  – Axis of evil and affiliates
    • Kim Jong II of North Korea
    • Sadr of Syria
    • Sudan
    • Burma
    • Belarus
What the Modern Age knew

- Zeitgeist
  - General pessimism about the human mission, despite rising standards of living, spreading democracy, fewer wars
  - Concerns about this planet (climate change, bad government, employment, pollution) prevail over dreams of other planets
2004 Tsunamis
What the Modern Age knew

• 2005 Elections in Iraq

Interim prime minister Iyad Allawi congratulating elected prime minister Ibrahim al-Jaafari
What the Modern Age knew

• 2005 Death of Pope Giovanni Paolo II
What the Modern Age knew

- Car bombings in Iraq
What the Modern Age knew

• Suicide bombings in Iraq

![Civilian Casualties in Iraq](chart)

- Al Qaeda bombed the Golden Mosque

<table>
<thead>
<tr>
<th>Year</th>
<th>May-05</th>
<th>Jul-05</th>
<th>Sep-05</th>
<th>Nov-05</th>
<th>Jan-06</th>
<th>Mar-06</th>
<th>May-06</th>
<th>Jul-06</th>
<th>Sep-06</th>
<th>Nov-06</th>
<th>Jan-07</th>
<th>Mar-07</th>
<th>May-07</th>
<th>Jul-07</th>
<th>Sep-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kills</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td>1000</td>
<td>1100</td>
<td>1200</td>
<td>1300</td>
<td>1400</td>
<td>1500</td>
</tr>
</tbody>
</table>

Note: The chart shows the number of civilian casualties in Iraq from May 2005 to September 2007. The peak in March 2006 is due to the bombing of the Golden Mosque by Al Qaeda.
What the Modern Age knew

EXECUTIONS AROUND THE WORLD 2006

- USA: 53
- Iran: 177
- Iraq: 65+
- Syria: 2
- Jordan: 4+
- Egypt: 4+
- Saudi Arabia: 39+
- Sudan: 65+
- Pakistan: 82
- Mongolia: 3
- China: 1,010
- Kuwait: 10+
- Yemen: 30+
- Bahrain: 3
- Uganda: 2
- Singapore: 5+
- Somalia: 7+
- Vietnam: 14
- North Korea: 2
- Malaysia: 4
- Indonesia: 3+

World total: 1,591

Also: 3
Bangladesh: 1
Botswana: 1
Equatorial Guinea: 1

“+” indicates figure may be higher

SOURCE: Amnesty International
What the Modern Age knew

- Location of the Cygnus X-1 black hole

(NASA 2004)
What the Modern Age knew

• First photography of a non-solar planet

(NASA 2005)
What the Modern Age knew

• Water on Titan

(NASA 2006)
What the Modern Age knew

- Suicide bombings

(Economist 2008)
What the Modern Age knew

• African democracy

(Economist 2008)
What the Modern Age knew

- **Fertility rates**

(Economist 2014)
What the Modern Age knew

- Africa/ Congo

Congo’s Conflict Minerals Supply Chain

Eastern Congo: Armed groups control mines and transit routes, buy weapons, perpetrate violence

East Asia: Smelting or chemical processing companies process minerals into metals

East Asia/Europe: Manufacturing companies who make tin solder, capacitors, tinplate

U.S., Europe: Sold to consumers in cell phones, music players, and digital cameras

Rwanda/Uganda/Kenya
Minerals transported to refiners/smelters. Main actors: European metals traders

East Asia: Circuit board manufacturing companies place metals onto circuit boards
155
What the Modern Age knew

• Frank Gehry’s design for Los Angeles 2009
What the Modern Age knew

- Abu Dhabi’s Saadiyat Cultural Center
- www.scaruffi.com/monument/arabia/saadiyat.htm
Global warming and the Arctic Sea

Drill, Baby, Drill? A U.S. Geological Survey report estimates that the Arctic holds 90 billion barrels of undiscovered oil and 1,670 trillion cubic feet of natural gas. The Sholtokman Field alone, in Russian waters, contains enough natural gas to power the U.S. electrical grid for six years, and may soon help Gazprom become the world's largest company.

Polar Express: The fabled Northwest Passage opened this summer for the second time in history—and the second year in a row. The Northeast Passage (also called the Northern Sea Route) over Europe first fully opened in 2005; shipping is already extensive in that region, particularly in the Barents Sea. Yet both routes, sought by ancient mariners, are likely to be used for only a few years. By 2025, if not before, most ships in the Arctic will likely sail straight over the pole, avoiding coastal-state jurisdictions and shaving still more miles off their journeys. Much of the world's international shipping will reorient itself as a result.

The New Entrepôts: Singapore's location, amid key shipping lanes from East Asia to Europe, has enabled the country to become the richest in Southeast Asia. As sea lanes like the Bering and Davis straits become busier, port towns like tiny Dutch Harbor, Alaska (population 4,000), and Hammerfest, Norway (population 9,000), are likely to grow from out-of-the-way fishing depots into key shipping hubs. Russia recently committed $1 billion to port development in Murmansk. Places like Singapore or Panama (which is currently investing more than $5 billion to expand its canal) may see trade disappear from their doorsteps.

(Geographical) Freedom: Drilling ice is revealing up to 31 billion barrels of oil and natural gas off Greenland's eastern coast, plus signs of enormous mineral deposits—gold, diamonds, zinc, and more—on land. Keen to establish their rights to these resources, 57,000 Greenlanders (most of whom live in Nuuk, whose territory has been protected by Denmark since 1721, will vote this month on a referendum for self-rule. Greenland will probably become the first country born from climate change.

Snow Forts: To defend its claims in the Arctic, Canada plans to build a deepwater naval port in Nanisivik and a new cold-weather combat training center in Resolute Bay, while also expanding satellite surveillance. Other countries are ratifying sabers in the region. Russia, for example, has resumed strategic bomber flights over the Arctic and last summer dispatched two military vessels to the disputed waters off the Svalbard Islands.

Atlantic Monthly, October 2008
• **Nuclear Energy**

![World map showing nuclear energy infrastructure](image)

- Operating reactors, building new reactors
- Operating reactors, planning new build
- No reactors, building new reactors
- No reactors, planning new build
- Operating reactors, stable
- Operating reactors, considering phase-out
- Civil nuclear power is illegal
- No reactors
What the Modern Age knew

- Renewable Energy

Share of power fueled by renewable energy other than large hydropower, 2009

Sources include wind, solar, biomass and waste, geothermal, ocean and small-scale hydropower. Large-scale hydropower is sometimes excluded from tallies of renewable energy because of its environmental impact.
What the Modern Age knew

- Financial crisis of October 2008

A Primer on the Financial Crisis

The boom

1. Interest Rates Fall
   In the aftermath of the bursting of the technology bubble in 2000, the Federal Reserve lowers its benchmark interest rates to 1 percent, from 6.5 percent, over two years. Strong foreign demand for American securities pushes down long-term interest rates.

2. Securitization
   At the same time, Wall Street packages more mortgages and other consumer debt into securities for investors like pension funds, foreign central banks and hedge funds. Bankers assert that these instruments — mortgage-backed securities and collateralized debt obligations — will help reduce and disperse risks.

3. Risky Loans
   Encouraged by low rates and securitization, banks and mortgage companies take bigger risks in home lending by allowing homeowners to borrow more, put little or no money down and not prove credit of their financial condition.

4. Home Prices Rise
   Low interest rates and advent of more risky loans help drive up home prices, which nearly double from 2000 to 2006. The run-up is greatest in California, Florida, Arizona and Nevada.

The bust

5. Prices Fall
   With interest rates rising and homeownership at record levels, prices start to dip in the second half of 2006. The decline start in places like San Diego, where prices jumped the most during the boom.

6. Defaults Increase
   As more homeowners are unable to refinance or sell their depreciating homes, defaults on mortgages climb. The first signs of trouble emerge among subprime loans but they quickly move to supposedly better-quality loans.

Crisis: With defaults rising and real estate prices falling, the value of mortgage securities falls rapidly and investors leave the market. Banks take more than $500 billion in write downs and the International Monetary Fund estimates losses could top $1 trillion.

7. Troubles Spiral
   As losses rise, firms like Lehman Brothers have more difficulty raising capital and investors lose confidence. Banks tighten lending standards, squeezing the economy and the financial system in a self-perpetuating cycle.

Sources: Federal Reserve, Thomson Reuters, Standard & Poor’s, Mortgage Bankers Association, Bloomberg

(New York Times, 15 Sep 2008)
What the Modern Age knew

- Financial crisis of October 2008

<table>
<thead>
<tr>
<th>Key Indexes</th>
<th>At close 10/10/2008</th>
<th>Change</th>
<th>% change</th>
<th>1 month</th>
<th>1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE 100-BRITAIN</td>
<td>3,932.06</td>
<td>-381.74</td>
<td>-8.85%</td>
<td>-26.73%</td>
<td>-41.53%</td>
</tr>
<tr>
<td>DAX GERMANY</td>
<td>4,544.31</td>
<td>-342.69</td>
<td>-7.01%</td>
<td>-26.83%</td>
<td>-43.43%</td>
</tr>
<tr>
<td>CAC 40-FRANCE</td>
<td>3,176.49</td>
<td>-266.21</td>
<td>-7.73%</td>
<td>-25.85%</td>
<td>-45.82%</td>
</tr>
<tr>
<td>Micex RUSSIA</td>
<td>700.37</td>
<td>0.00</td>
<td>0.00%</td>
<td>-37.17%</td>
<td>-62.12%</td>
</tr>
<tr>
<td>Nikkei 225-JAPAN</td>
<td>8,276.43</td>
<td>-881.06</td>
<td>-9.62%</td>
<td>-32.97%</td>
<td>-52.59%</td>
</tr>
<tr>
<td>Hang Seng-HONG KONG</td>
<td>14,796.87</td>
<td>-1,146.37</td>
<td>-7.19%</td>
<td>-26.01%</td>
<td>-49.21%</td>
</tr>
<tr>
<td>Shanghai Composite CHINA</td>
<td>2,000.57</td>
<td>-74.01</td>
<td>-3.57%</td>
<td>-6.98%</td>
<td>-66.17%</td>
</tr>
<tr>
<td>Bovespa-BRAZIL</td>
<td>35,609.54</td>
<td>-1,470.76</td>
<td>-3.97%</td>
<td>-28.25%</td>
<td>-42.98%</td>
</tr>
</tbody>
</table>

Dow Jones

-25%

(New York Times, October 10)
What the Modern Age knew

- Financial crisis of October 2008

(Economist, October 2008)

That sinking feeling

Stockmarkets, October 1st 2007=100

Source: Thomson Datastream
What the Modern Age knew

- **Financial crisis of october  2008**

<table>
<thead>
<tr>
<th>3-MONTH CHANGE AGAINST THE U.S. DOLLAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEST PERFORMERS</strong></td>
</tr>
<tr>
<td>Hong Kong dollar</td>
</tr>
<tr>
<td>Chinese yuan</td>
</tr>
<tr>
<td>Thai baht</td>
</tr>
<tr>
<td>Argentine peso</td>
</tr>
<tr>
<td>Indonesian rupiah</td>
</tr>
<tr>
<td>Peruvian new sol</td>
</tr>
<tr>
<td>Taiwanese dollar</td>
</tr>
<tr>
<td>Singaporean dollar</td>
</tr>
<tr>
<td>Malaysian ringgit</td>
</tr>
<tr>
<td><strong>WORST PERFORMERS</strong></td>
</tr>
<tr>
<td>Colombian peso</td>
</tr>
<tr>
<td>Mexican peso</td>
</tr>
<tr>
<td>Turkish new lira</td>
</tr>
<tr>
<td>South Korean won</td>
</tr>
<tr>
<td>Brazilian real</td>
</tr>
<tr>
<td>Hungarian forint</td>
</tr>
<tr>
<td>Polish zloty</td>
</tr>
<tr>
<td>South African rand</td>
</tr>
<tr>
<td>Icelandic krona</td>
</tr>
</tbody>
</table>

*Source: Bloomberg*
What the Modern Age knew

(Dow Jones)
What the Modern Age knew

- USA elections of November 2008
What the Modern Age knew

- USA elections of November 2008
Breakdown of 1,840 suicide attacks worldwide, December 1981 through mid-March 2008

**ATTACKS AGAINST AMERICANS**

- **April 18, 1983** U.S. Embassy, Beirut
  - 63 people killed
  - A delivery van exploded outside the embassy.
  - Pro-Iranian group Islamic Jihad took responsibility for the blast.

- **Oct. 23, 1983** Marine peacekeepers, Beirut
  - 241 killed
  - Two truck bombs struck barracks that housed U.S. and French members of the Multinational Force in Lebanon. Islamic Jihad took responsibility.

- **Dec. 20, 1983** U.S. Embassy annex, Beirut
  - 7 killed
  - A truck bomb detonated outside the embassy’s administrative annex. Islamic Jihad and Islamic Dawa took responsibility.

- **Sept. 20, 1984** U.S. Embassy annex, Beirut
  - 23 killed
  - The embassy was moved to another location after the 1983 attack. A car bomb exploded outside the annex.

- **Nov. 13, 1995** U.S.-Saudi military training facility, Riyadh
  - 6 killed
  - The Islamic Movement of Change activated two car bombs outside a building used to train the Saudi National Guard.

- **June 25, 1996** Khobar Towers U.S. military housing, Saudi Arabia
  - 19 killed
  - Members of Hizballah Al-Hijaz blew up a fuel truck next to a building housing foreign and U.S. military personnel.

- **Aug. 7, 1998** U.S. Embassies, Kenya and Tanzania
  - 224 killed
  - Simultaneous car bomb explosions at both embassies were linked to local members of al-Qaeda.

- **Oct. 12, 2000** USS Cole Aden Harbor, Yemen
  - 17 killed
  - A small boat driven by al-Qaeda suicide bombers approached the vessel’s port side during a routine fuel stop. The small boat then exploded.

- **Sept. 11, 2001** World Trade Center, Pentagon and Pennsylvania
  - 2,988 killed
  - Four commercial airliners were hijacked by members of al-Qaeda and used in coordinated suicide attacks targeting prominent buildings.

- **May 12, 2003** Foreign-housing compounds, Riyadh, Saudi Arabia
  - 34 killed
  - Four car bombs attributed to al-Qaeda detonated simultaneously outside three housing compounds that contained Americans and other Westerners.

**TOTAL DEATHS**

- 6,000
- 2,000
- 100

**TOTAL ATTACKS**

- 1981
- 1982
- 1983
- 1984
- 1985
- 1986
- 1987
- 1988
- 1989
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008

**WASHINGTON POST**
What the Modern Age knew

• USA 2009
What the Modern Age knew

- Burj Dubai (2010)
What the Modern Age knew

• Knowledge
What the Modern Age knew

• Geoffrey Miller (2000)
  – Sexual selection caused the human brain to grow very rapidly
  – Art, literature and music are by-products of sexual selection (not useful for survival but for reproduction purposes)
What the Modern Age knew

- Peter Gardenfors (2003)
  - How self-conscious beings came to be: first sensations, then attention, then emotions, then memory, then internal representations, then planning, then the self, then free will and finally language
  - Perceptions (the interpretation of sensations, which are representations directly related to the world) vs "detached" representations (representations about something that is present here and now)
  - Detached representations allow a being to "become increasingly detached from the immediate vicinity"
What the Modern Age knew

- Peter Gardenfors (2003)
  - The self presupposes a you
  - The "I" emerges from a network of inter-related cognitive functions
  - Language came last: human language is very much about the "I" and the "you"
  - Language is an emergent property of cognitive systems (it is a natural evolution of cognitive skills that preexisted it)
What the Modern Age knew

• James Surowiecki (2004)
  – A crowd of random individuals is likely to make certain predictions and judgment better than the most expert individuals
What the Modern Age knew

- Thomas Friedman (2005)
  - Globalization has leveled the competitive playing fields between industrial and emerging countries
What the Modern Age knew

- Thomas Friedman (2005)
  - Triple convergence
    - Around the year 2000 all of the flatteners converged with one another
    - Businesses began collaborating horizontally
    - Communist countries adopted capitalism
What the Modern Age knew

- John Hagel (2009)
  - The world is shifting from an economy in which the strategic advantage was in protecting and extracting value from knowledge into an economy in which the focus of value creation is effective participation in knowledge flows which are constantly being renewed
  - Knowledge is depreciating at an accelerating pace
  - Social media allow to build richer knowledge networks that connect with partners and customers
What the Modern Age knew

• Ballet
  – Paulo Henrique (Portugal): “Contract with the Skin” (2000)
  – Igloo (Bruno Martelli and Ruth Gibson, Britain): "Winter Space" (2001)
What the Modern Age knew

- Ballet
  - Pam Tanowitz "Four Quartets" (2018)
What the Modern Age knew

• “No one has any questions because we all have too many questions” (Jennifer Dean, former student of this class)
What the Modern Age knew
Piero Scaruffi
Copyright 2018
http://www.scaruffi.com/know