

17.181/17.182
SUSTAINABLE DEVELOPMENT
Week 7 Outline
Technology, Firms & Markets

- 1. SOME REMINDER**
- 2. COMPLEXITIES of GLOBALIZATION**
- 3. GLOBAL INVESTMENTS**
 - Firms and Markets**
 - States, Firms, and Markets**

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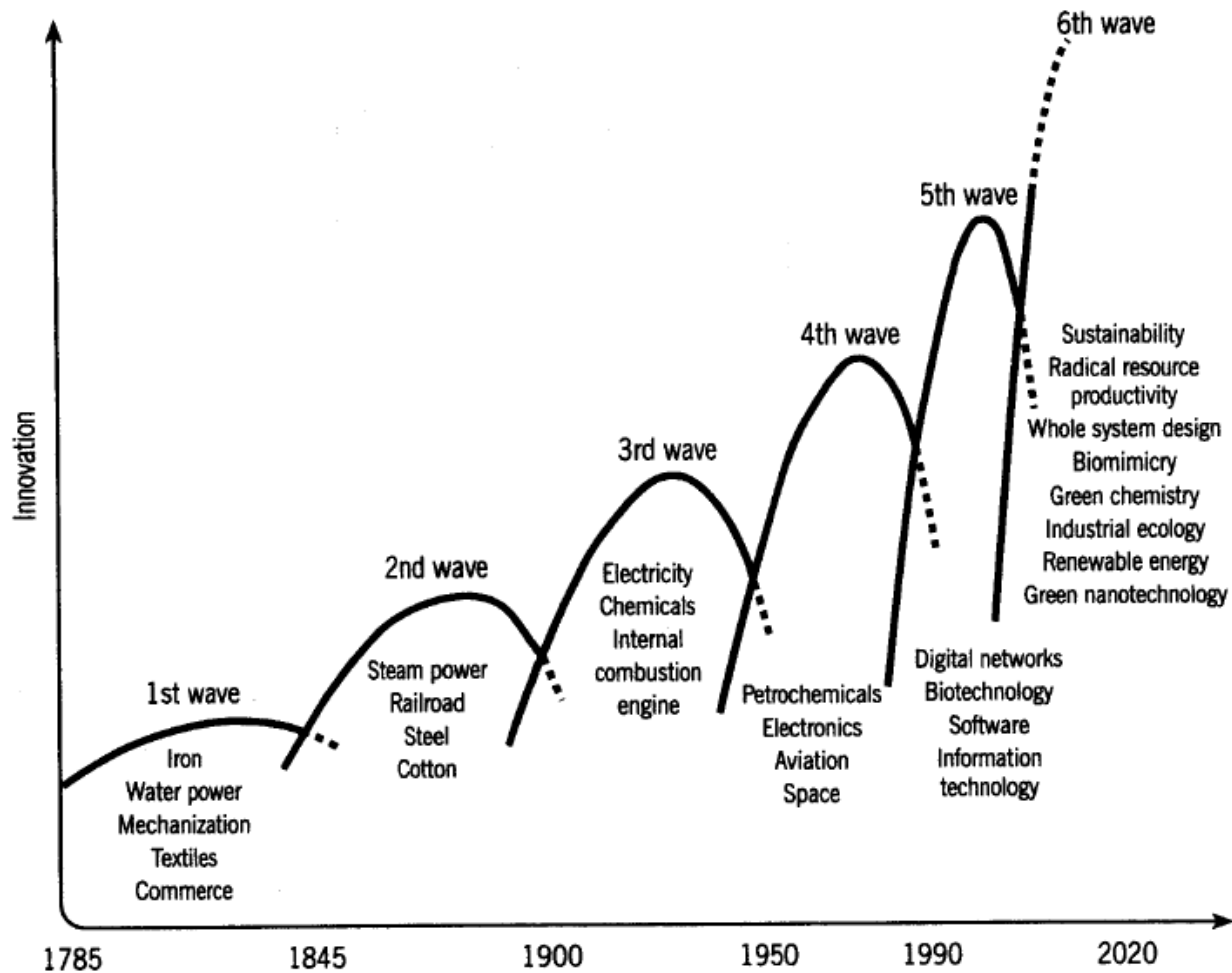
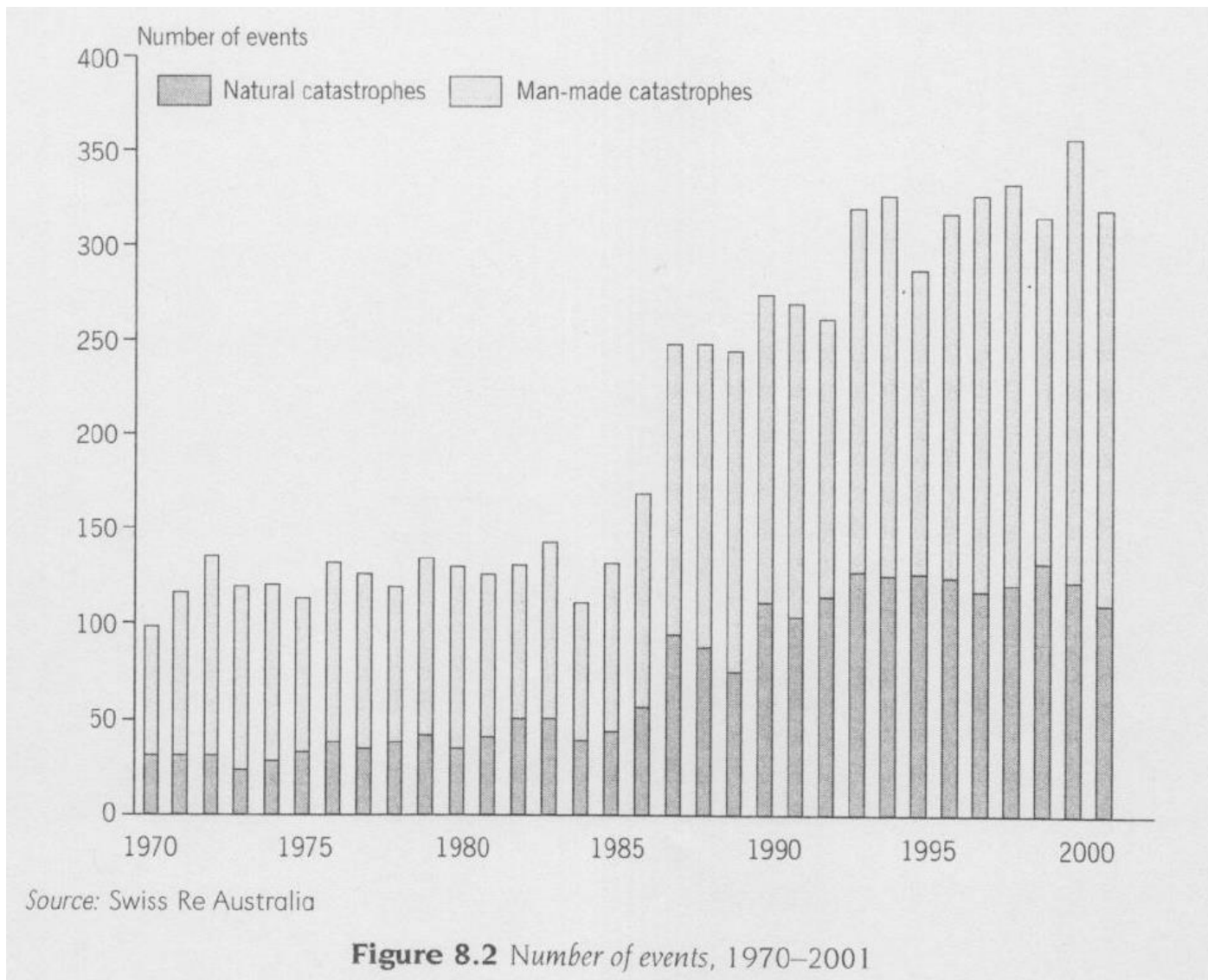


Figure 1.1 Waves of innovation of the first and the next industrial revolution

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Re-VIEW Matrix of Possible Climate Change/Security Interactions over Time- Strong Interactions

	Direct impact	Indirect Consequences					Slow-onset
	Water	Food	Health	Mega-projects	Disasters	Bio-fuel	Sea level
Short term (2007-2020)	Local conflict over water	Failure to meet MDGs	Failure to meet MDGs	Long history of development-induced displacement from 1950s	Nation states begin to lose credibility due to inability to prevent large disasters	Isolated food – fuel competition & price spikes	Small number of displacements
Medium term (2021-2050)	Increased local & some international conflict over water	Significant displacement due to famine	Interacts with food production problems	Displacement of rural poor due to CDM & large scale dams & other state based mitigation & adaptation projects	Significant political unrest due to failure of DRR & inadequate recovery in many countries	Food-fuel competition increases & biodiversity erosion	Increasing displacement & national/ international tension
Long term (2051-2100)	Major international conflict over water	Major displacement & political upheaval	Major displacement due to epidemics	Major urban upheaval and other political fall out from mega-project displacement	Major upheaval with international implications due to unattended weather catastrophes	Major discontent due to food-fuel competition	Major international tensions due to population displacement

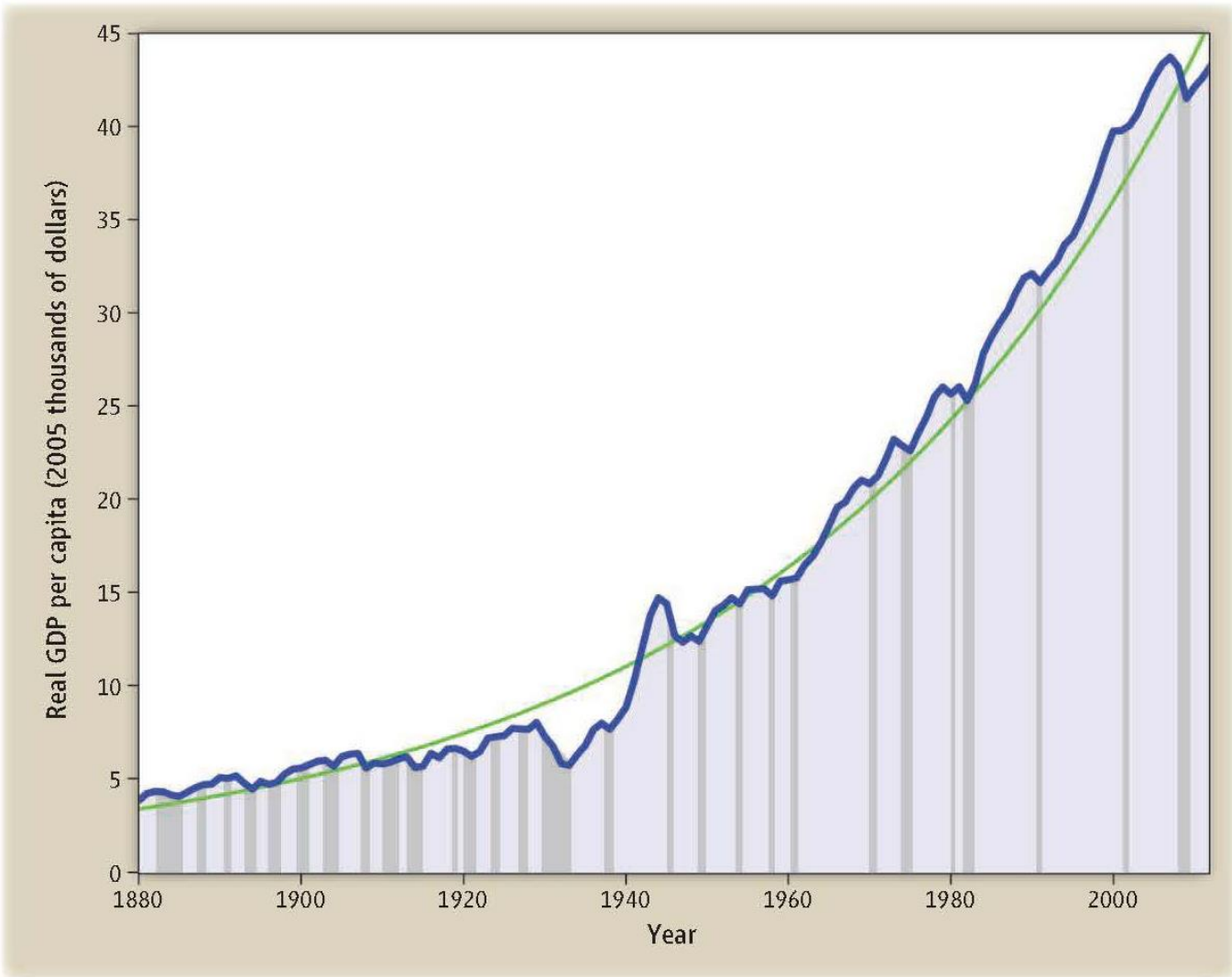
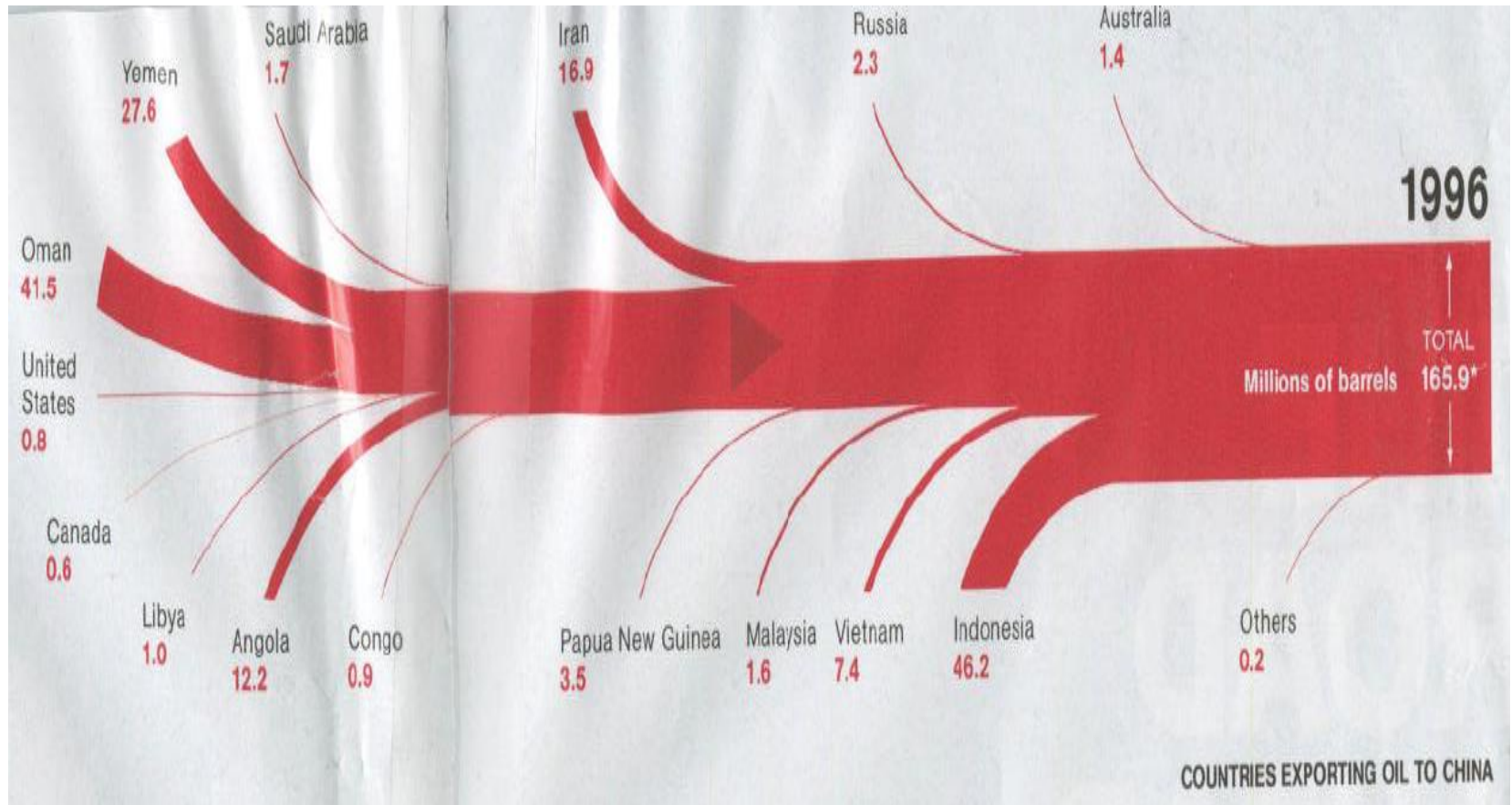


Fig. 1. U.S. GDP per capita, corrected for inflation in 2005 dollars. The smooth green curve is an exponential fit to the data. Shaded date ranges show official periods of recession. On average, an individual's income in the United States has increased by about 2% per year for more than 130 years.

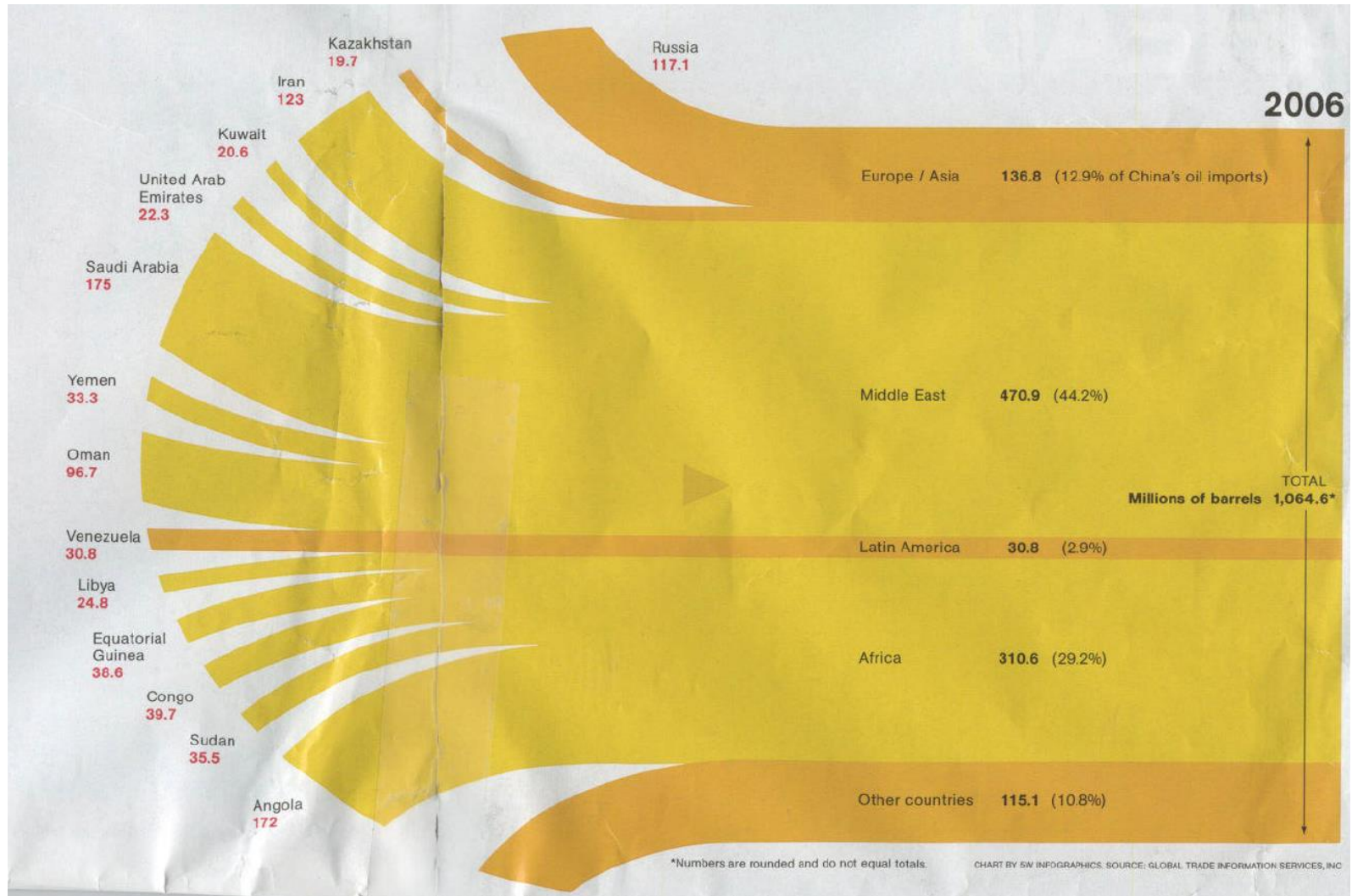
Press, William H. "What's So Special About Science (And How Much Should We Spend on It?)" *Science* 343, no. 6160 (2013): 817-22. © American Association for the Advancement of Science. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

Countries Exporting Oil to China: 1996



"Hungry For Oil." *National Geographic* 213, no. 5 (2008): 172-3. © National Geographic Partners. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

Countries Exporting Oil to China: 2006



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Complexities of Globalization: Real & Virtual

- **Cases in the complexities of globalization**
 - Flow types
 - Impacts on sending and receiving
 - Relevance to profiles
 - From state-based interactions to pervasive modalities
- **Different flows engender different forms of demands for regulation**
 - Adaptive versus transformative
- **Brief introduction to four modalities of globalization**
 - Trade, Migration, Environment, Cyberspace
 - Each manifesting different aspects of globalization and of governance challenges
 - Each rooted in activities of individuals within the state

COMPARISONS

Pressures from Globalization Domains	Globalization Type	Interaction Mode	Flow Type	Target or Management	Internationally Managed
Trade	Traditional	Bilateral	Tangible goods and services	Object	High
Migration	Traditional	Bilateral	Tangible/ People	People	Variable
Environment	Emergent	Global	Intangible	Effleunts	Low moving toward some form of accord
Cyberspace	Emergent	Global	Intangible	People and Networks	Low with little trends toward formalization

Level of Monitoring

Heavily Monitored

Relatively Unmonitored

Traditional	Trade	Migration
Emergent	Environment	Cyberspace

Flow Type and Response to Flow

	Encouraged	Discouraged
Tangible	Trade	Migration
Intangible	Cyberspace	Environment

Interaction Type

Bilateral / Dyadic

Multilateral

Object-oriented

Trade

Environment

Orientation

People-oriented

Migration

Cyberspace

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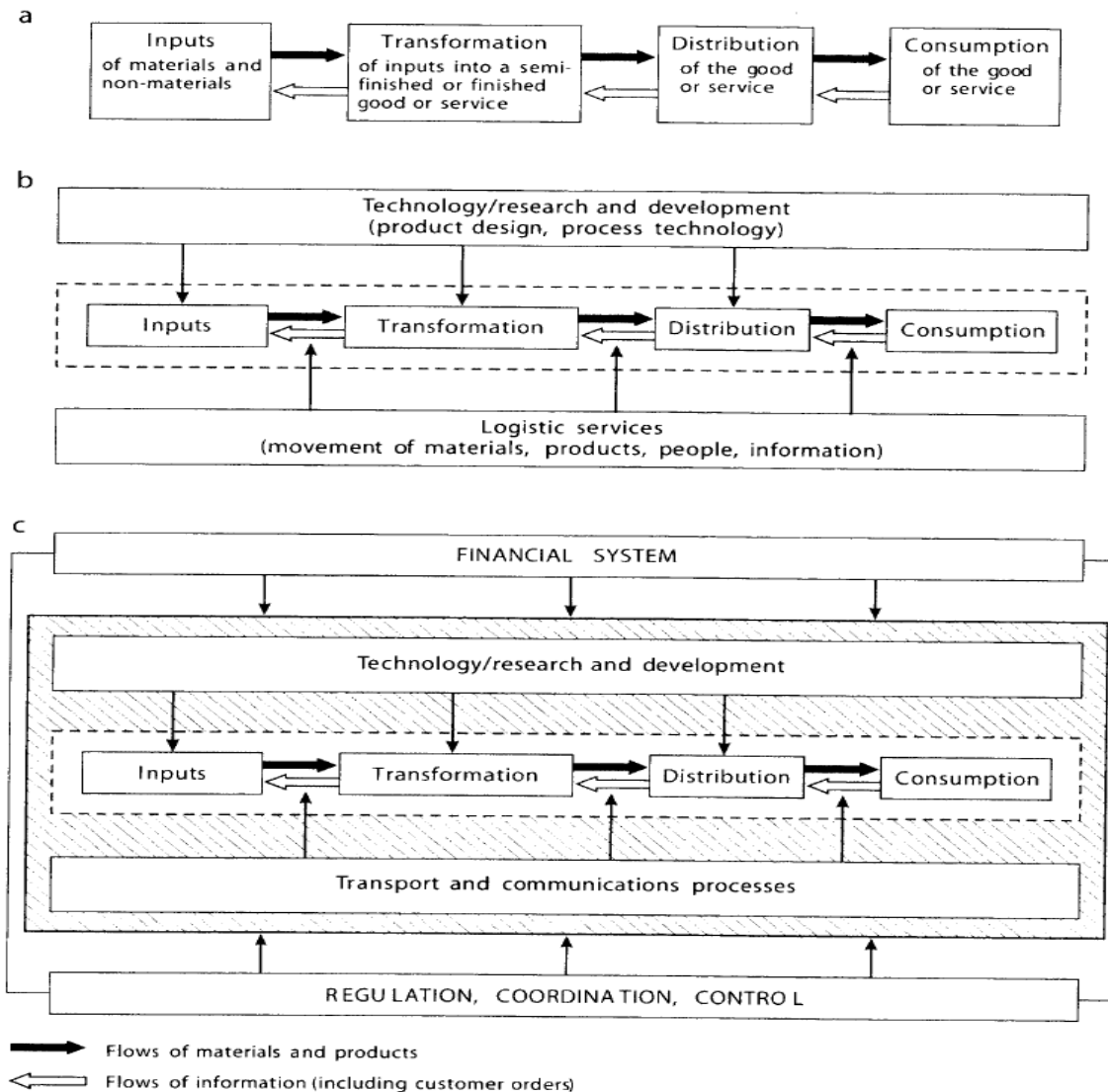
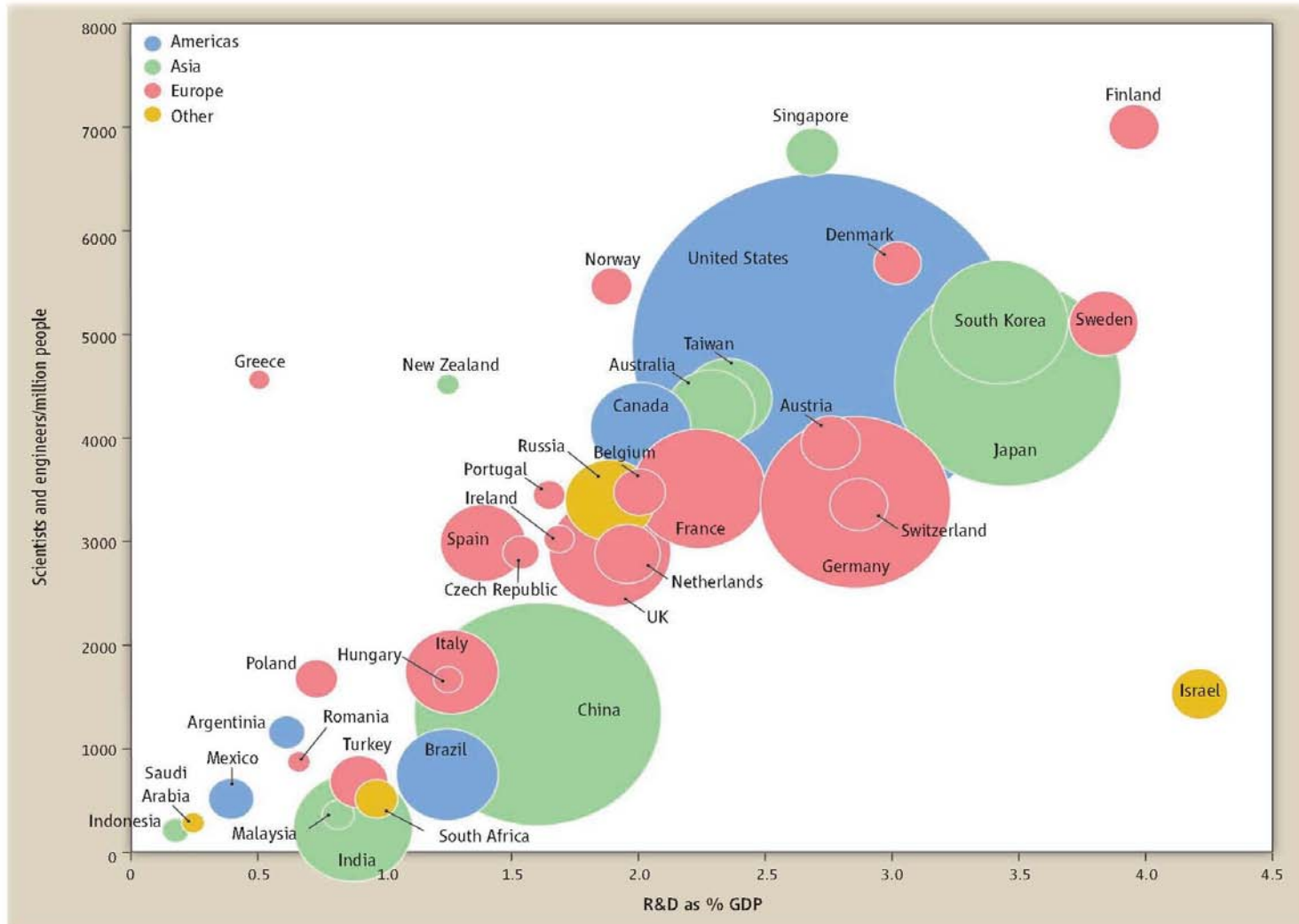


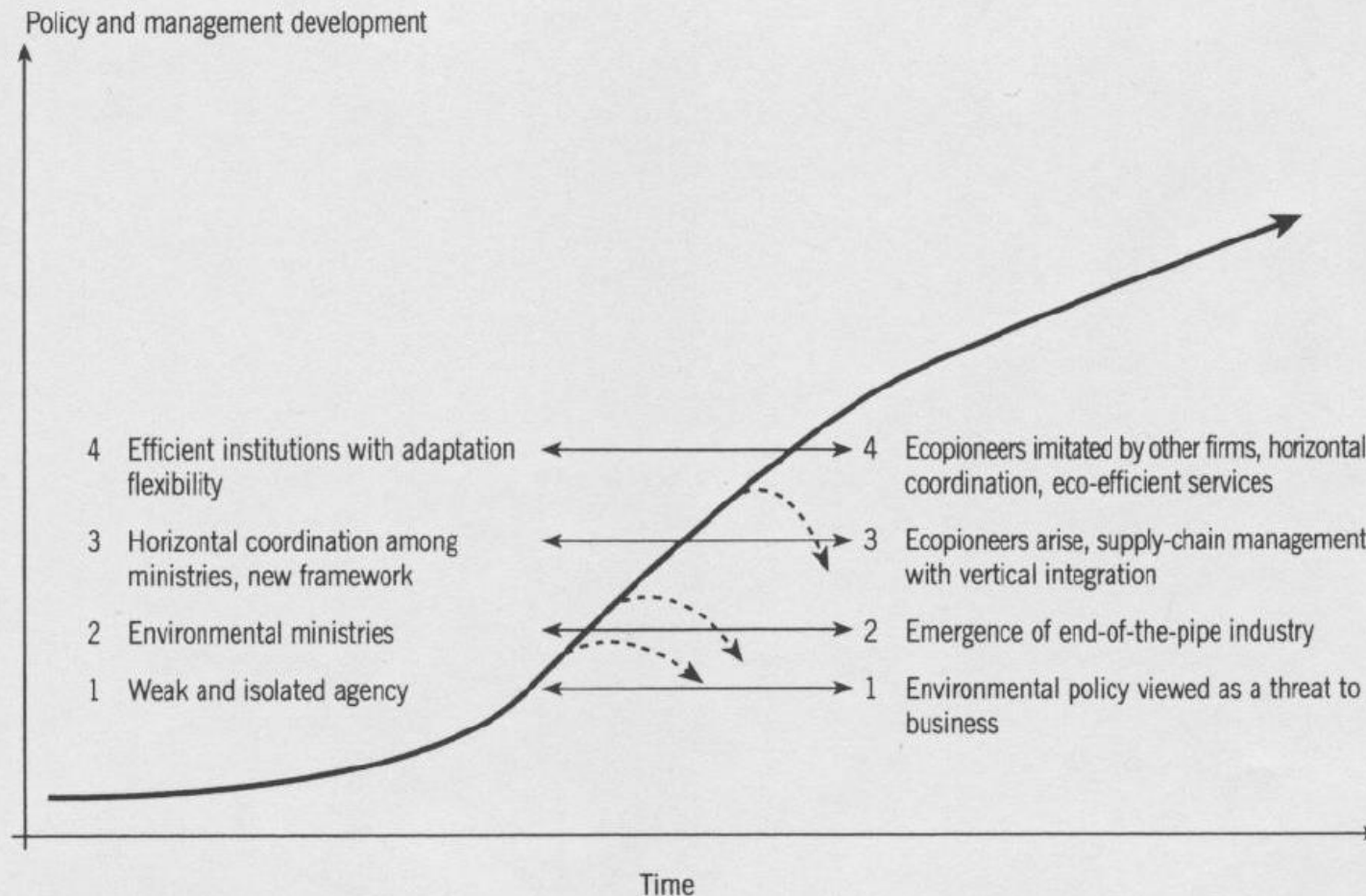
Figure 2.3 The production chain

Dicken, Peter. *Global Shift: Reshaping the Global Economic Map in the 21st Century*. SAGE Publications, Ltd. 2003. © SAGE Publications, Ltd. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

Scientists & Engineers



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Source: Bleishwitz (2002)

Figure 12.1 Stages in environmental policy and management development

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Five Factors Affecting Competition in an Industry

- **Threats of New Entrants**
- **Bargaining Power of Suppliers**
- **Threats of Substitute Products or Services**
- **Bargaining Power of Buyers**
- **Rivalry Among Existing Competitors**

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Fall 2016

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