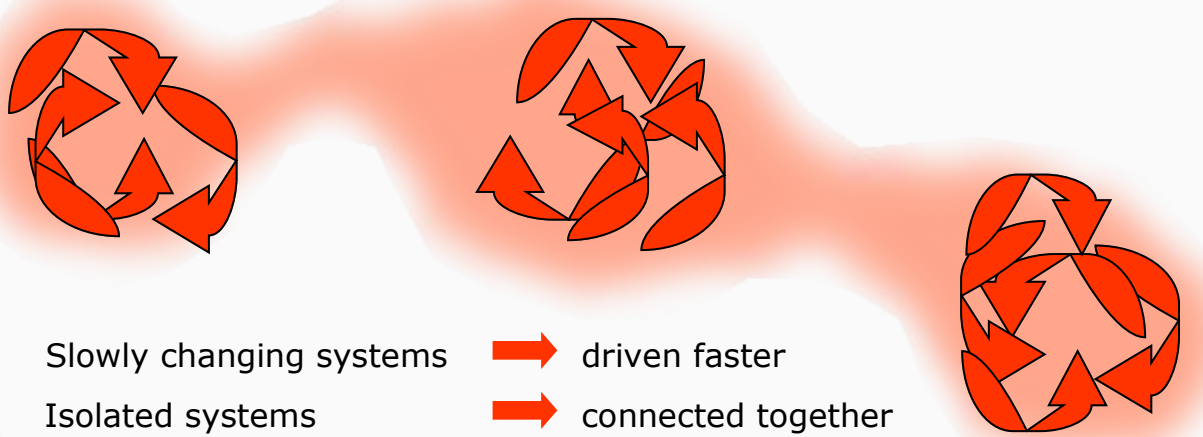
Weak signals, harsh impacts

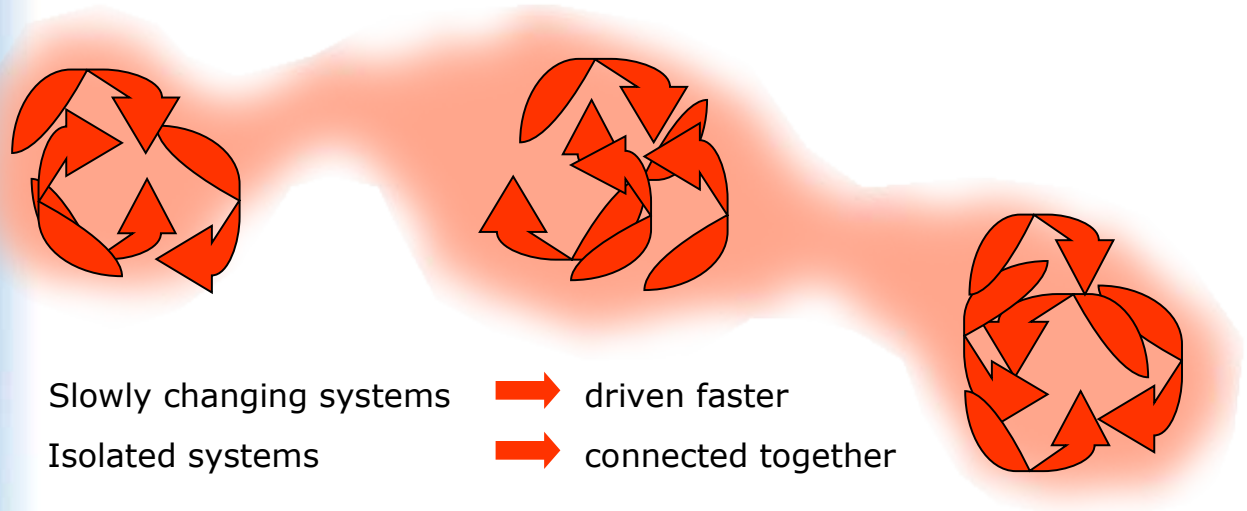
Weak signals, harsh impacts



Slowly changing systems → driven faster

Isolated systems → connected together

Weak signals, harsh impacts



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New connections need new institutions to police them

Change impacts the natural world, societies and institutions

The surface vector of change is commerce

Commerce embroiled in political, social and security issues

However, some caveats…

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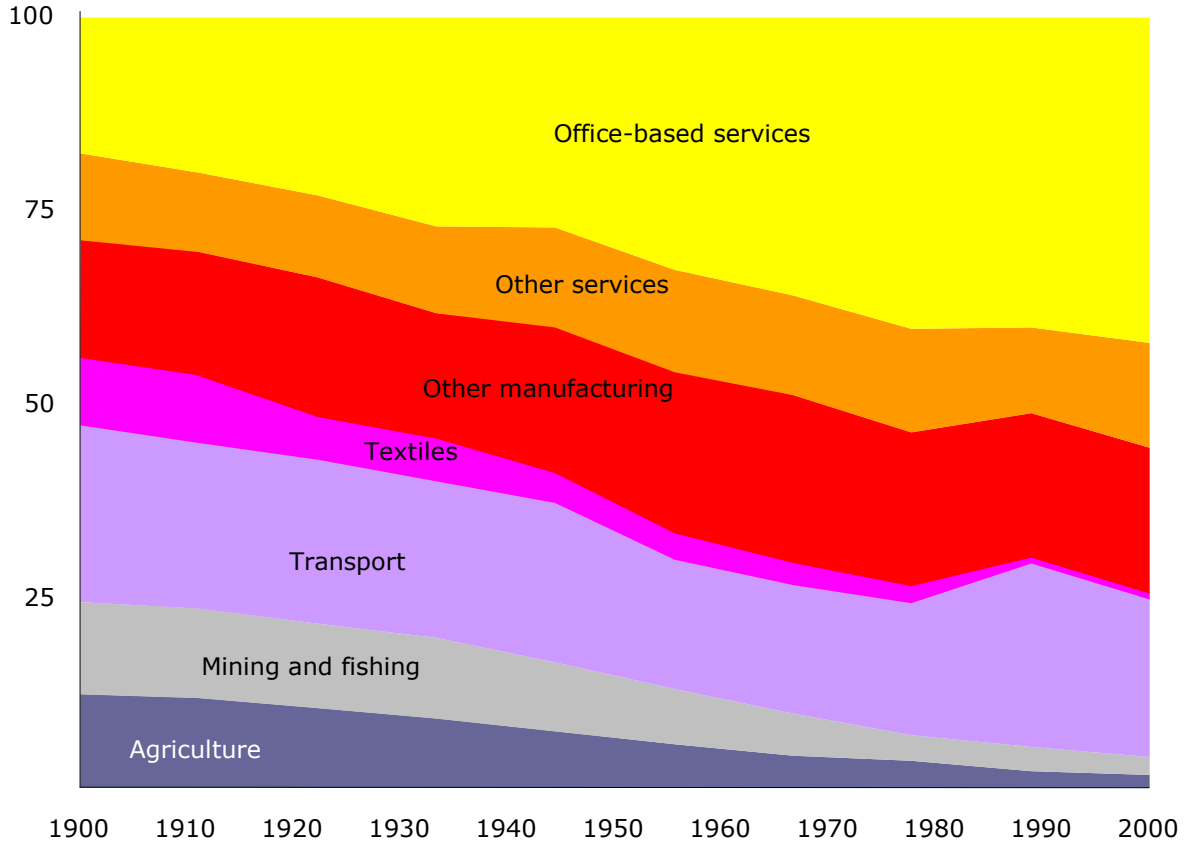
Sector share in UK employment, 1901-2001



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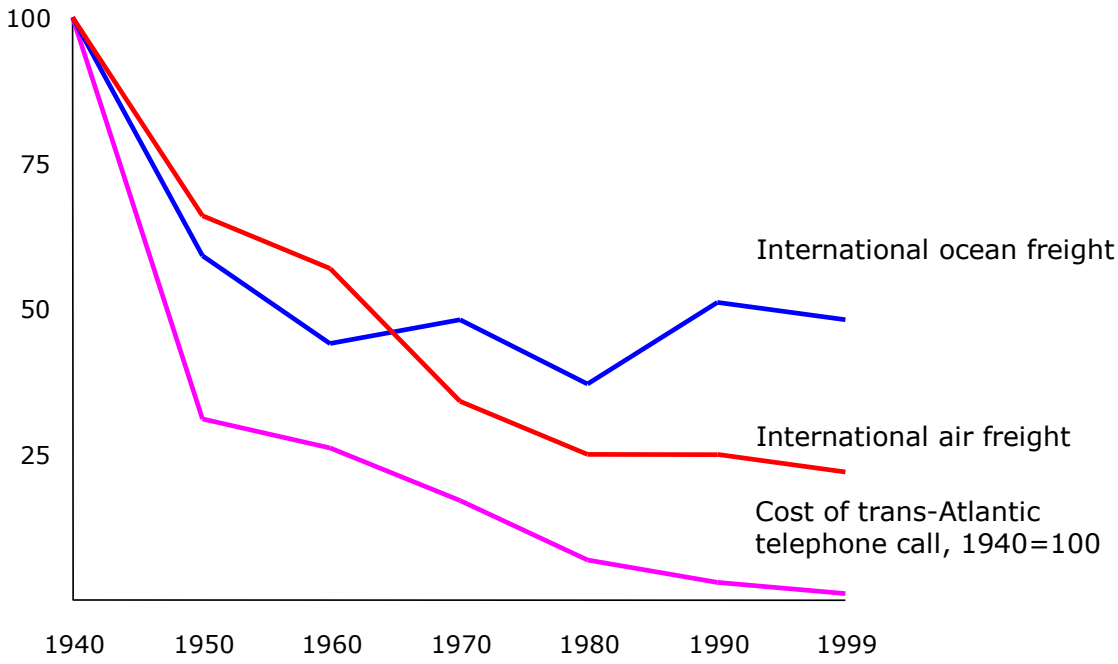
- The great systems change relatively slowly
- Hitherto separate systems are being brought together



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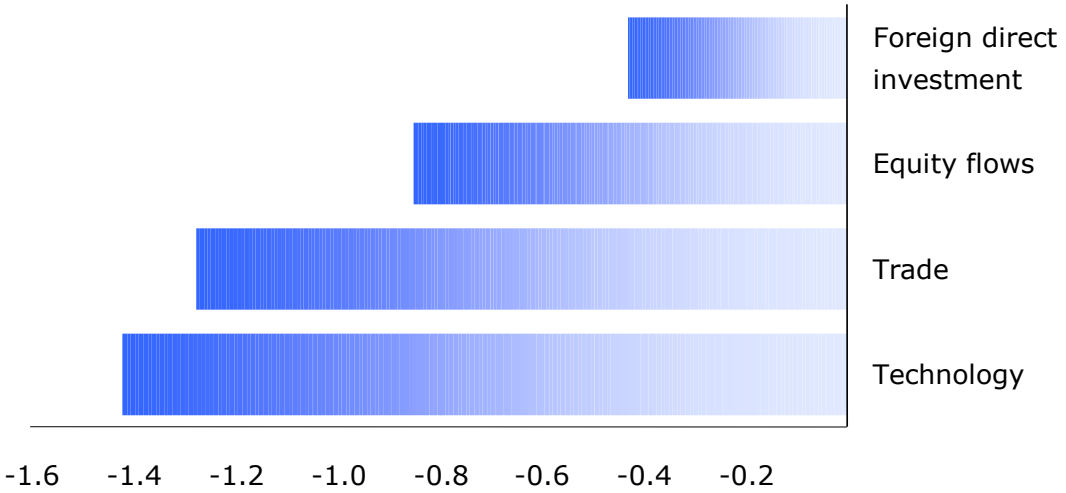


The elasticity of activity with respect to distance between the actors

Knowledge-intensive products based in a complex and flexible infrastructure

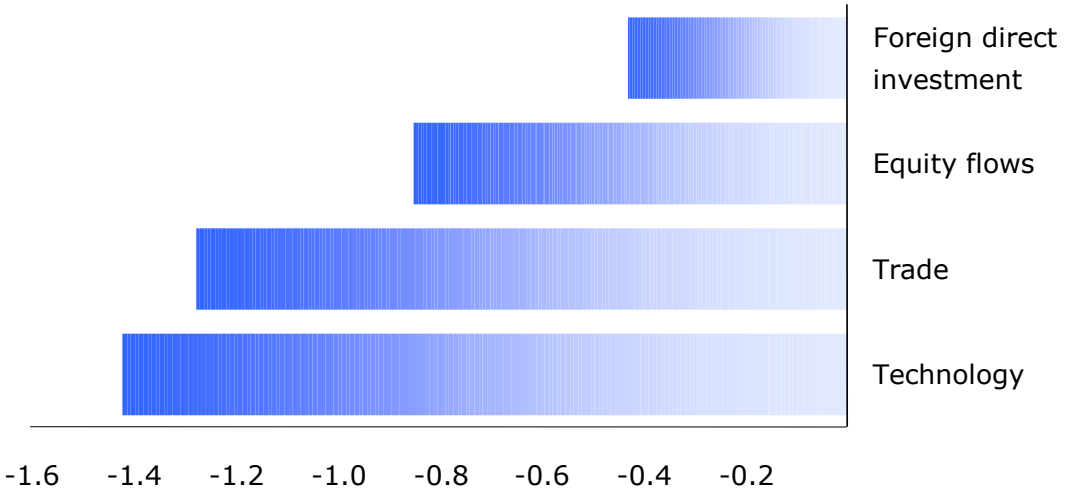
Scalable, modular systems

Relationships of trust

Tightly specified, exactly-defined products and services

Uniform, giant systems

Contractual relations



The elasticity of activity with respect to distance between the actors

Knowledge-intensive products based in a complex and flexible infrastructure

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Relationships of trust

Clusters and networks

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Uniform, giant systems

Contractual relations

Risk, cost and necessity

- 80% of US car maker's suppliers operate within 12 hours of the main plant.
- Toyota's US suppliers 7 times closer than GM's; its working capital is 25% that of GM, its non-wage costs 80% of GM.
- Geographical cohesion has increased since 1980 in 37 of 40 industries studies.

So what *is* coming together?

Standards

Best practice

Scalable activities

Asset allocation

Consumer advocacy

Ideas

Scrutiny

Regulatory frameworks

Shareholder pressure **Regulatory change**

Consumer cynicism **Technology**

CI and cost management skills

More people, better people

Accelerated commoditisation

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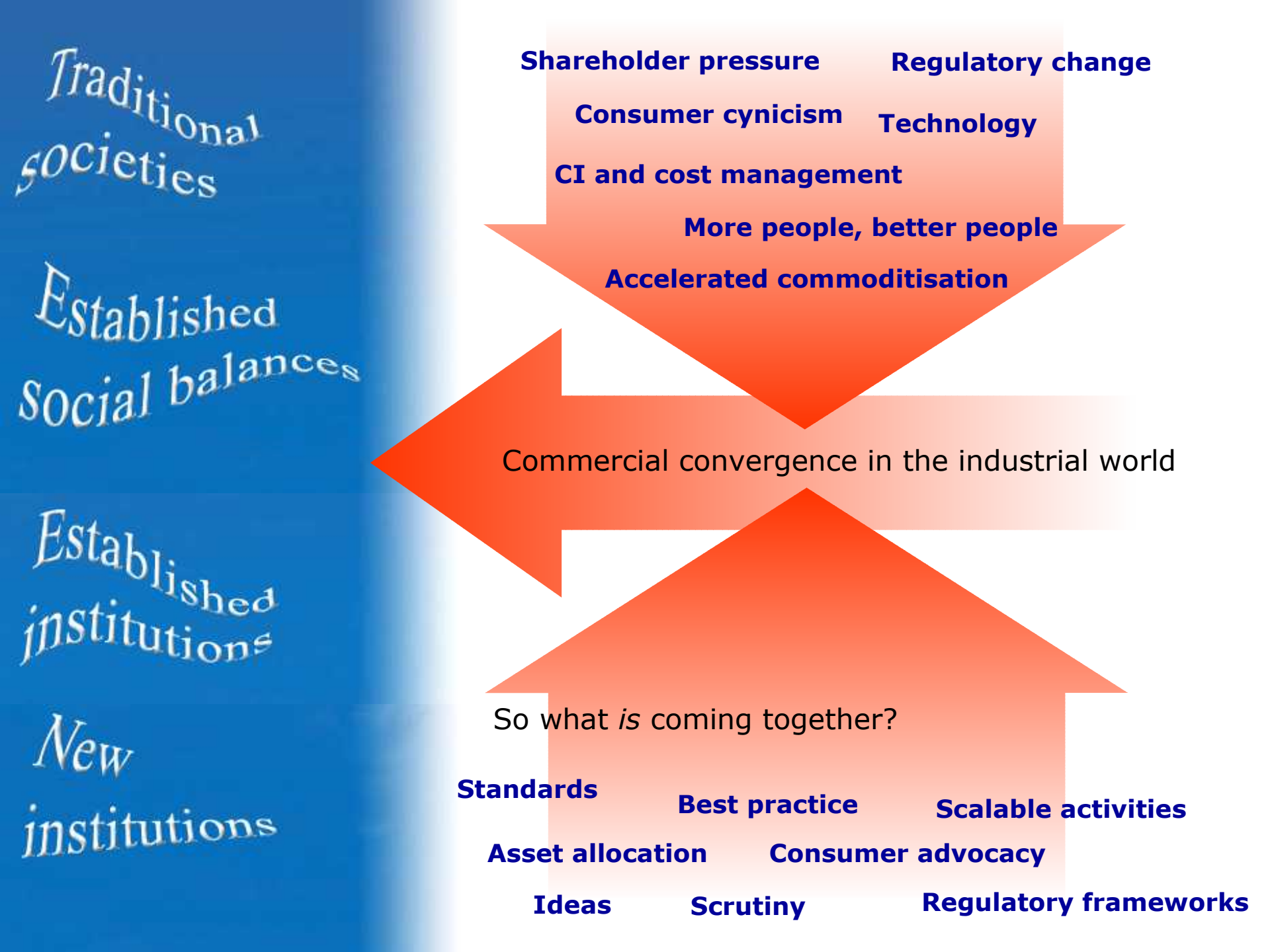
Traditional societies
Established social balances
Established institutions
New institutions
Shareholder pressure
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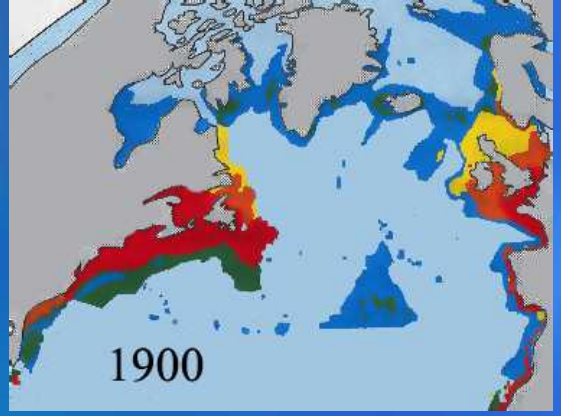

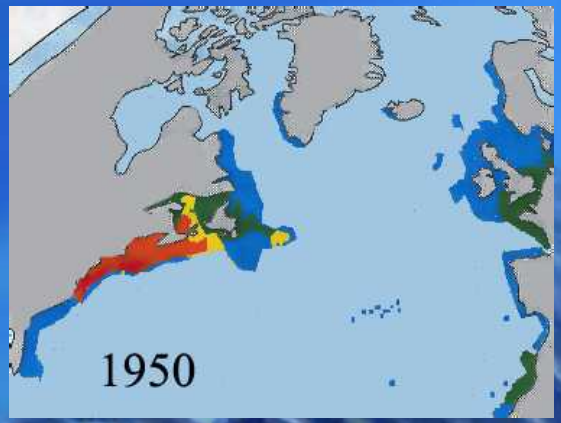

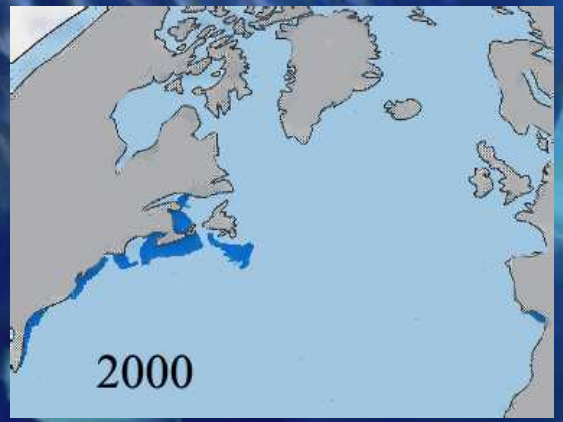

Fishing catch in 1900
Red = over 10 tons/sq km
Light blue = less than 0.1

Traditional societies

Established social balances

Established institutions

New institutions

Weak signals, harsh impacts

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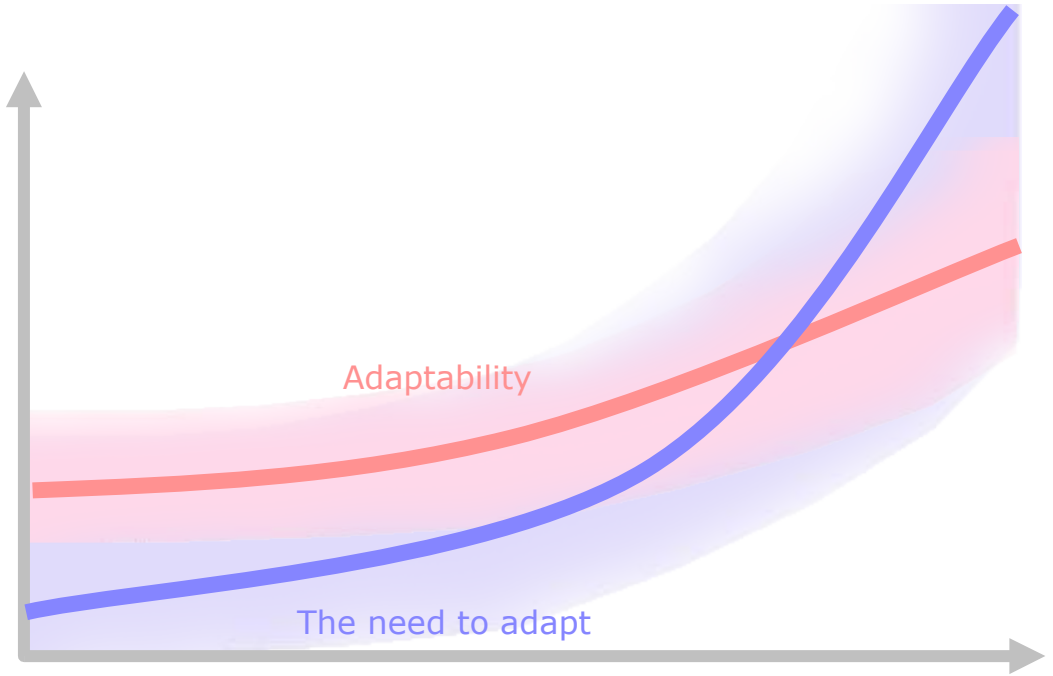
- Hitherto separate systems are being brought together
- Long-established drivers continue to increase in force



What permits adaptation?

What drives change?

What creates friction?

Weak signals, harsh impacts

- The great systems change relatively slowly
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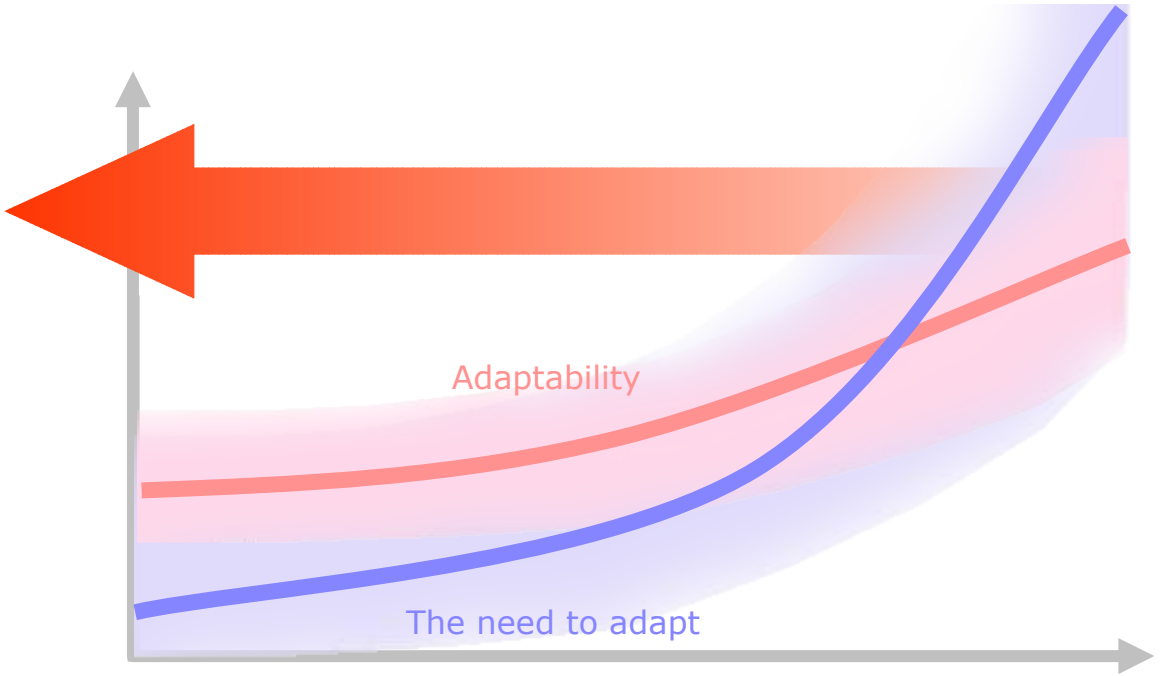
- Long-established drivers continue to increase in force
- Response to may create discontinuities



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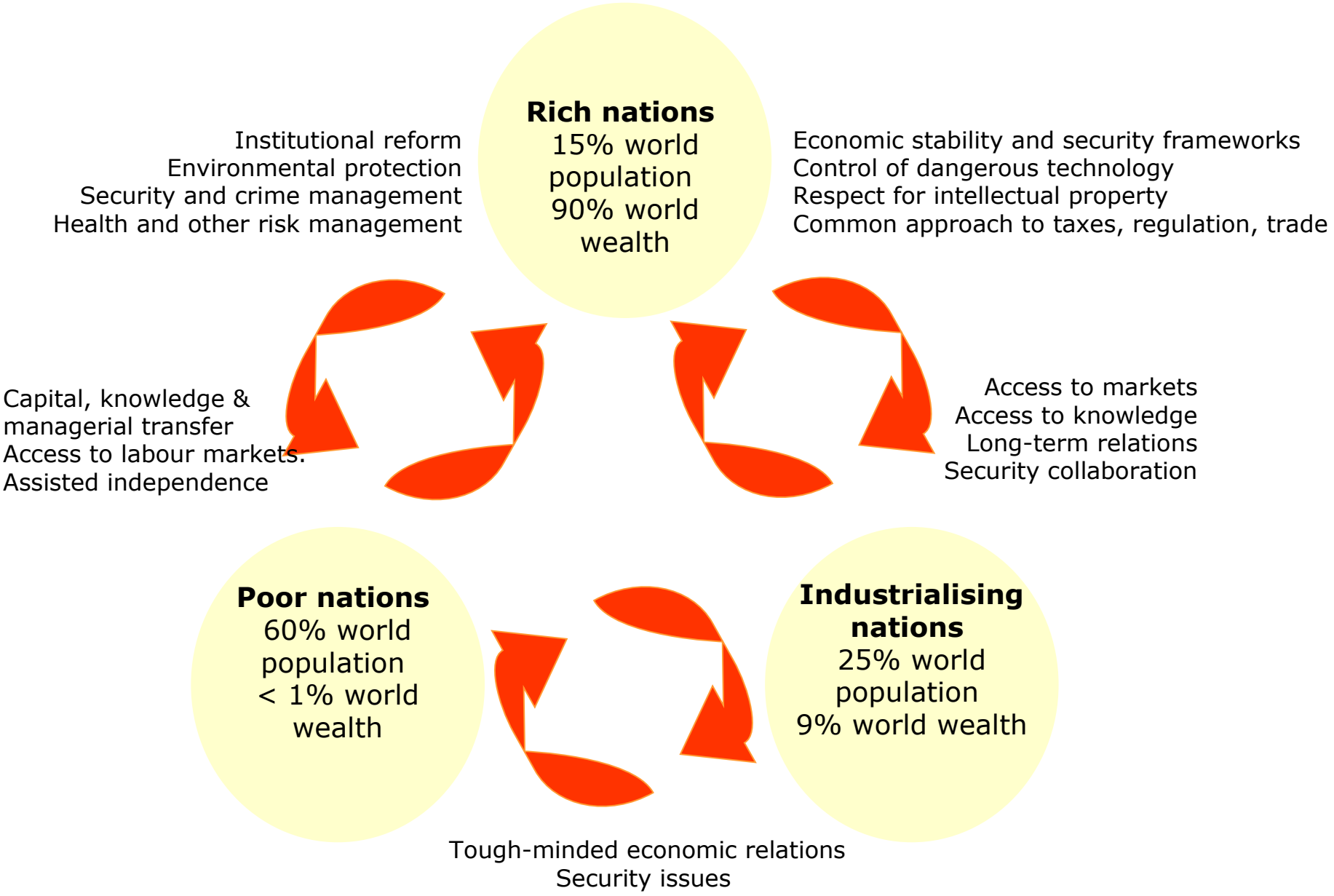
Rich nations
15% world population
90% world wealth

Economic stability and security frameworks
Control of dangerous technology
Respect for intellectual property
Common approach to taxes, regulation, trade

Access to markets
Access to knowledge
Long-term relations
Security collaboration

Industrialising nations
25% world population
9% world wealth


Rich nations
15% world population
90% world wealth
Institutional reform
Environmental protection
Security and crime management
Health and other risk management
Economic stability and security frameworks
Control of dangerous technology
Respect for intellectual property
Common approach to taxes, regulation, trade
Capital, knowledge & managerial transfer
Access to labour markets.
Assisted independence
Access to markets
Access to knowledge
Long-term relations
Security collaboration
Poor nations
60% world population
< 1% world wealth
Industrialising nations
25% world population
9% world wealth
Tough-minded economic relations
Security issues

Institutional reform
Environmental protection
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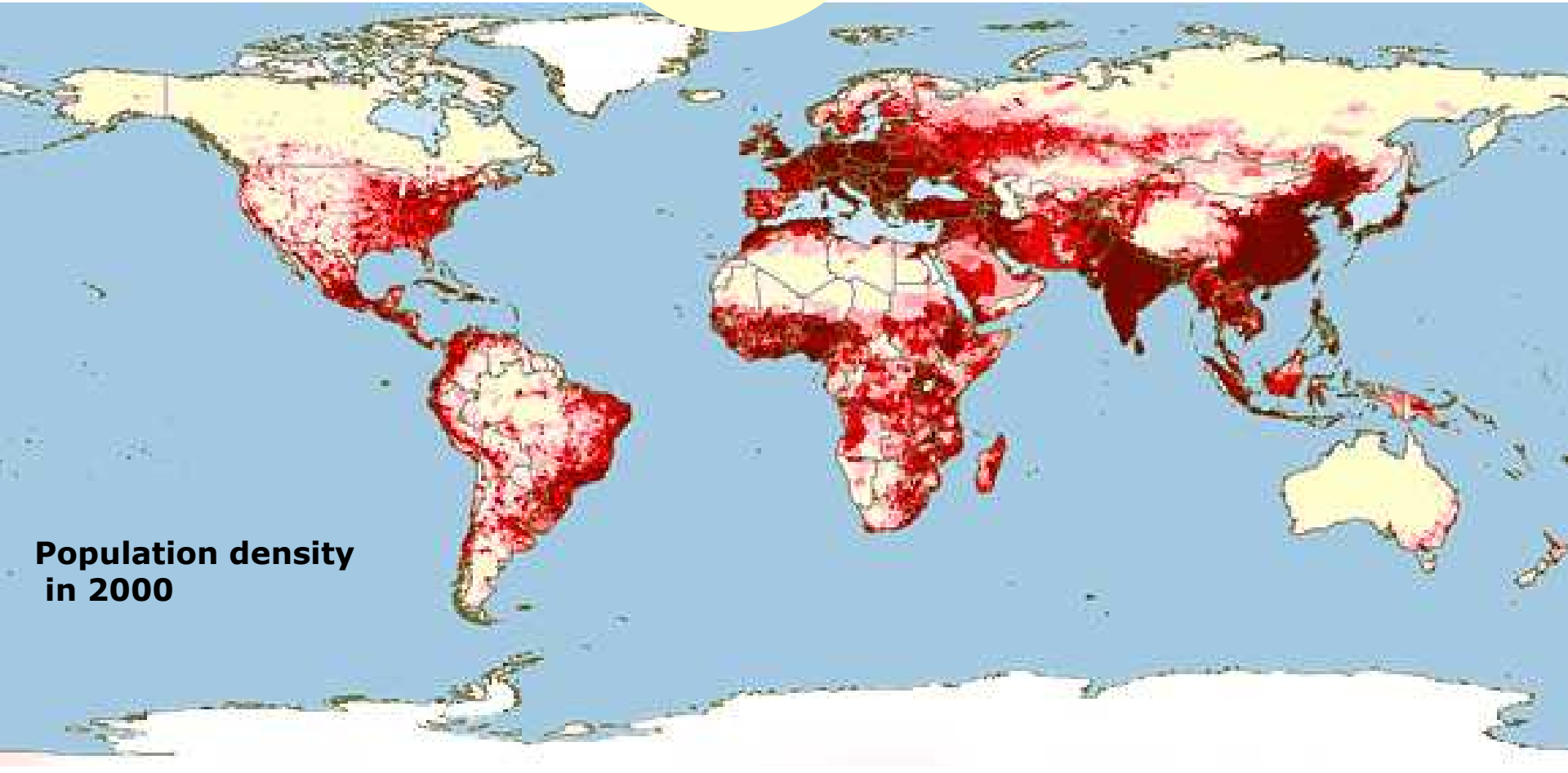

Population density in 2000

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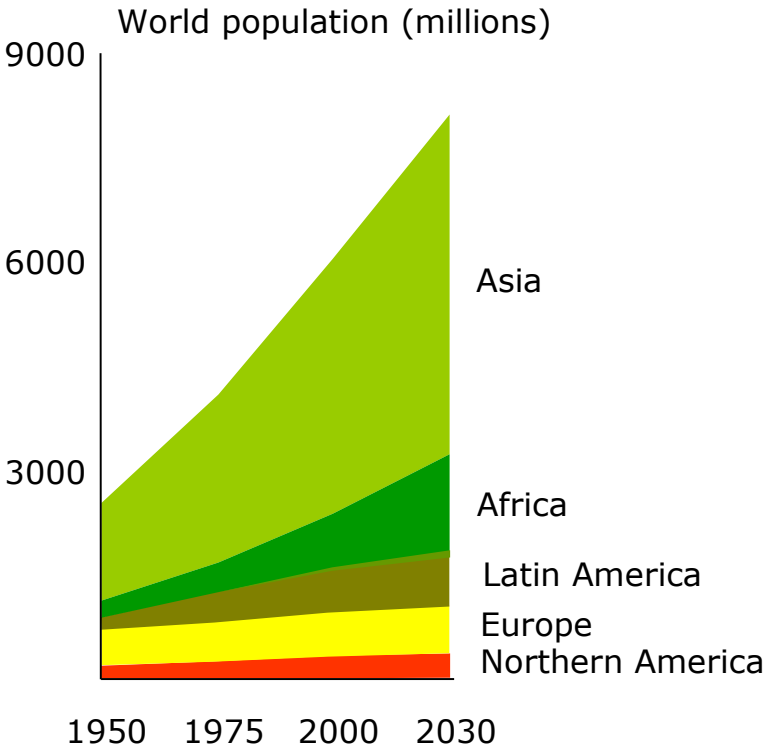
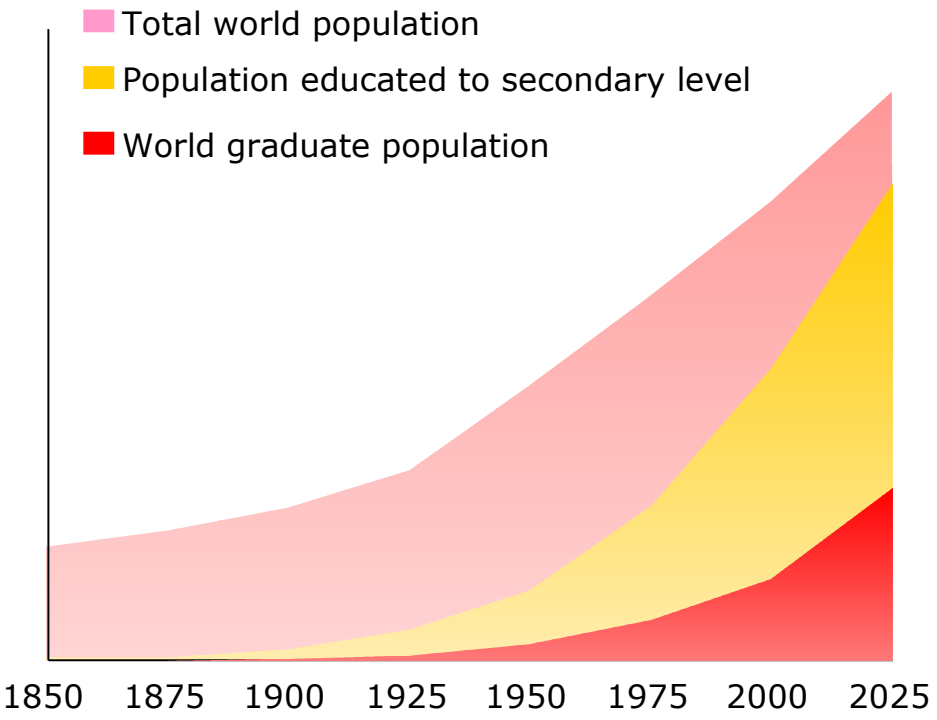
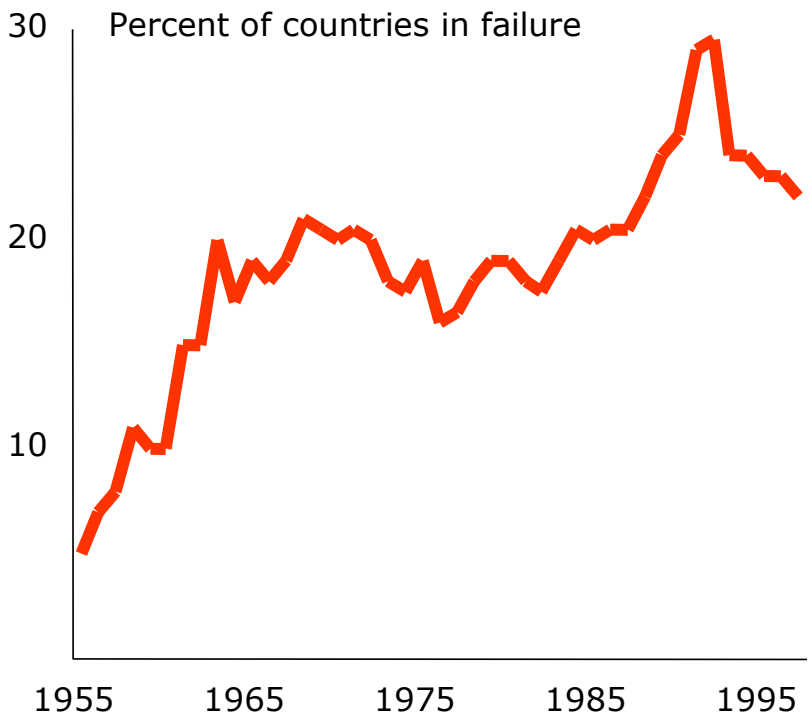
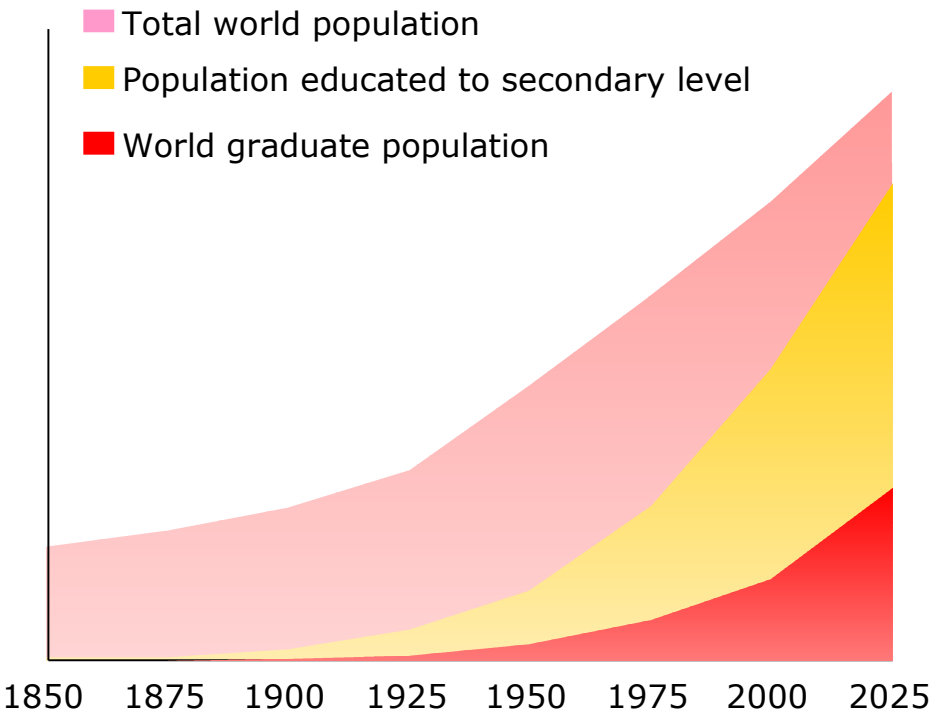
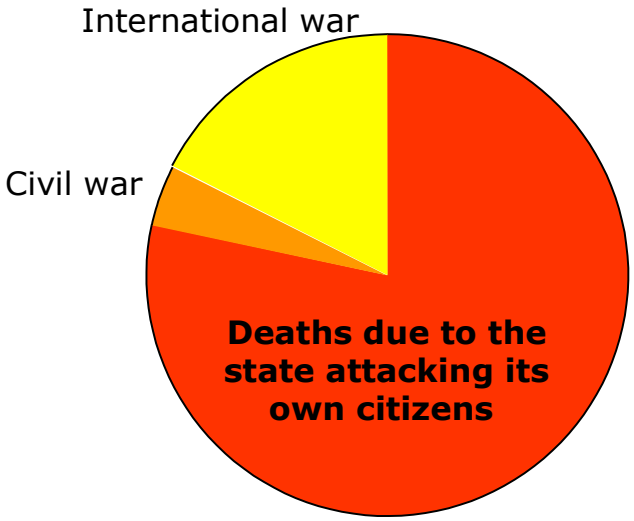


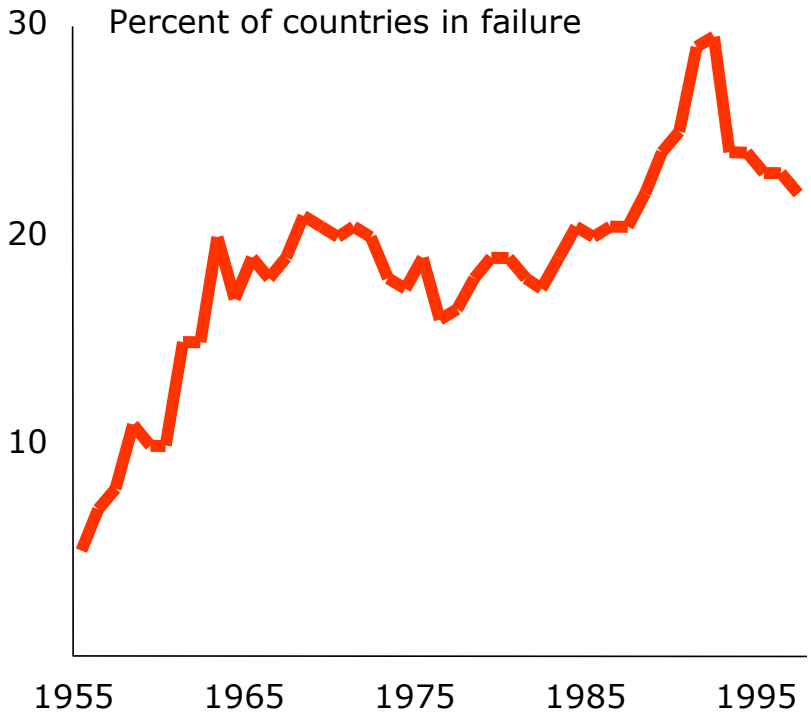


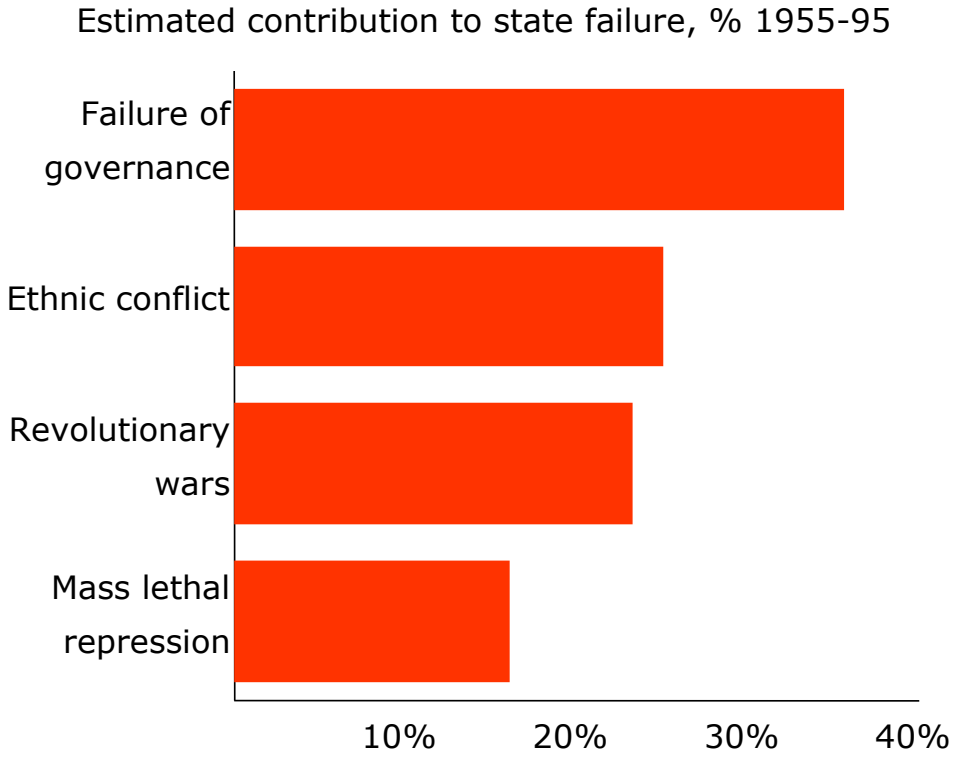

Percent of countries in failure
30
20
10
1955
1965
1975
1985
1995


Total world population
Population educated to secondary level
World graduate population
1850
1875
1900
1925
1950
1975
2000
2025



Around 220 million deaths due to conflict in the C20th





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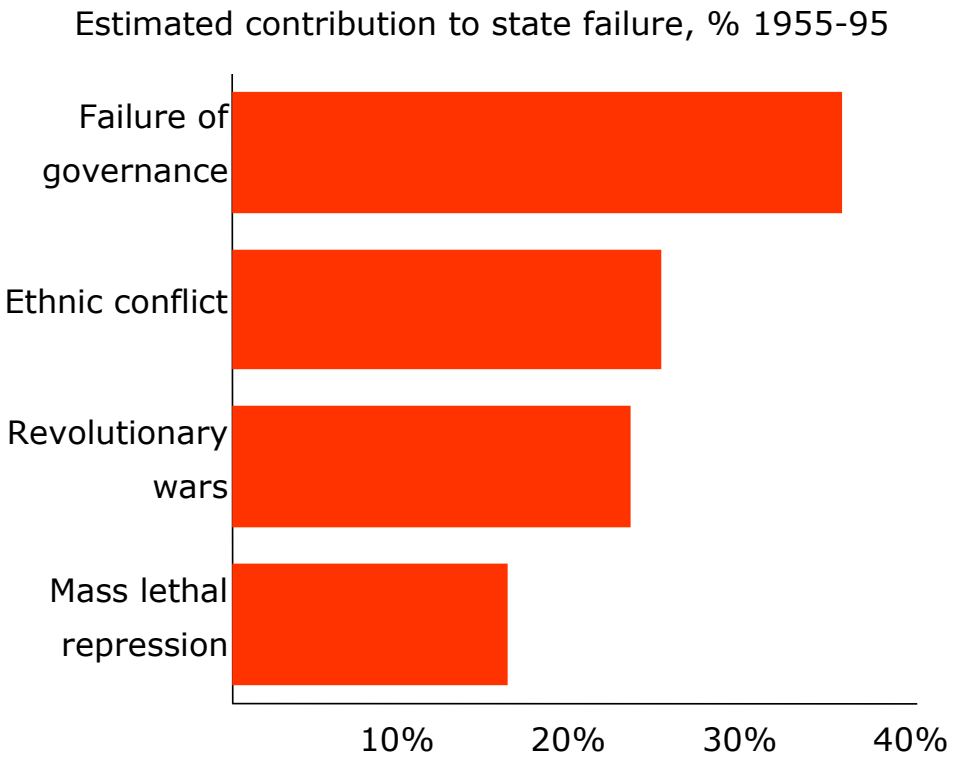
Connectivity between hitherto separate domains, actors and systems

What creates friction?

Adaptive machinery that cannot cope



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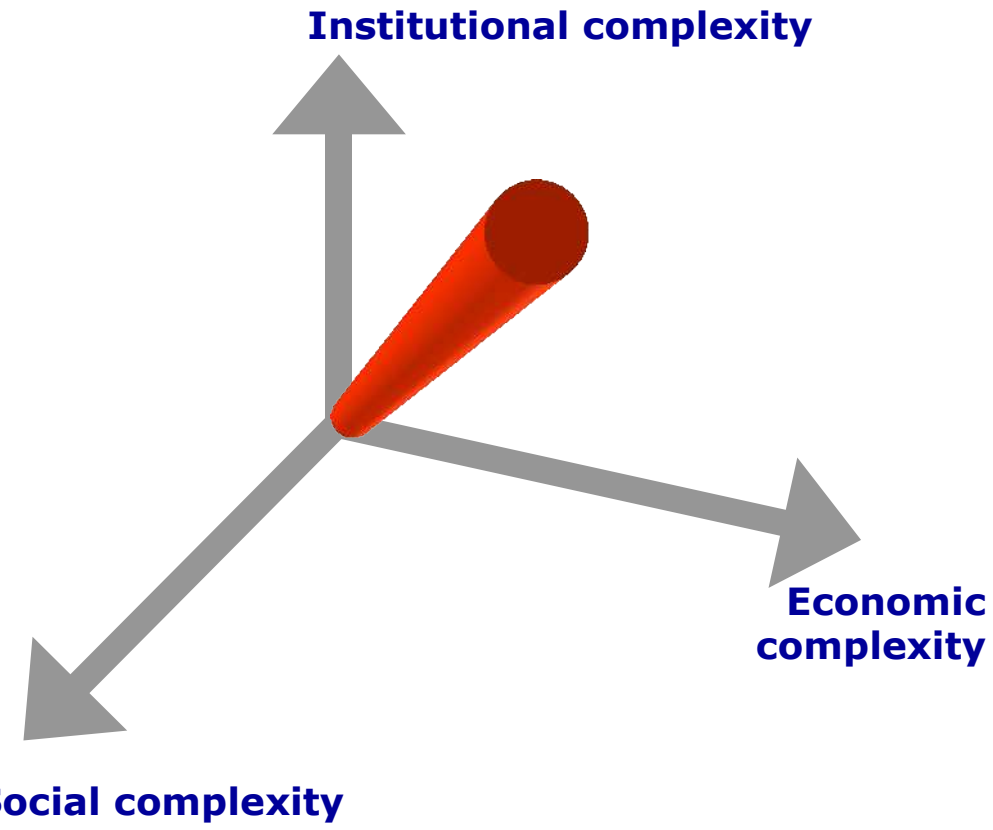
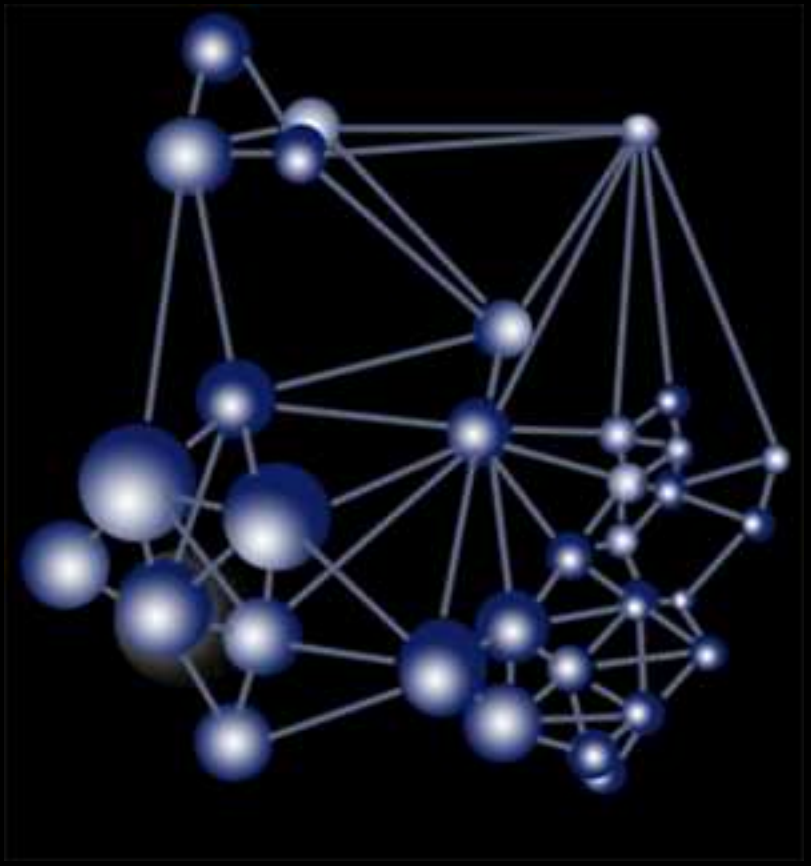
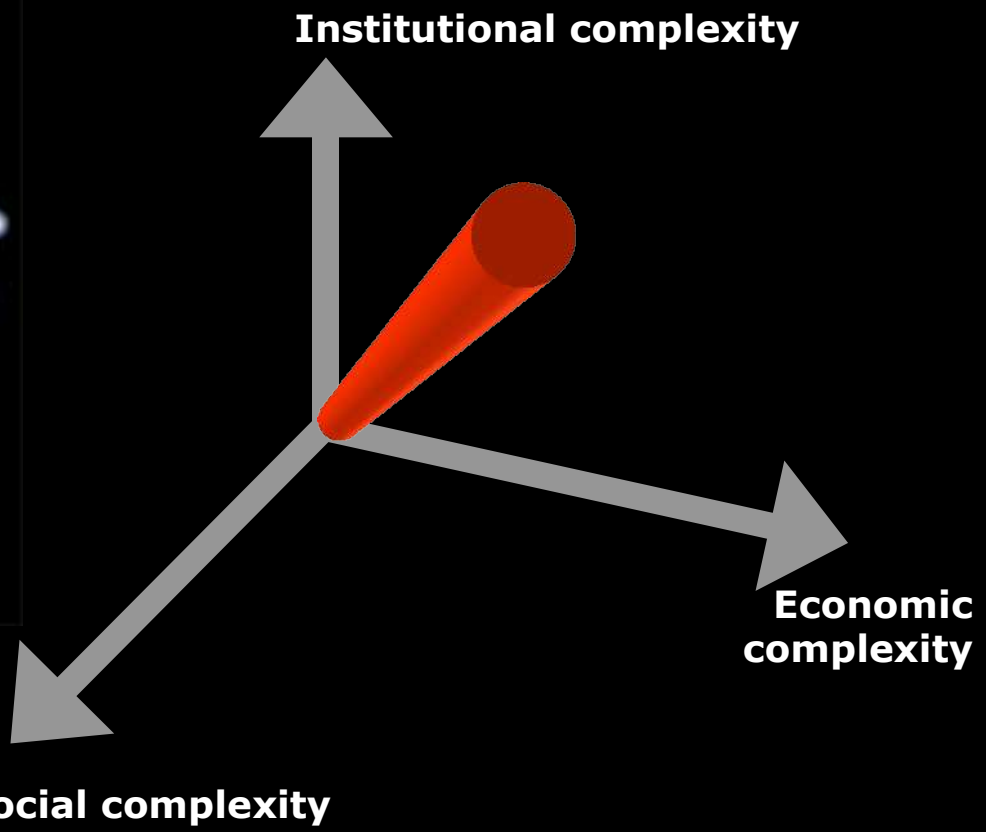
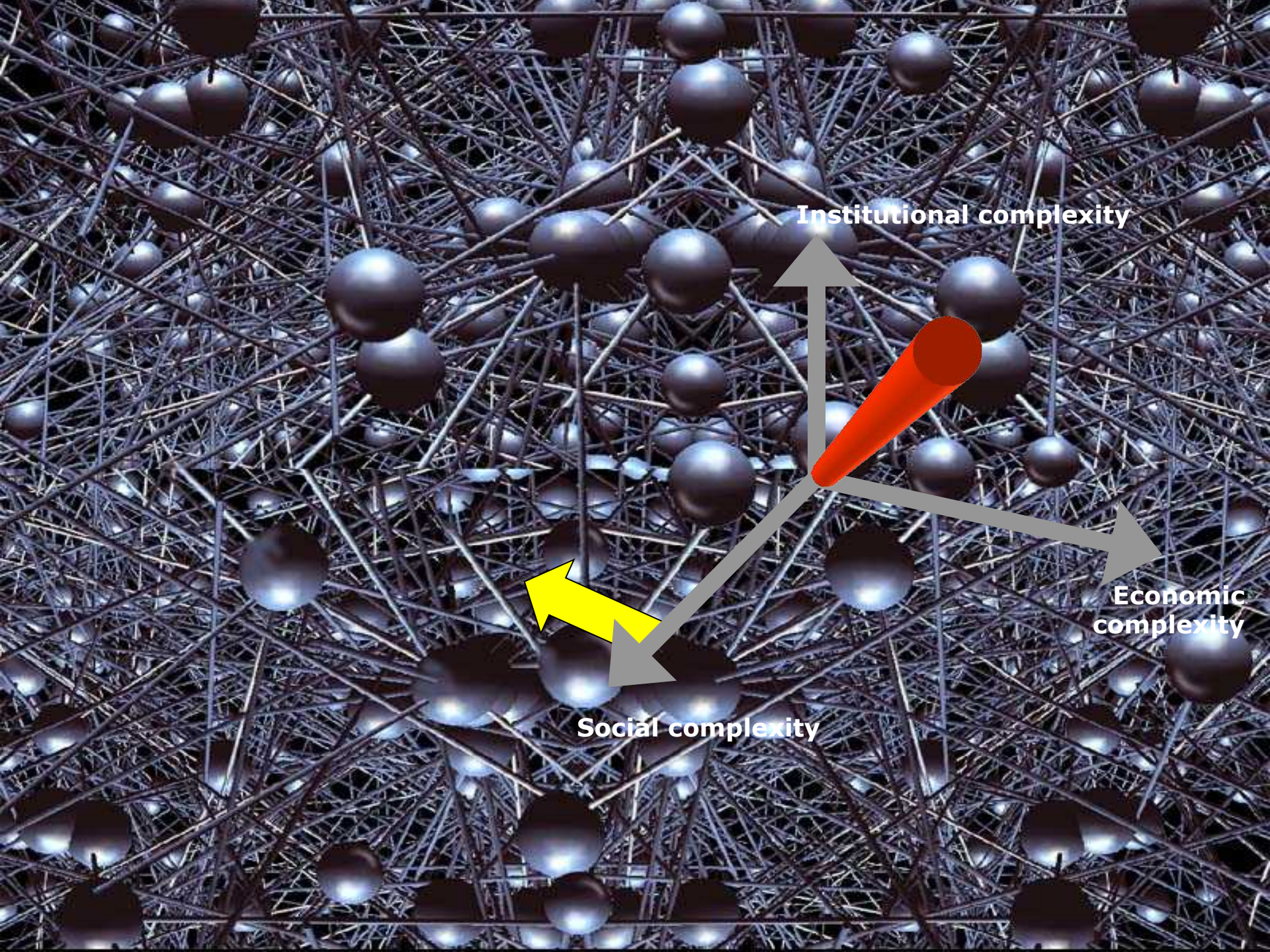





Institutional complexity
Economic complexity
Social complexity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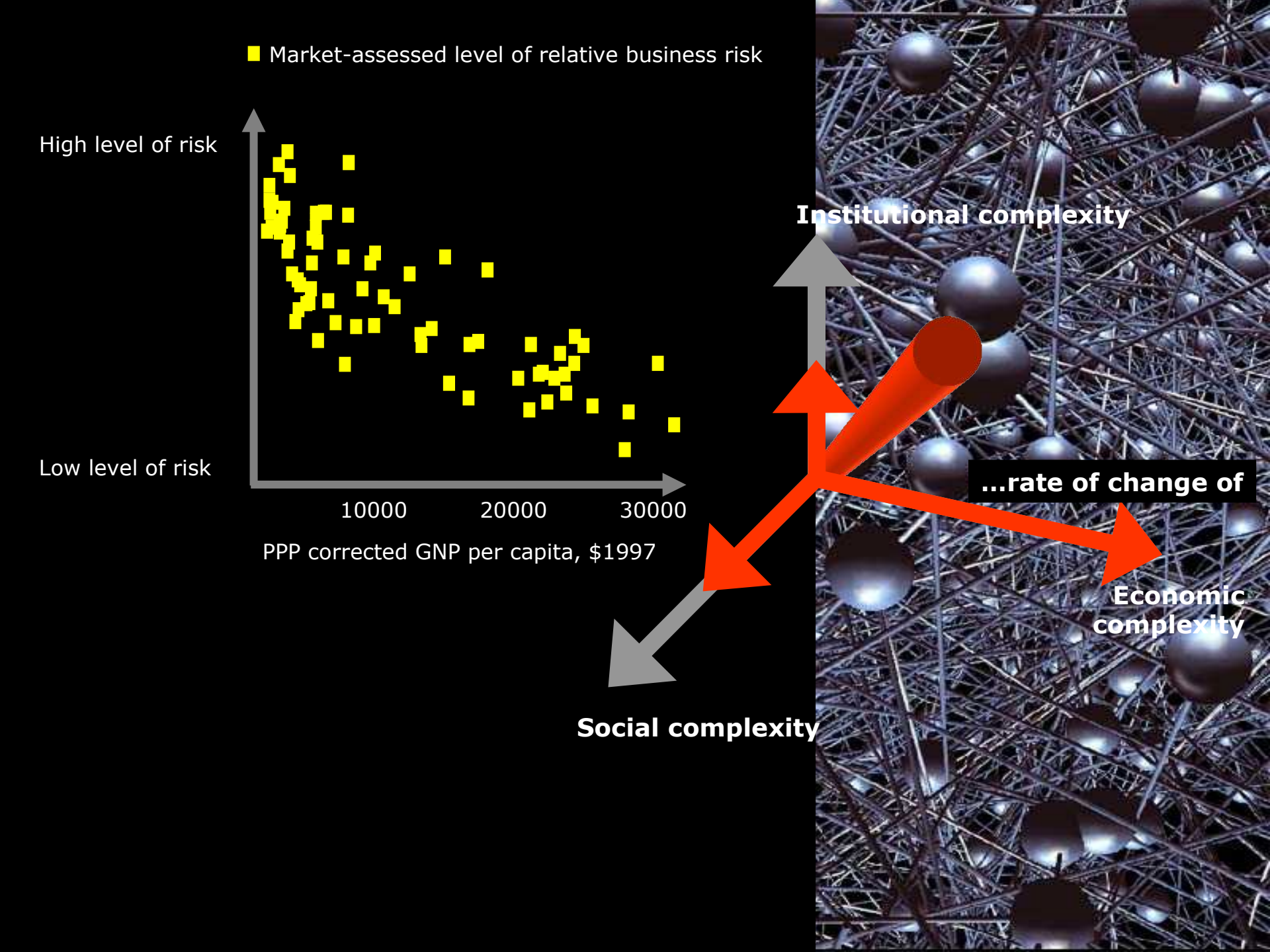
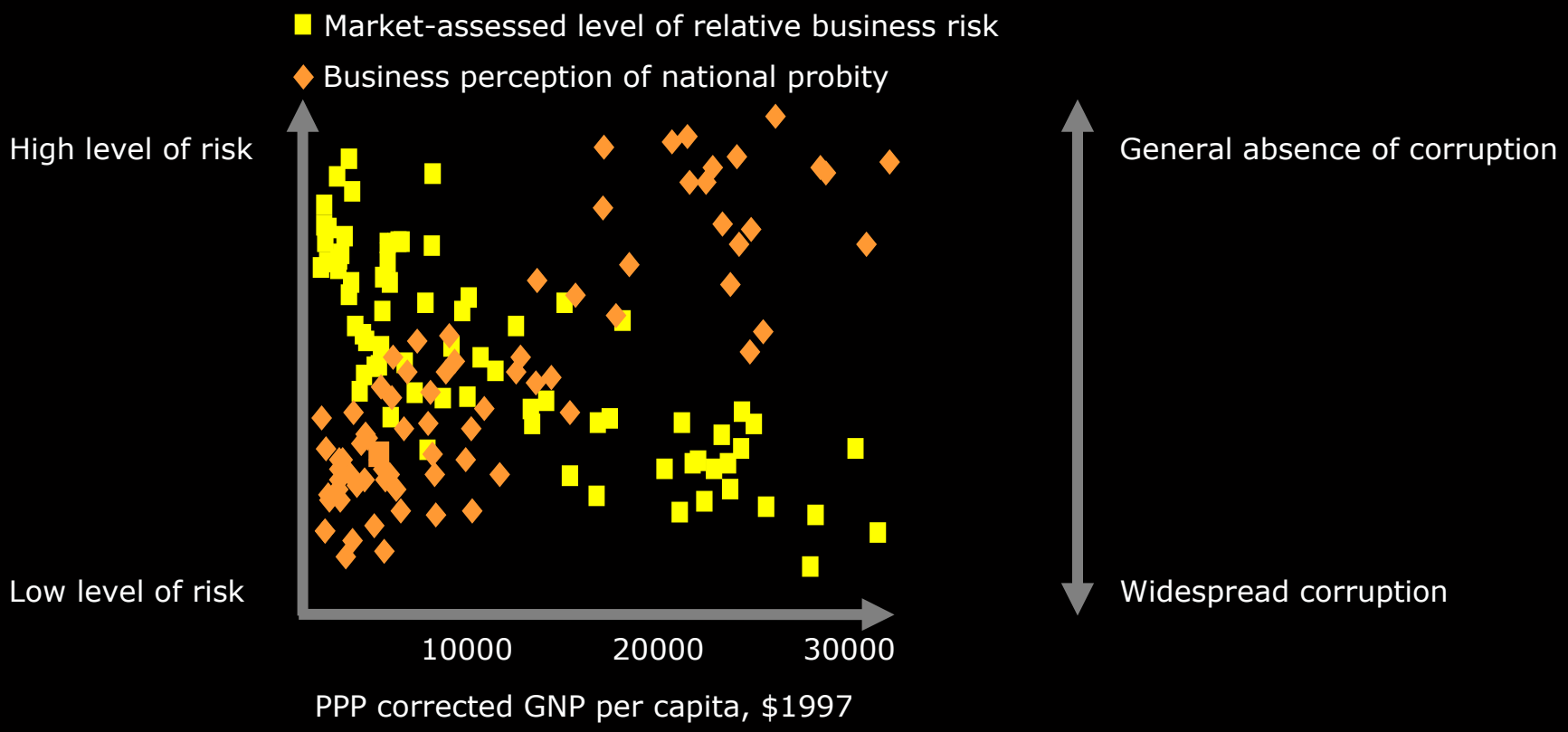
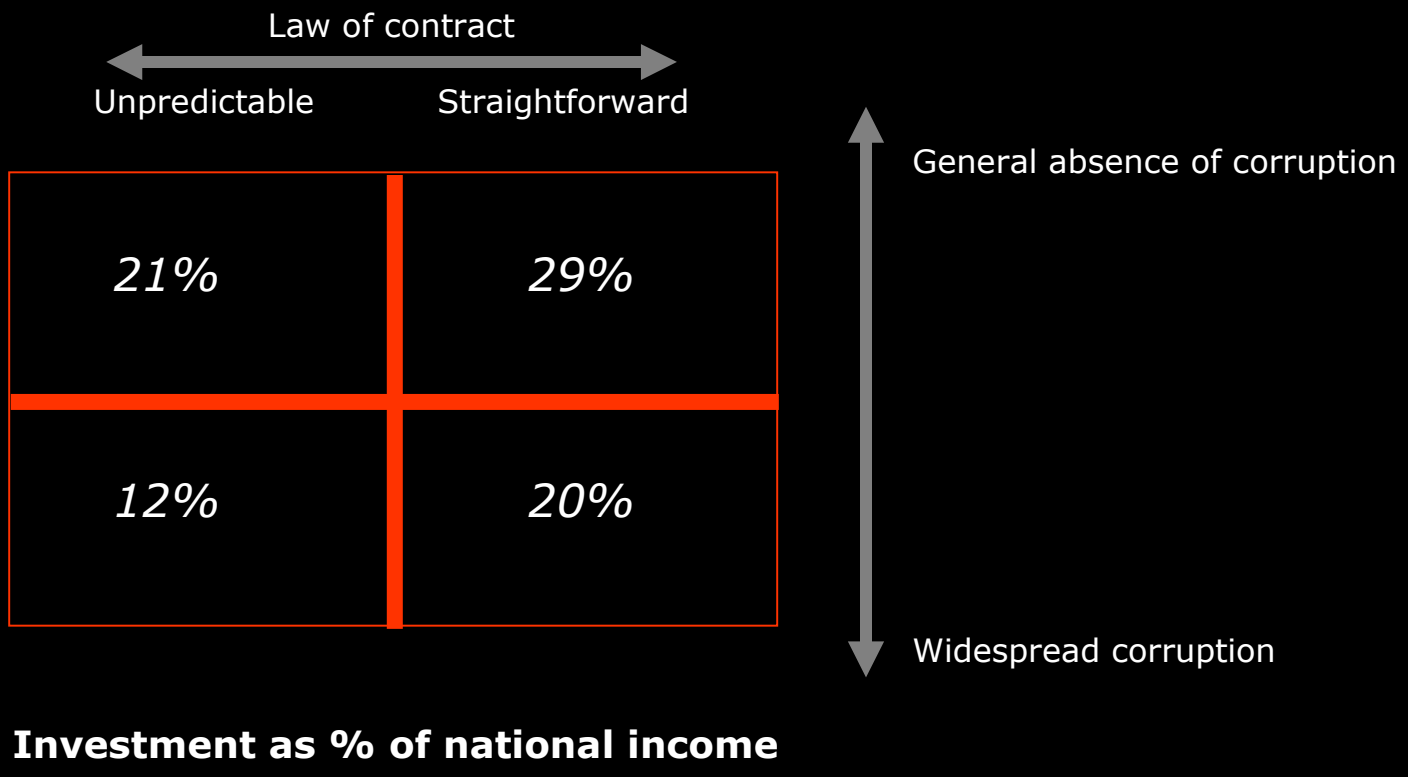
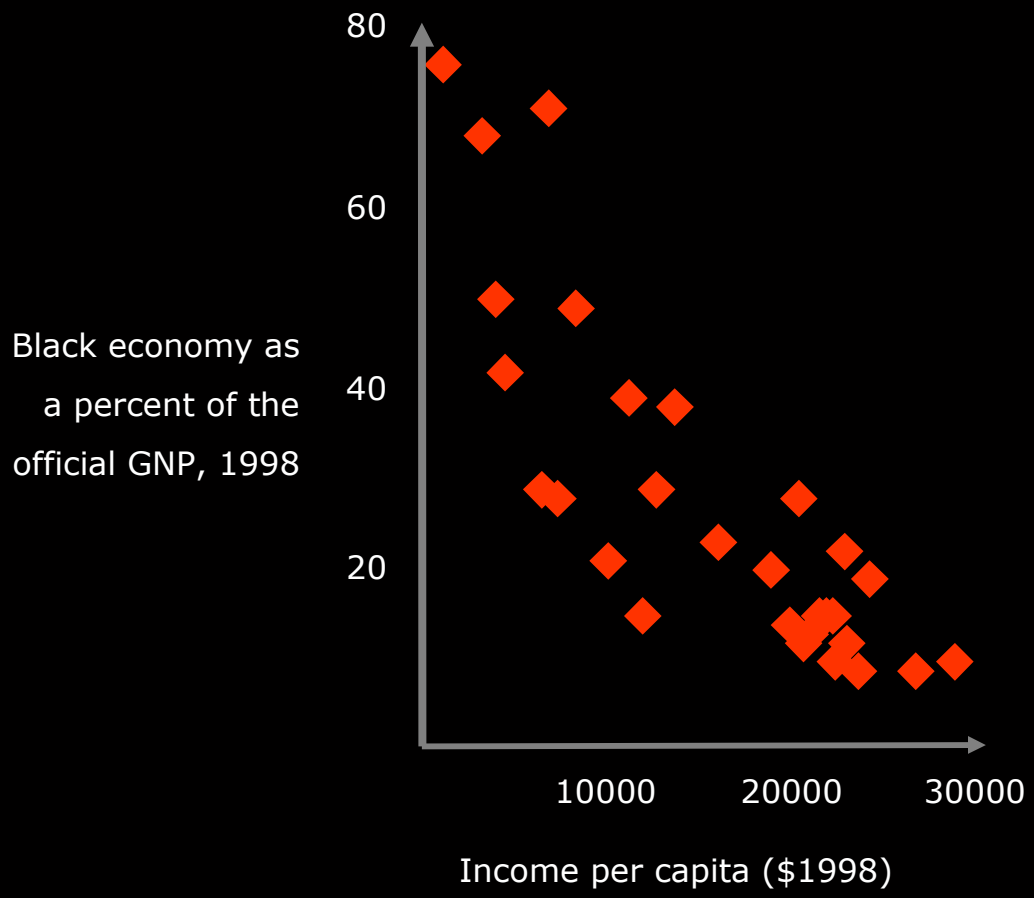

Market-assessed level of relative business risk
High level of risk
Low level of risk
10000
20000
30000
PPP corrected GNP per capita, $1997
Institutional complexity
...rate of change of
Economic complexity
Social complexity

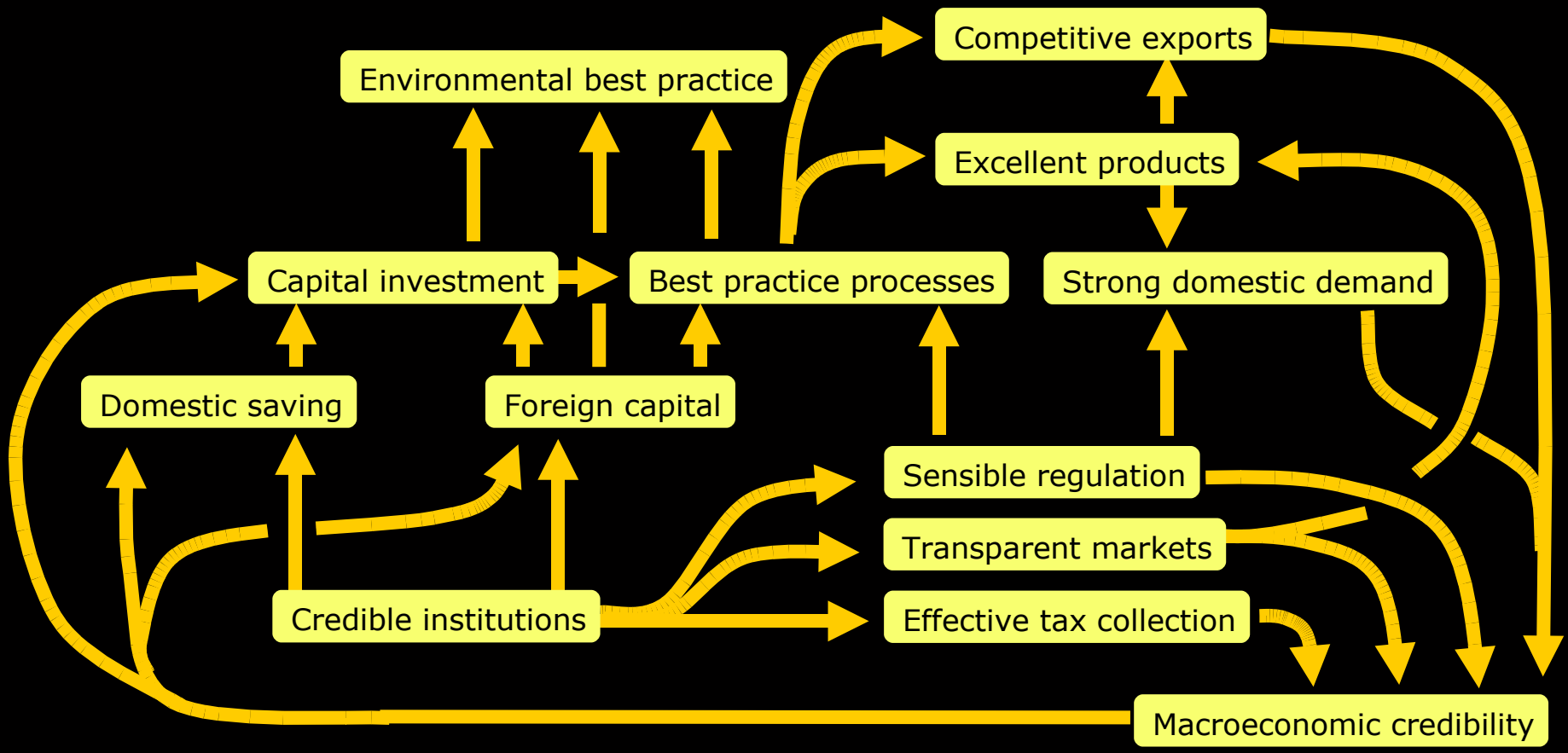

Market-assessed level of relative business risk
Business perception of national probity
High level of risk
Low level of risk
General absence of corruption
Widespread corruption
10000
20000
30000
PPP corrected GNP per capita, $1997



Lack of corruption ➢ public income and investment, rationality, trust

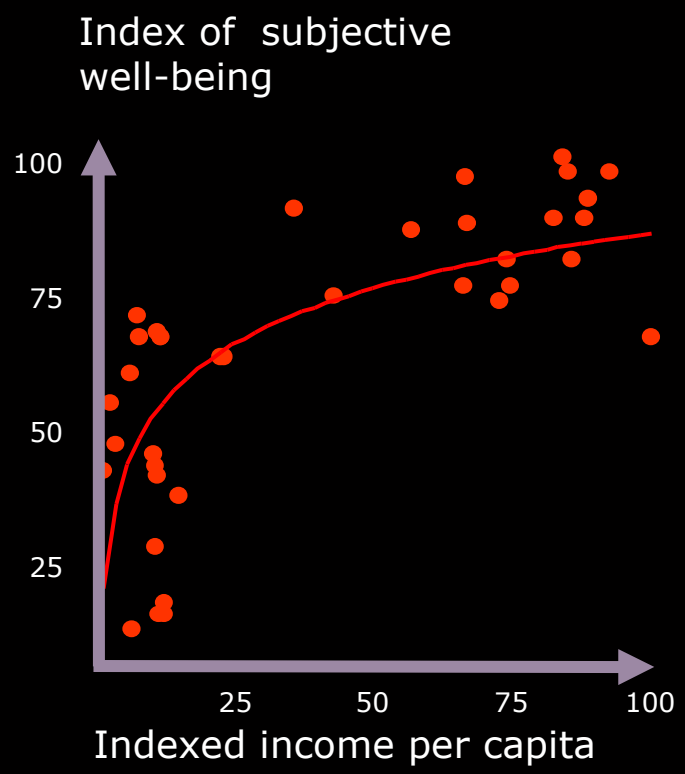


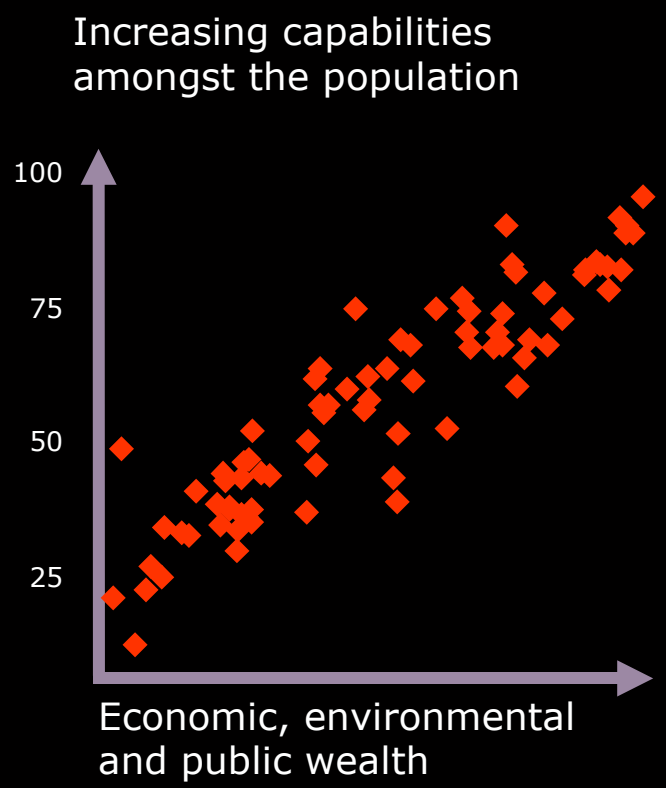
Lack of corruption	➢	public income and investment, rationality, trust
Stable environment	➢	savings, investment, foreign funds, foresight
Equitable society	➢	engagement with institutions, entrepreneurship
Systems approach	➢	pulling together the threads, public integration



Human resources ➢ capability, trust, engagement

Systems approach ➢ pulling together the threads, public integration





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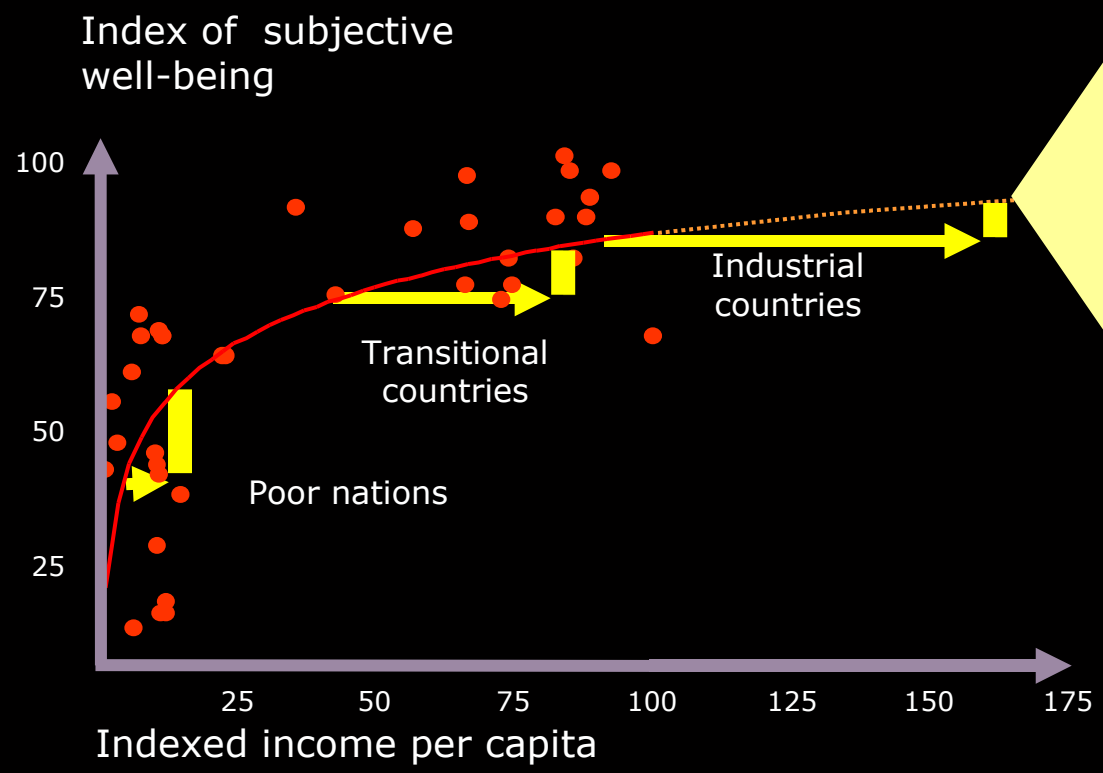

Elderly, concerned by internal affairs. Key external issues are maintaining competitiveness, retaining intellectual property, assuring security & tending to the natural environment.

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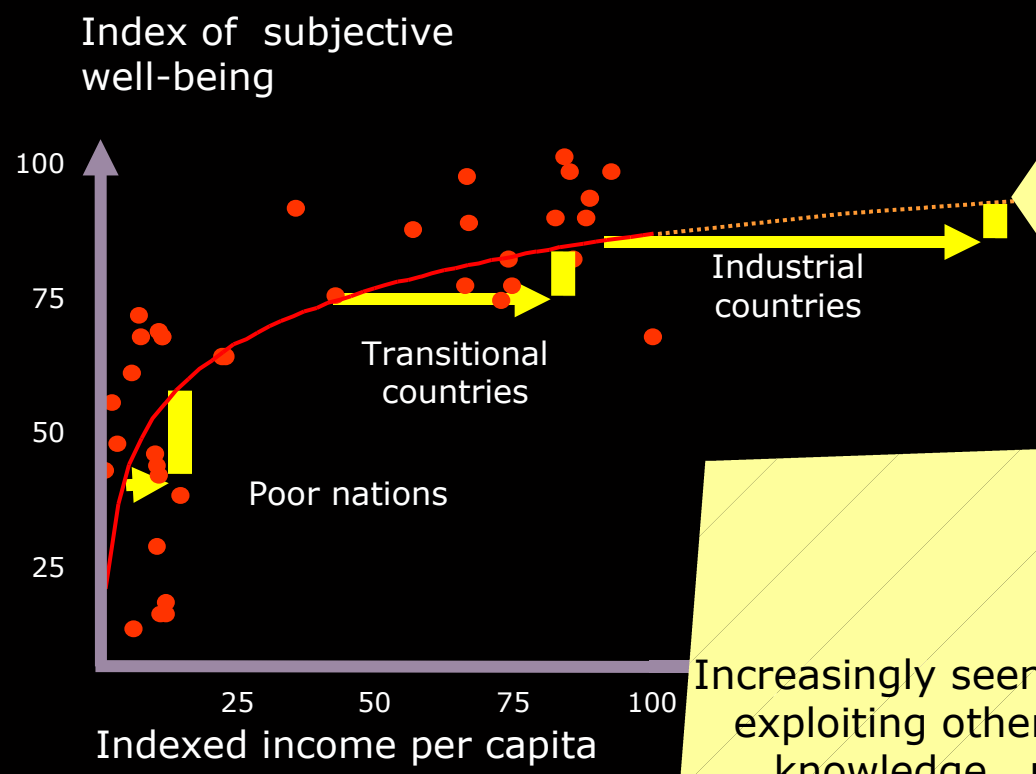

Elderly, concerned by internal affairs. Key external issues are maintaining competitiveness, retaining intellectual property, assuring security & tending to the natural environment.

Increasingly seen as exploiting other peoples' knowledge, unsettling or dangerous new technologies and natural resources in troubling ways. Becoming elderly, but racing to catch up with the knowledge economy

Grasping at available economic and political possibilities

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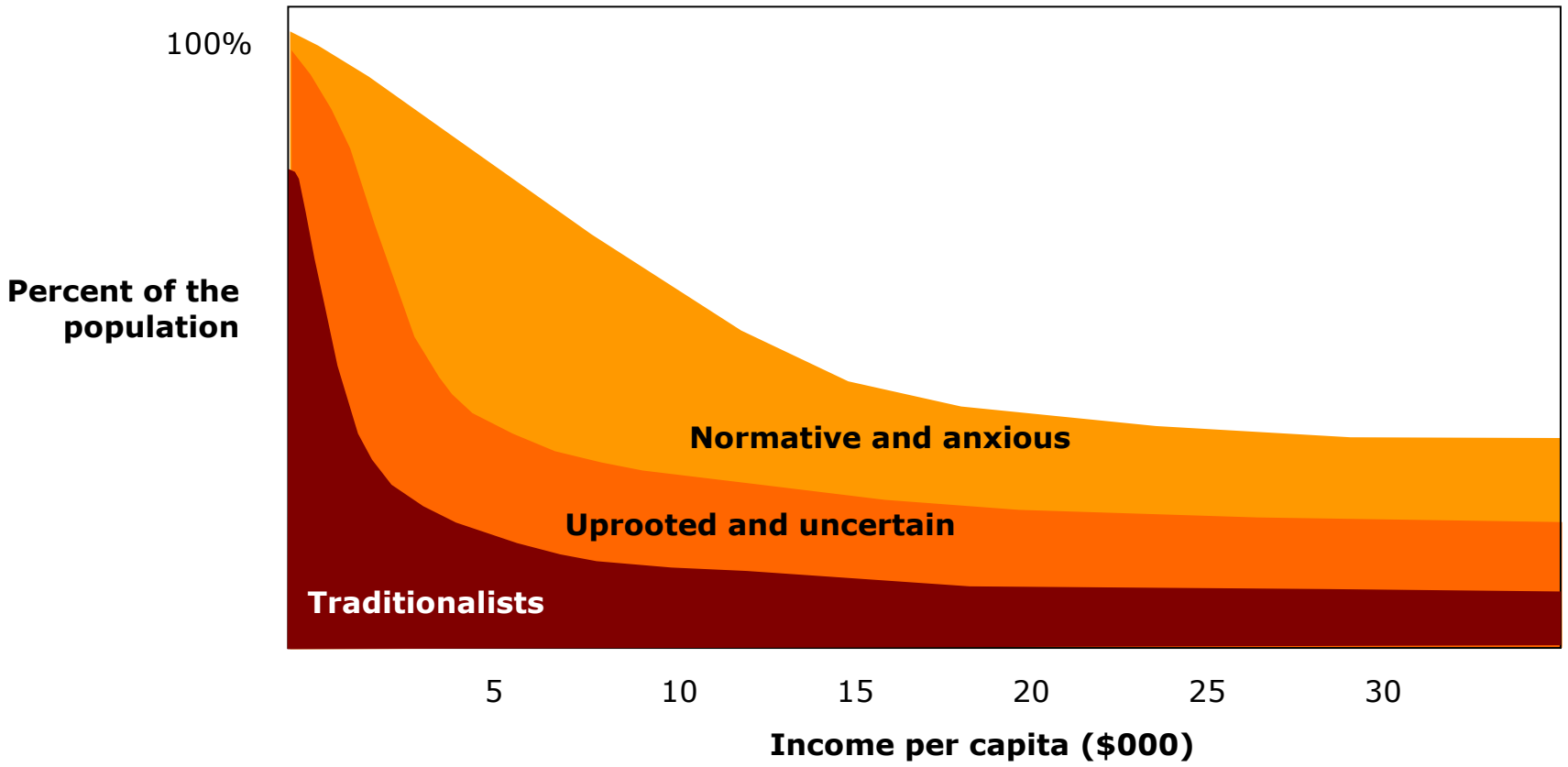
What creates friction?

Adaptive machinery that cannot cope
Resource scarcity: food, water
Incompatible goals or world view



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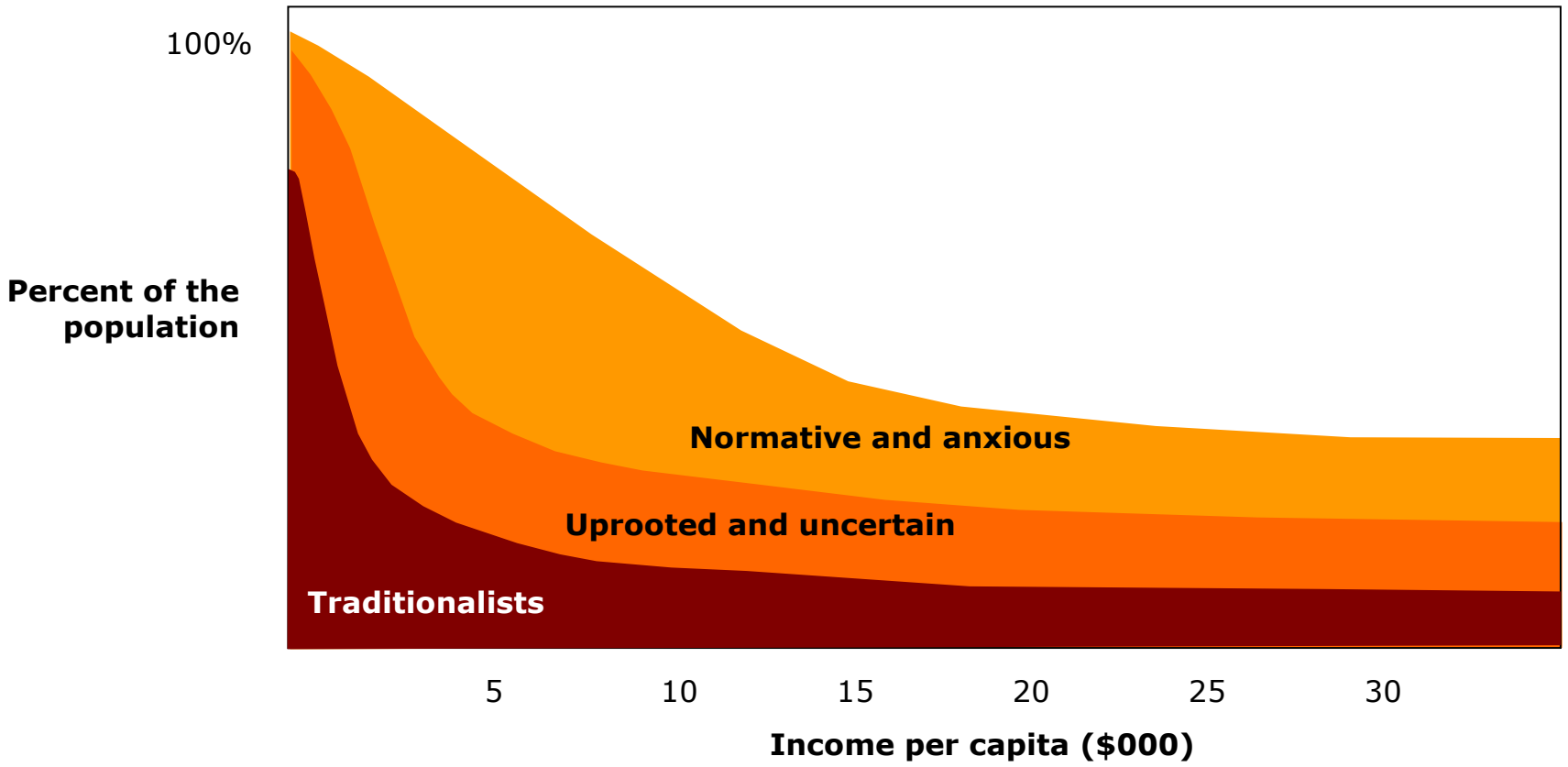
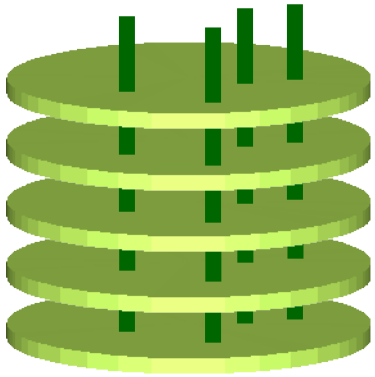


Individual lives seen as 'threads' cutting through these layers of activity



Personal preference

Family life

Culture & entertainment

Getting & spending

Adding value

Village community

Tacit rules, trust
Informal institutions
Traditional power hierarchies
Traditional support mechanisms
Stasis maintained by relative privilege

Personal preference
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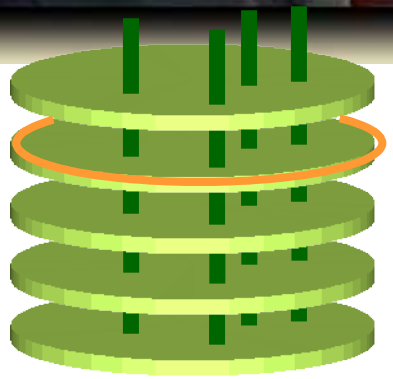
Urban ‘community of layers’



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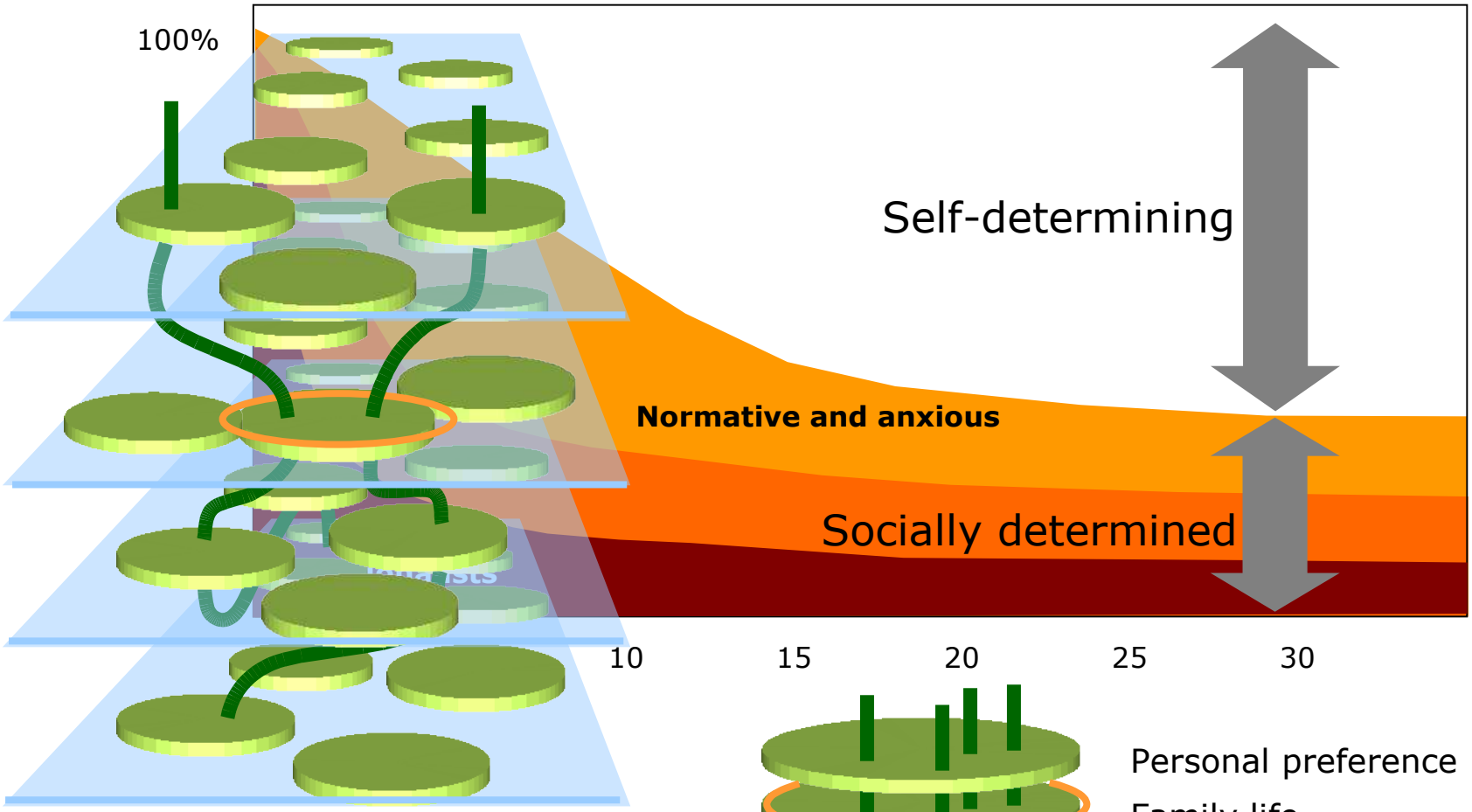
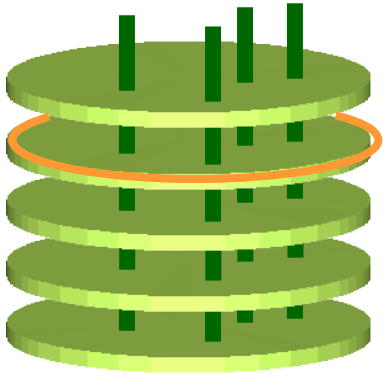
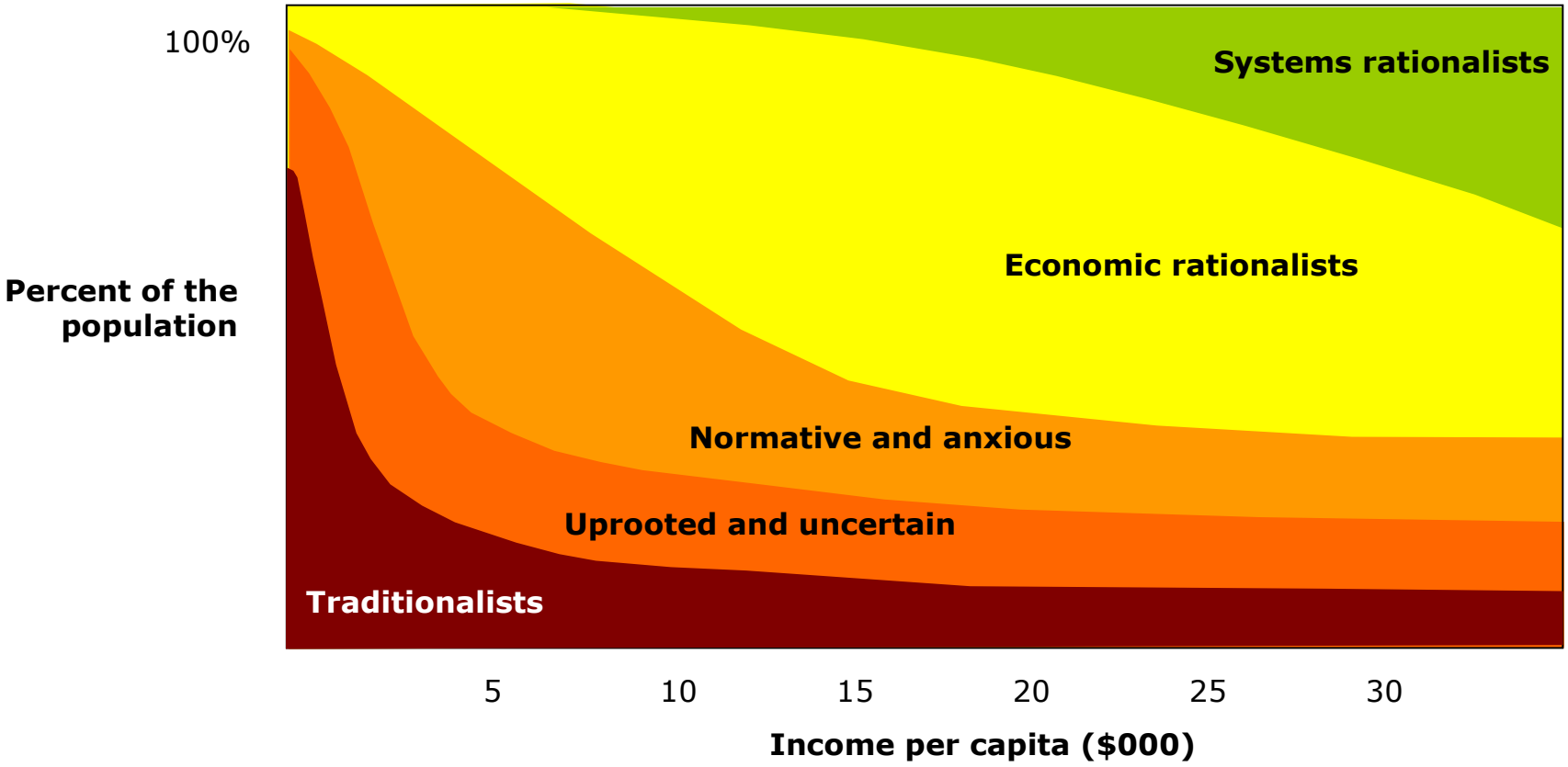


Urban 'community of layers'



Personal preference
Family life
Culture & entertainment
Getting & spending
Adding value

Village community



What creates friction?

Adaptive machinery that cannot cope

Resource scarcity: food, water

Incompatible goals or world view

Active malevolence, larceny & predation

What creates friction?

Adaptive machinery that cannot cope

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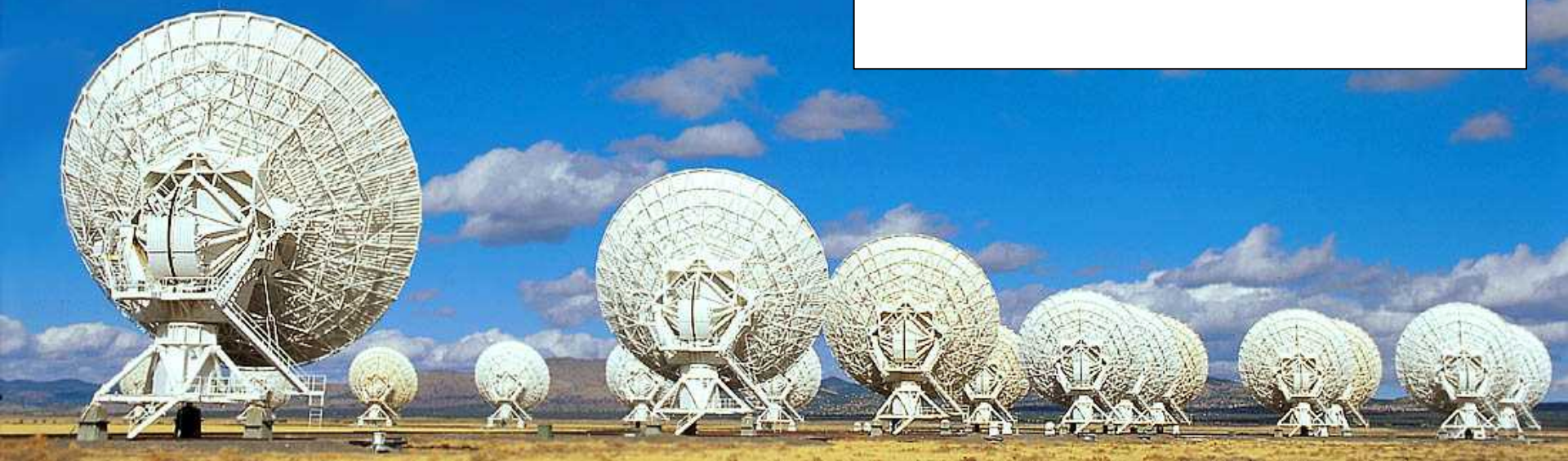
Weak signals, harsh impacts

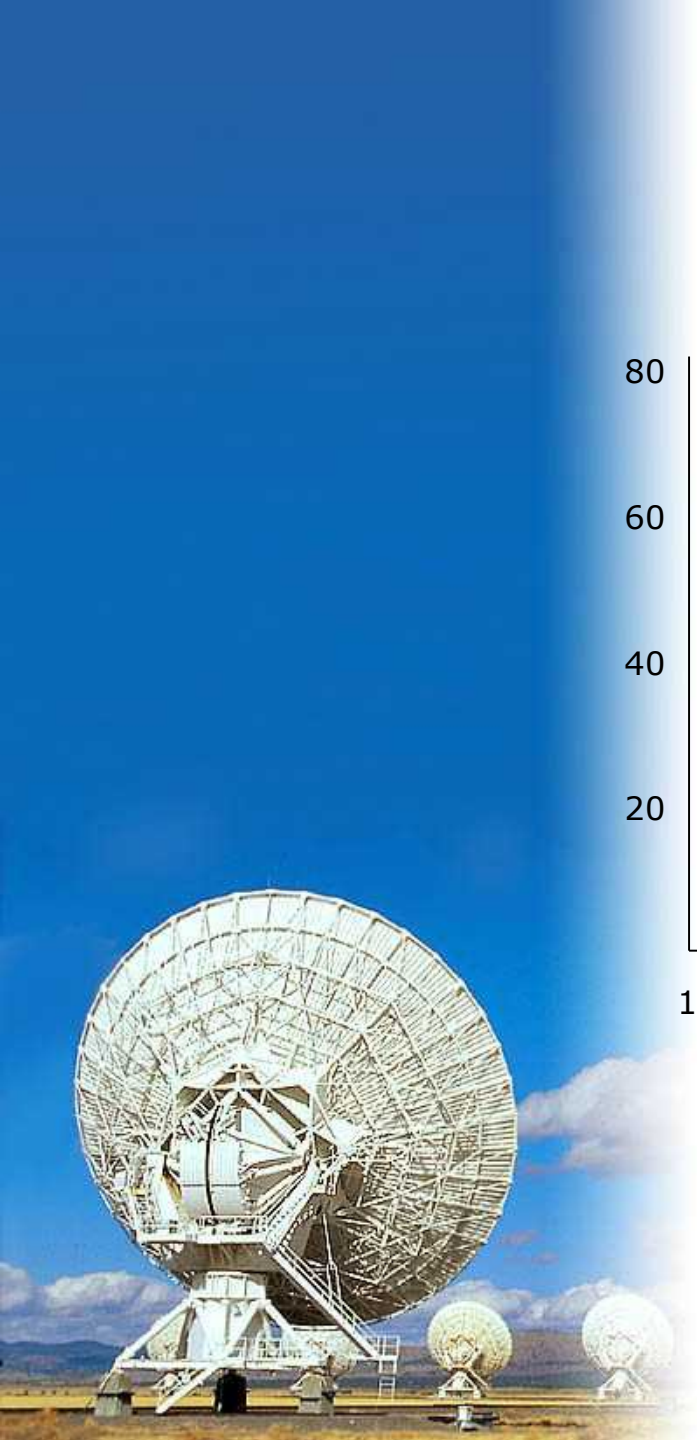
- **Difficulties in the wealthy world**
- **Two cases for 2020**

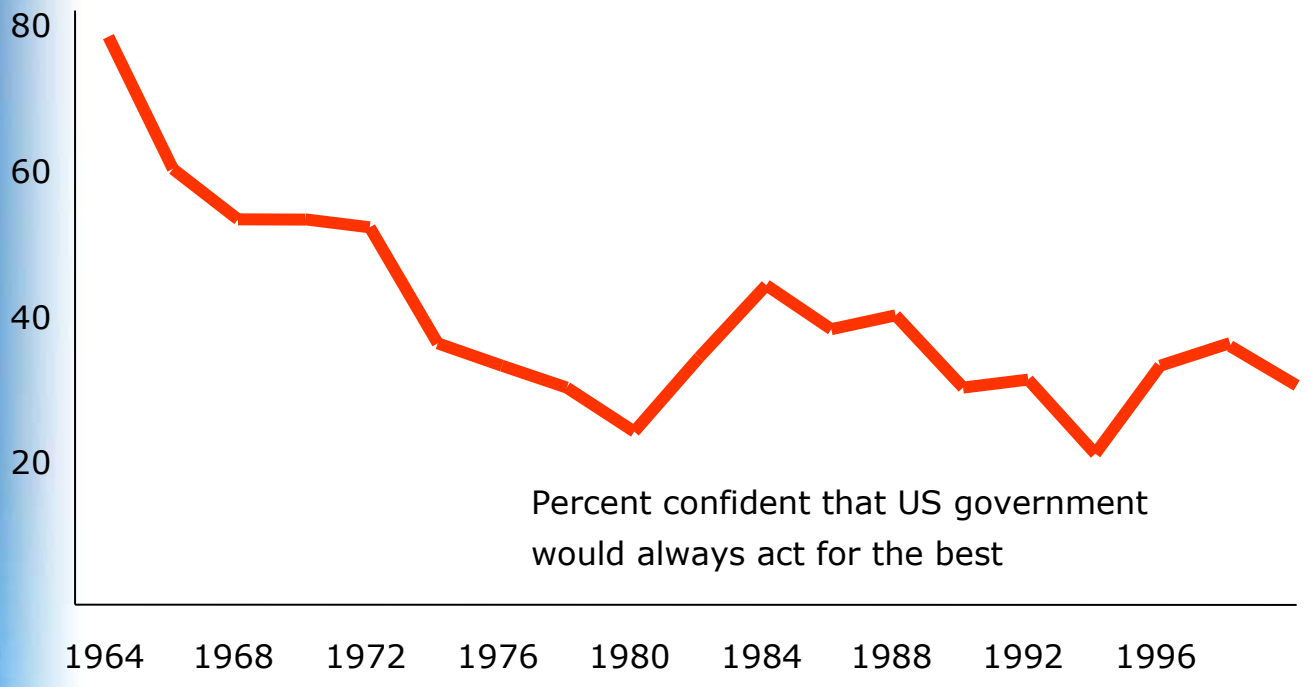
Political cohesion and consent

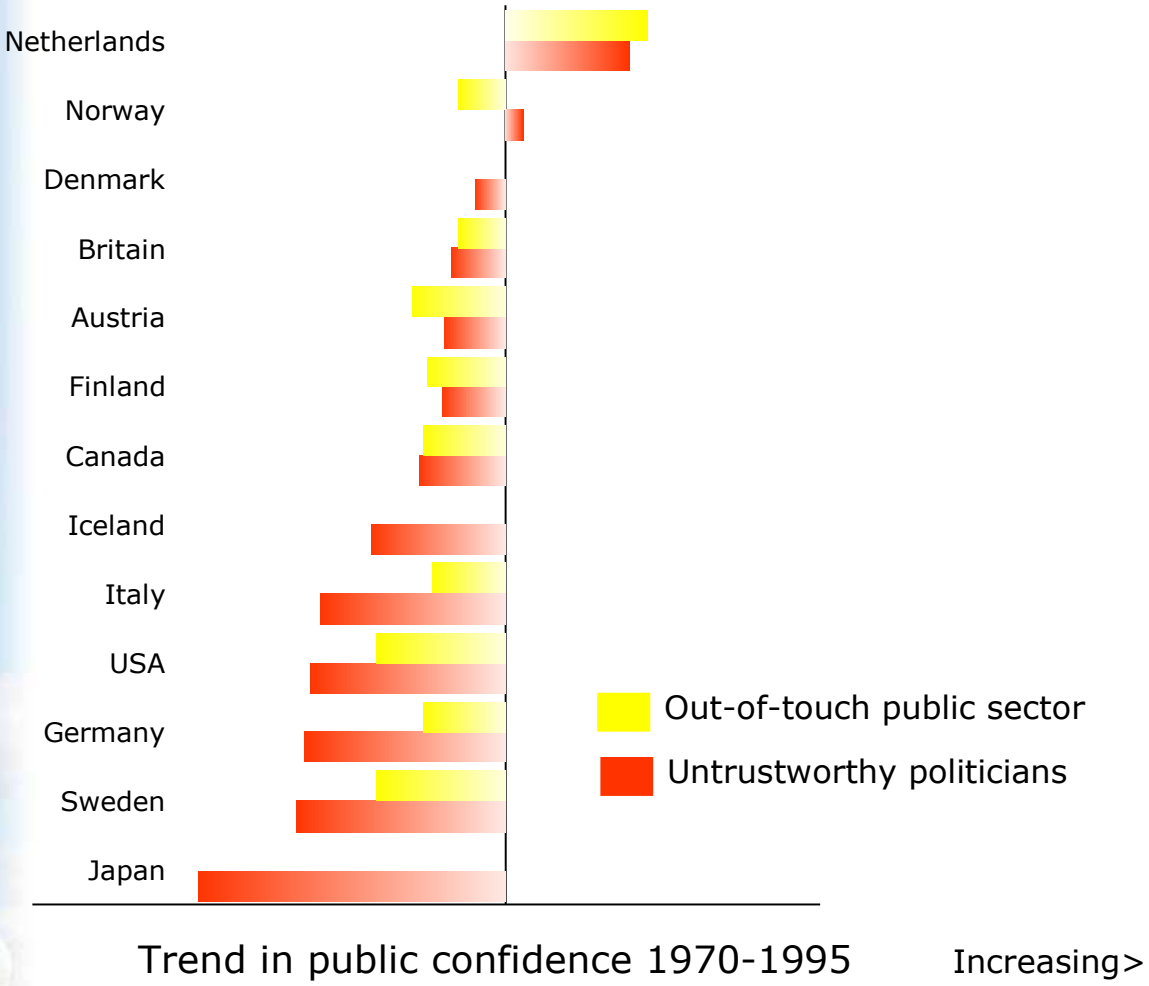
Demographics

Issues of wealth generation





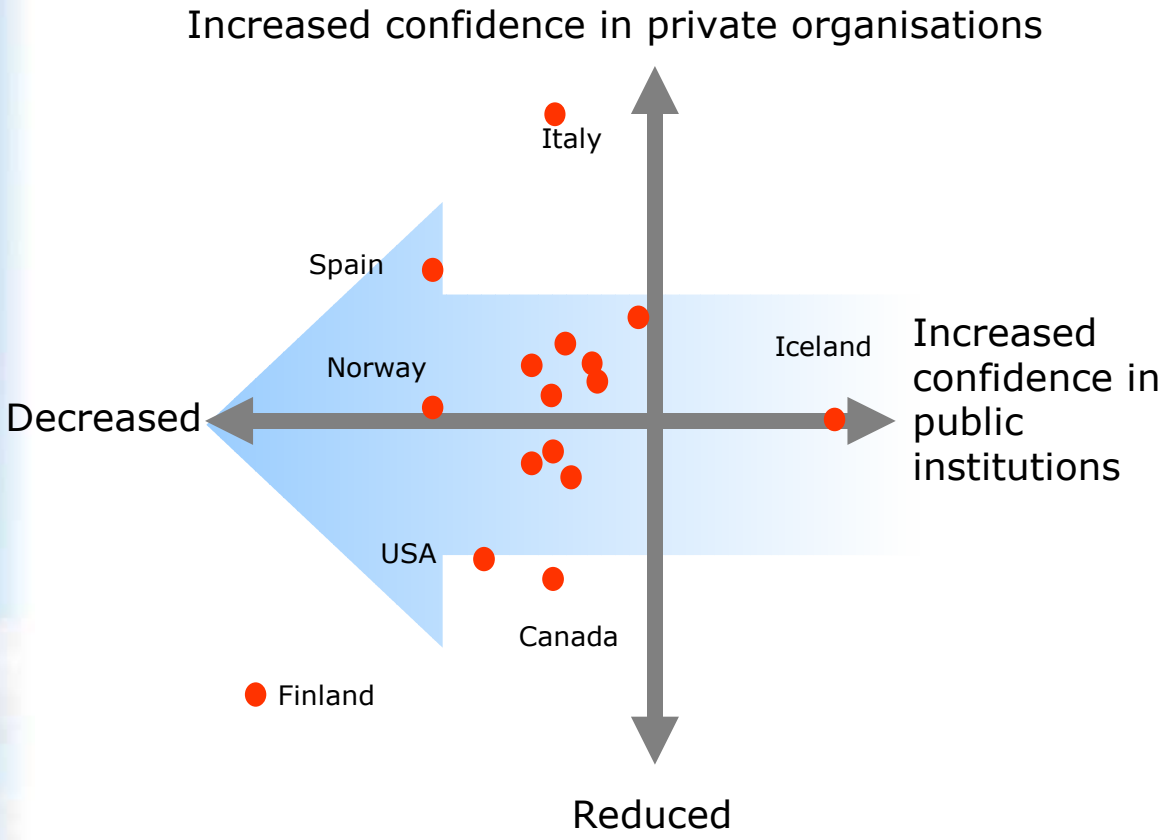

80
60
40
20
Percent confident that US government
would always act for the best
1964
1968
1972
1976
1980
1984
1988
1992
1996



Trend in public confidence 1970-1995

Increasing>

Have governments in fact performed worse than before?



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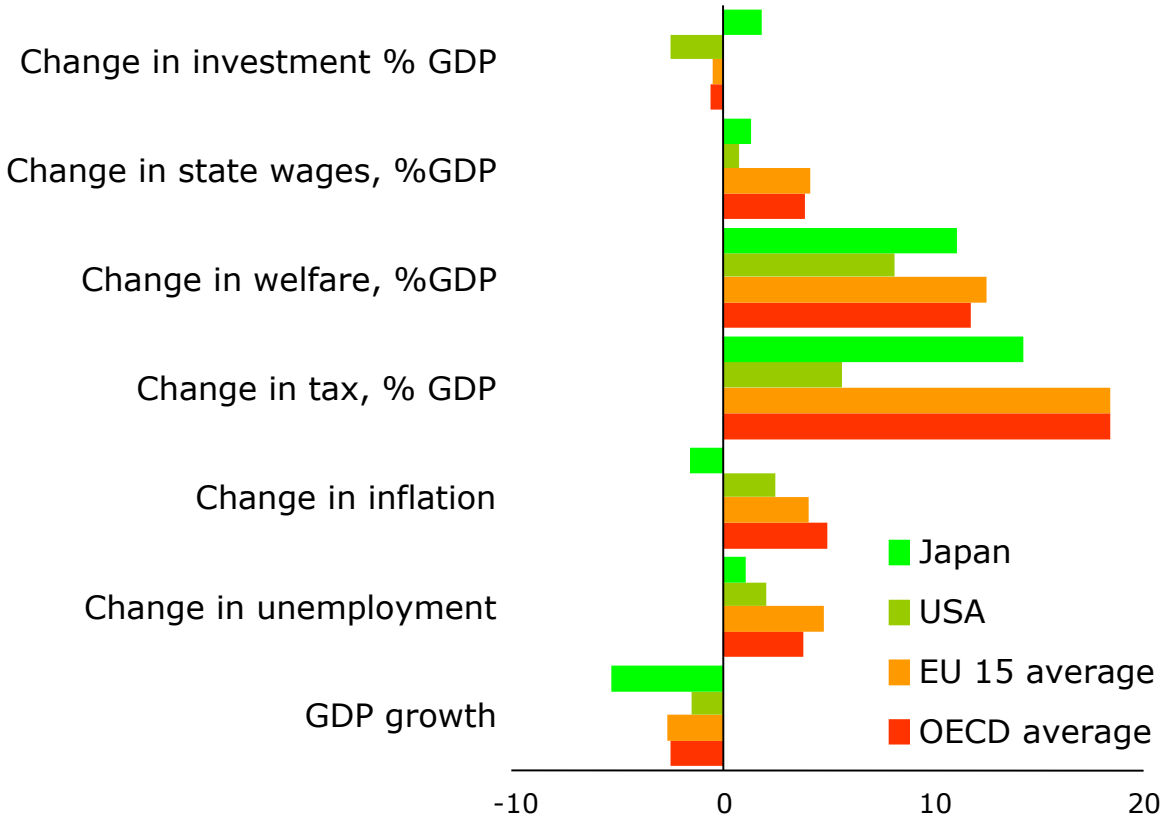

Percent change between average performance 1960-73 and average performance after 1973

Have governments in fact performed worse than before?

Two sources of malaise:

Party politics has reached the limits of its usefulness

Have governments in fact performed worse than before?

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No brand-unifying social or economic principles. Issues are seen as operationally separate.

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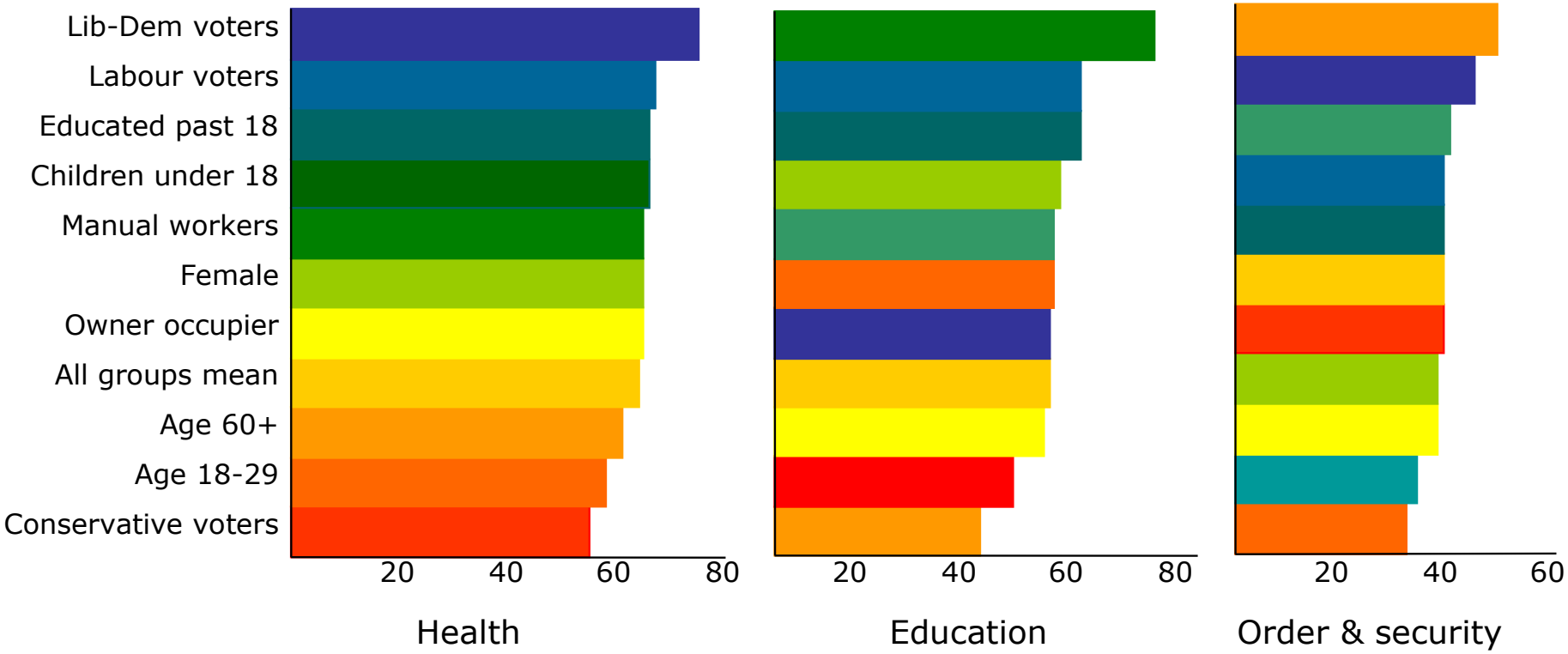

Have governments in fact performed worse than before?

Two sources of malaise:

Party politics has reached the limits of its usefulness

Populations have complex values and do not 'bundle' into two or three supporter groups.

Emphasis on personality and reputation, on presentation and issue micro-management

Parties have become only machines for getting elected:

- They must attempt to please all, and to alienate no significant groups.
- Brand is a dominant consideration. It tends to drive policy and priorities.
- Career development focuses on charisma rather than efficacy.

Have governments in fact performed worse than before?

Two sources of malaise:

Party politics has reached the limits of its usefulness

Policy machinery is archaic

The complexity and speed of events demand a modular, expert approach
Once-and-for-all legislation is shifting towards continual "managerial" review
More and more issues are becoming technical, rather than aspirational.
The relevant knowledge pool often lies beyond government.
An expert, confident population seeks a more direct voice

?

Multi-layered, focused, agency-based governance, with more expert representation
A tier of integrative, strategic governance focused more on process and integration

Weak signals, harsh impacts

- **Difficulties in the wealthy world**
- **Two cases for 2020**

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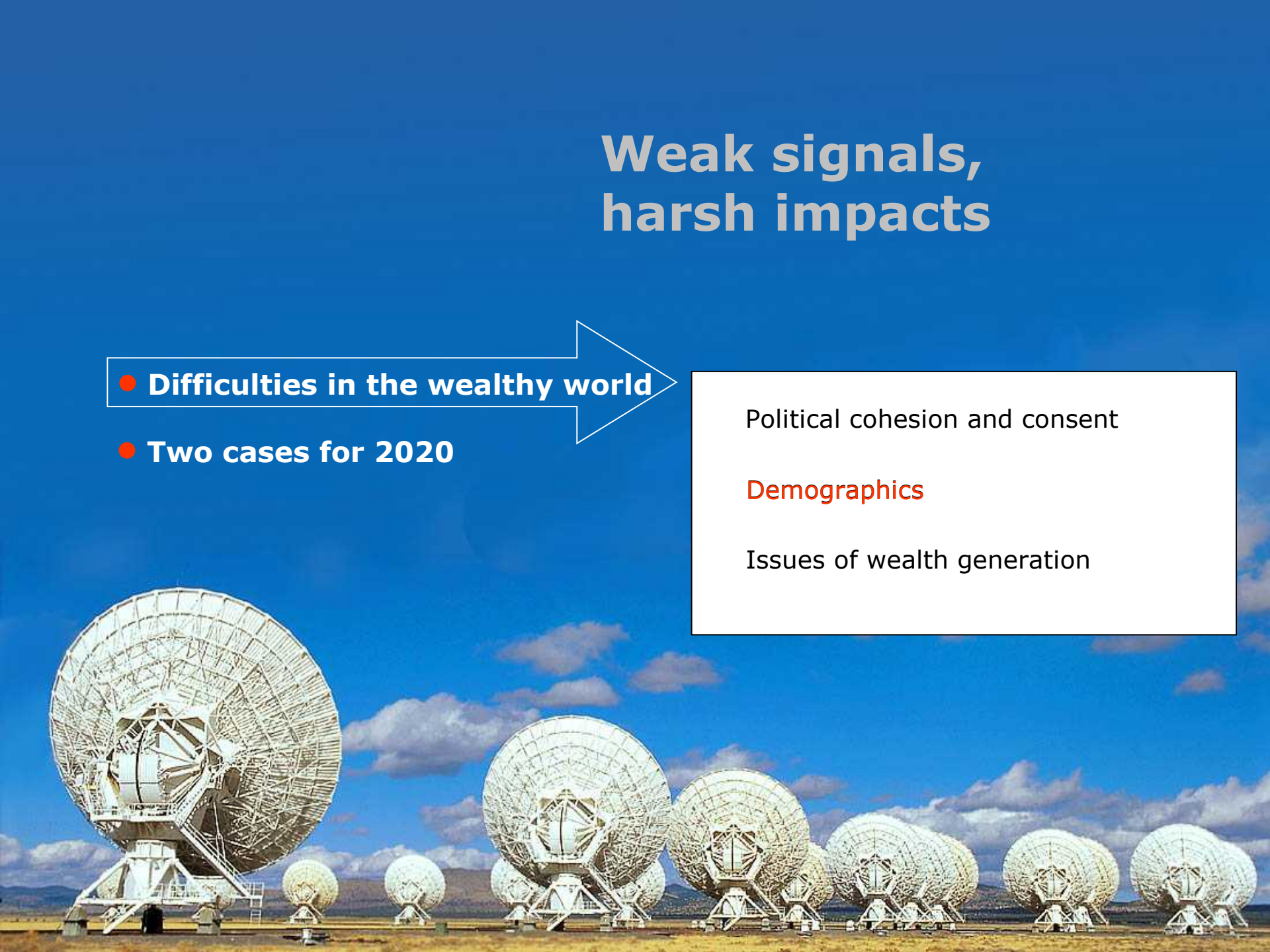
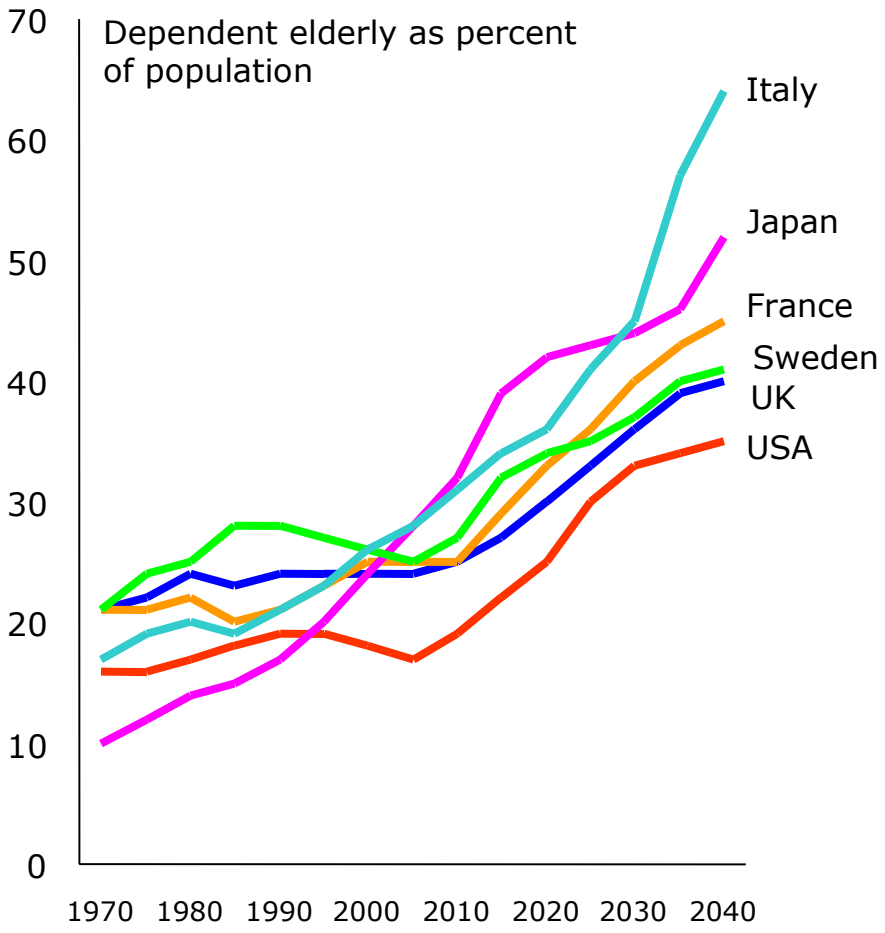
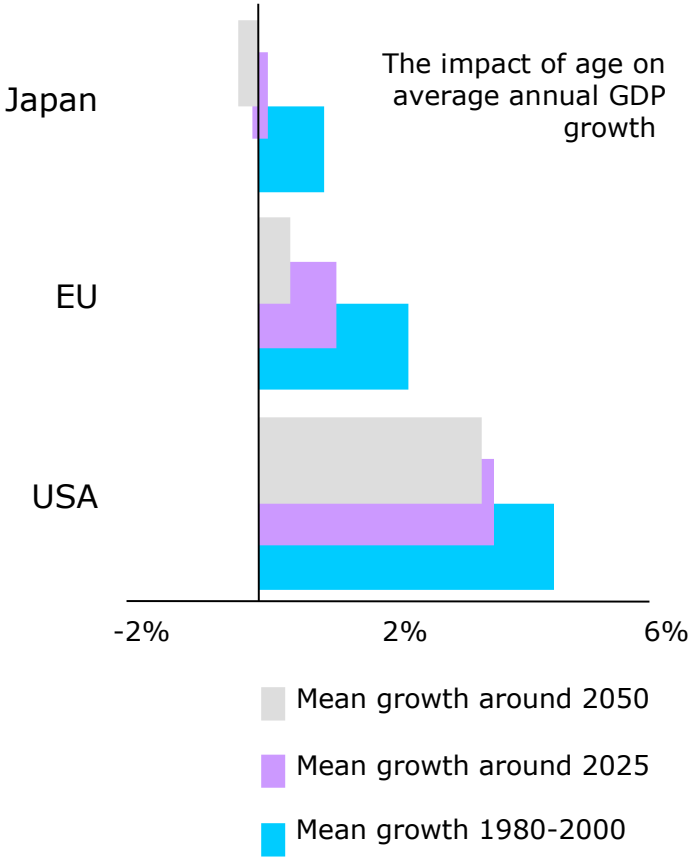
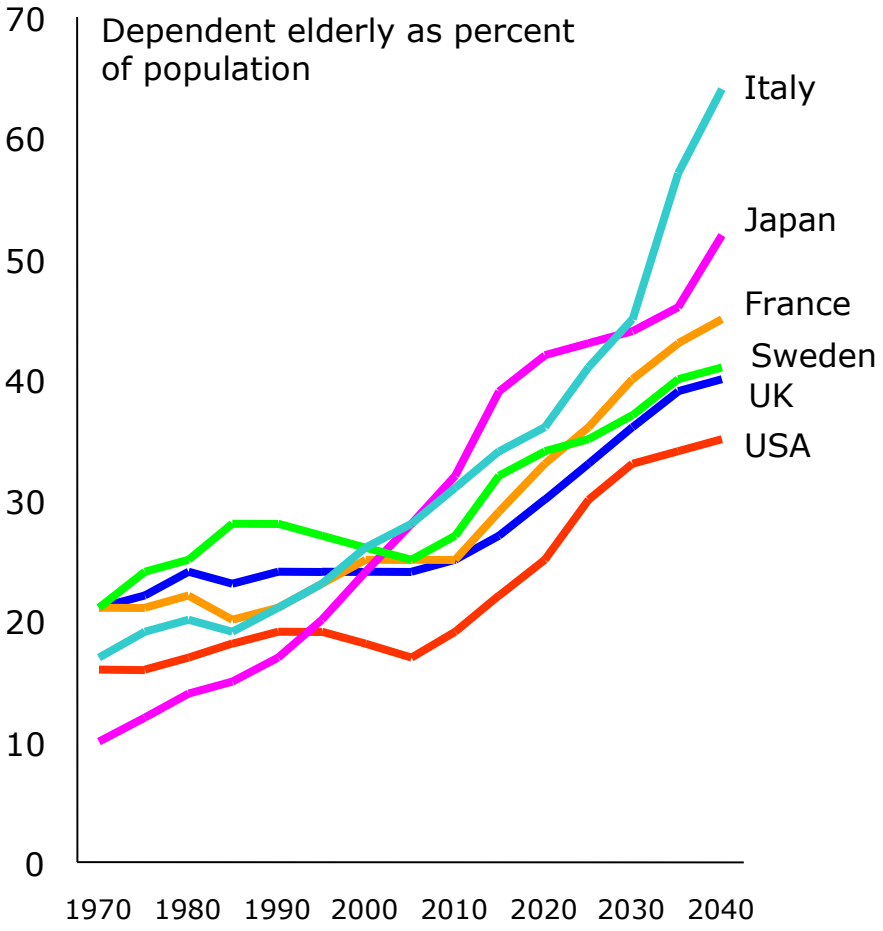



Dependent elderly as percent of population
70
60
50
40
30
20
10
0
1970
1980
1990
2000
2010
2020
2030
2040
Italy
Japan
France
Sweden
UK
USA


The impact of age on average annual GDP growth
Japan
EU
USA
-2%
2%
6%
Mean growth around 2050
Mean growth around 2025
Mean growth 1980-2000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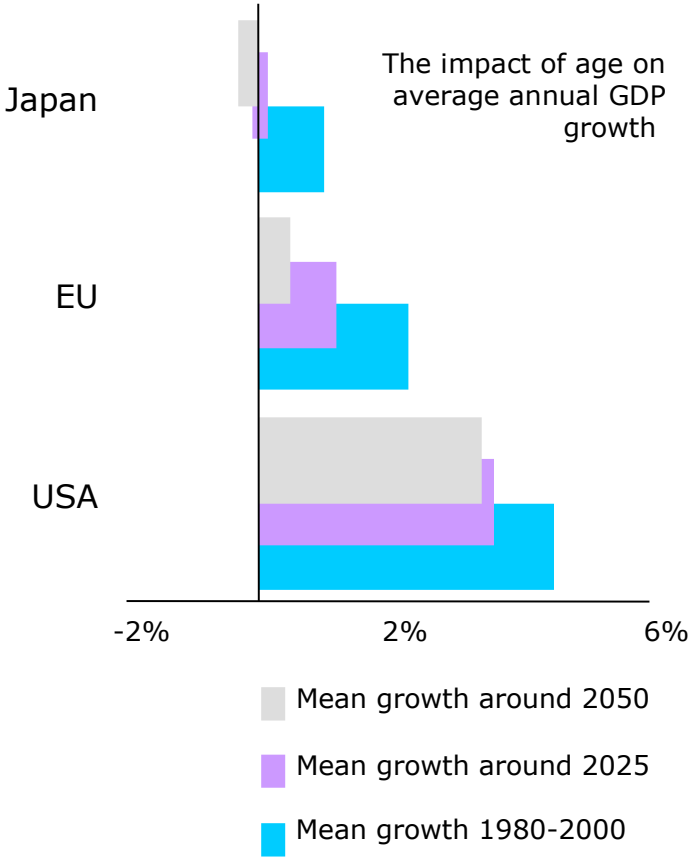

Pensions

Health

Care

Weak signals, harsh impacts

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- **Two cases for 2020**

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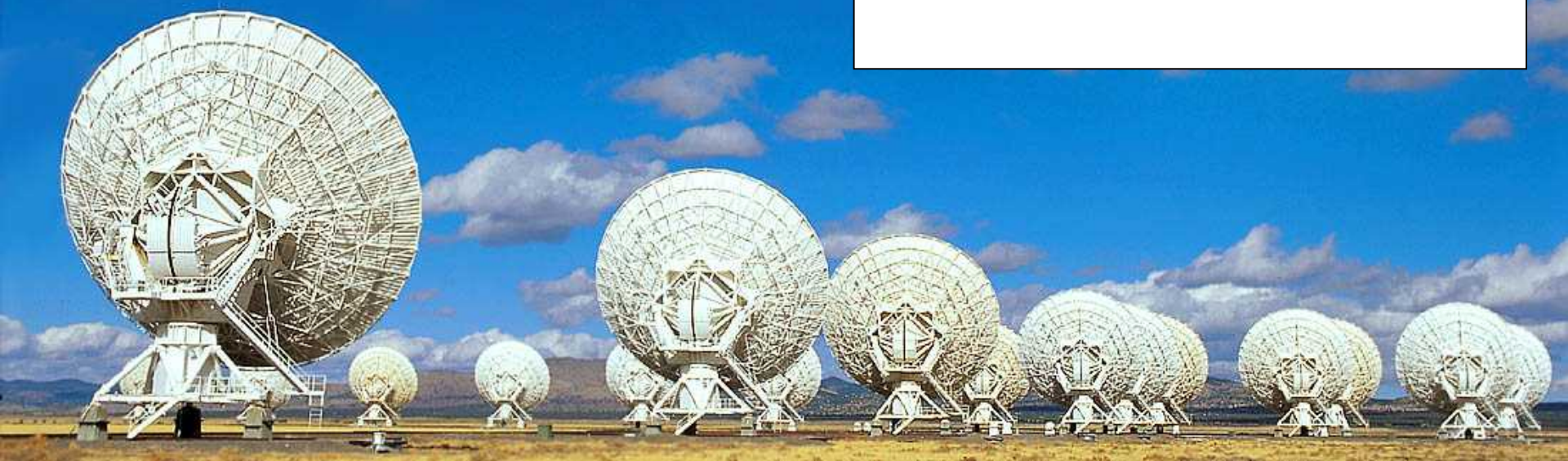
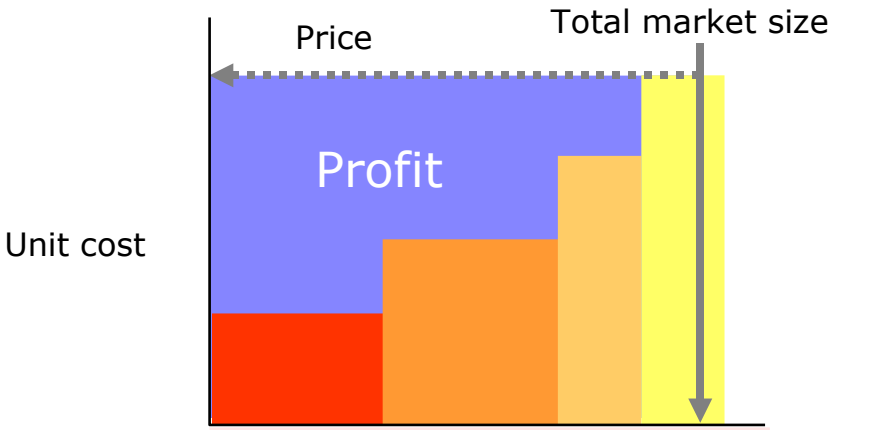
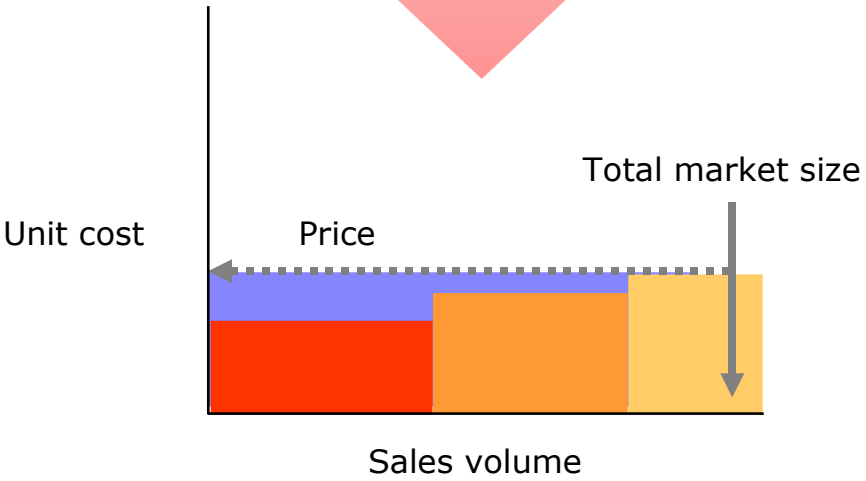


- Good for the consumer
- Difficult for commerce

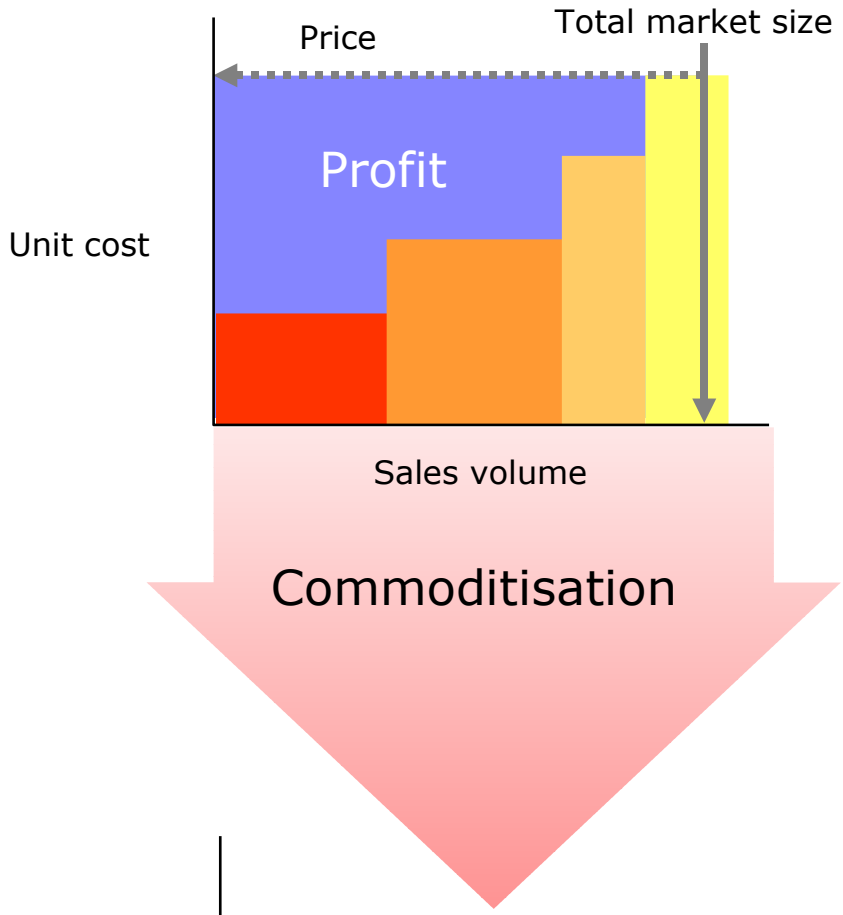


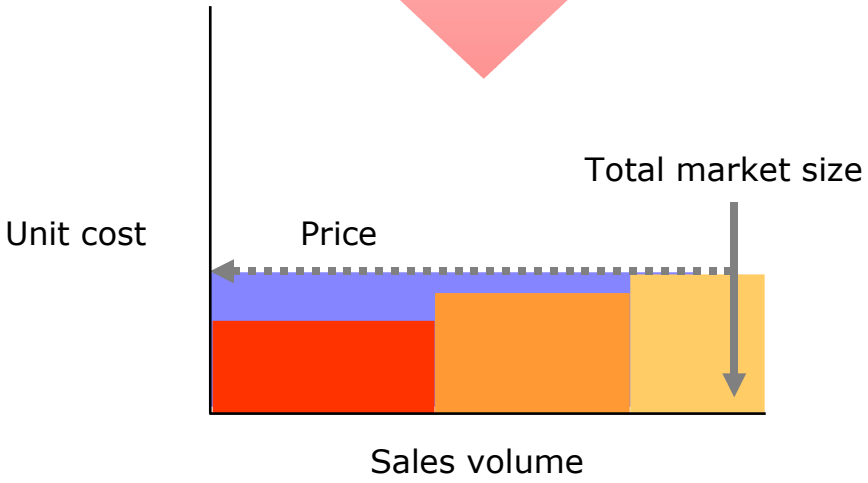
Commoditisation



Innovation
and new markets

Generic responses
to competition





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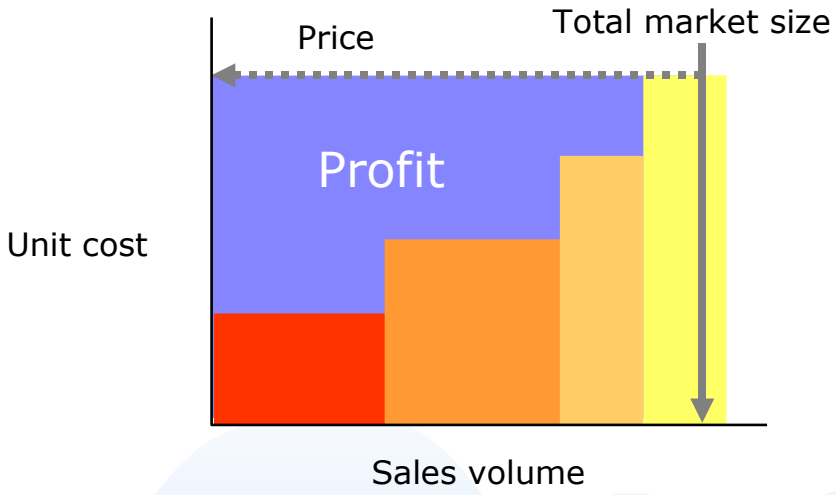


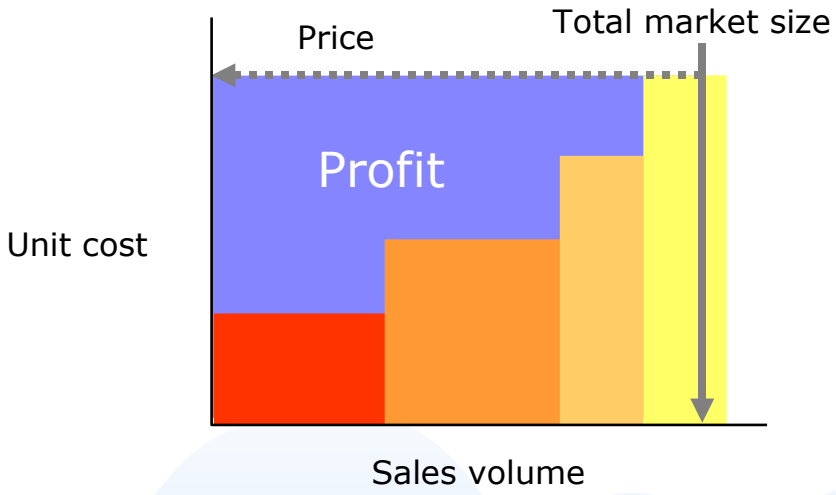
Generic responses
to competition

Risk containment
Consolidation
Cost management
Process streamlining
Benchmarking
Measurement and accountability
Continuous improvement
Bureaucratisation and
algorithmatisation
Total quality management
Outsourcing
Internal segmentation
Supply chain management
Working capital management
The stereotyped customer
Flight to the middle

Unspecified goals, uncertain tools

Specified, defined tools and goals

Innovation
and new markets



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The stereotyped customer

Flight to the middle

Unspecified goals, uncertain tools

Specified, defined tools and goals

Guidance

Measurement

Accountability

Tools

Motivation

- Exact metrics
- Clear deliverables
- Economies of scale
- IT is easily applicable
- Silo management works
- Resource planning works
- Risks are familiar and transparent
- People act as replaceable modules

Unspecified goals, uncertain tools

Specified, defined tools and goals

- No metrics
- ‘Know it when you see it’
- Existing structures often subverted
- IT is seldom more than an enabling tool
- Silo management is actively unhelpful
- Traditional resource planning unhelpful
- New and unfamiliar risks
- People act as knowledge agents

Unspecified goals, uncertain tools

- Exact metrics
- Clear deliverables
- Economies of scale
- IT is easily applicable
- Silo management works
- Resource planning works
- Risks are familiar and transparent
- People act as replaceable modules

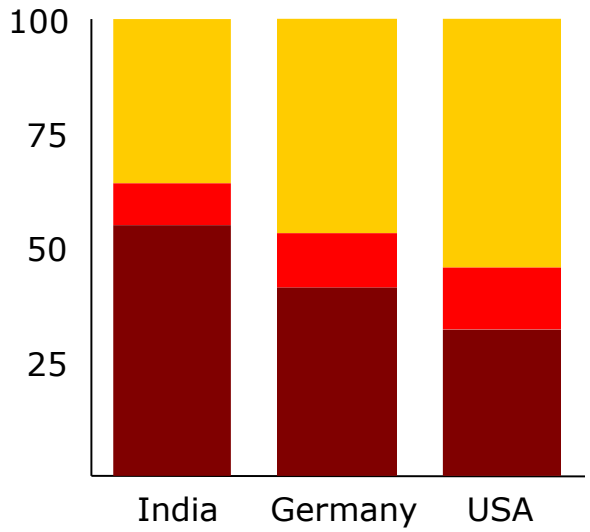
Specified, defined tools and goals

- Direction and renewal cannot be delivered ‘top down’
- Options arise from three key elements:
  - Consolidation and synthesis of the knowledge stored in individual heads
  - A common sense of context, of what the organisation is trying to achieve
  - Machinery for converting ideas and options into motivation, action and reward
- Each of these elements are extremely complex, and need supporting processes
- Few organisations have even the skeleton of this in place

Unspecified goals, uncertain tools

Specified, defined tools and goals

Lifetime project costs in manufacturing (% share)



Cost of gaining insight

Cost of managerial oversight

Cost of physical transformation

- Ever-shortening life cycles
- Explosion in knowledge and connectivity
- "Specified" activities increasingly delocalised
- Firms have only three long-term defensible capabilities:

  Cost control
  Capacity to innovate
  Resilience and predictability

Weak signals, harsh impacts

- The drivers of change
- Two cases for 2020

Adaptation is forced on nations and firms through the workings of impersonal forces

Social and institutional structures tend both to limit and to shape the nature of events

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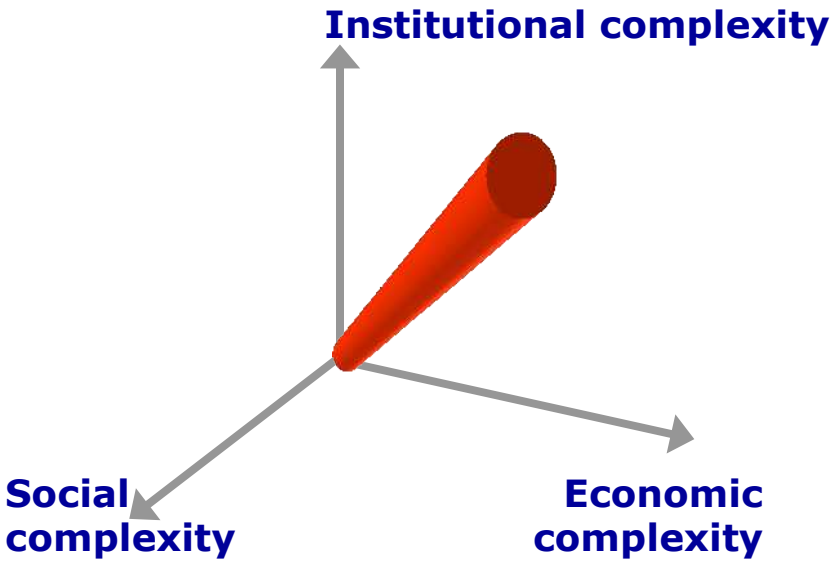
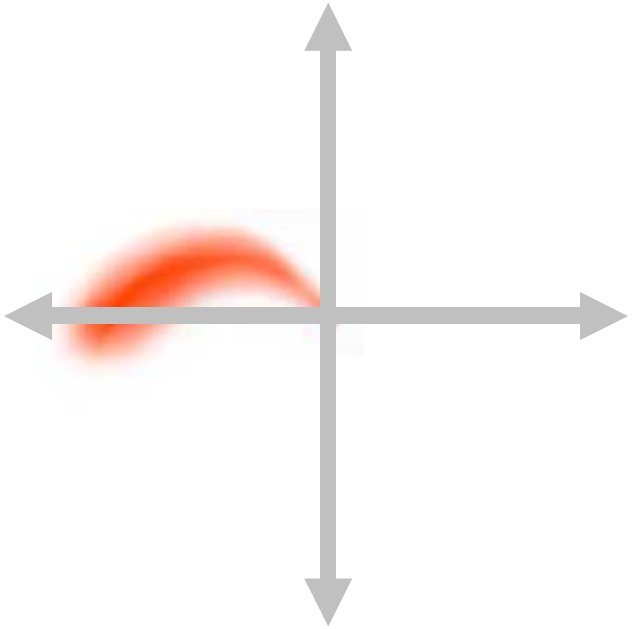


The international environment becomes increasingly open and well-policed

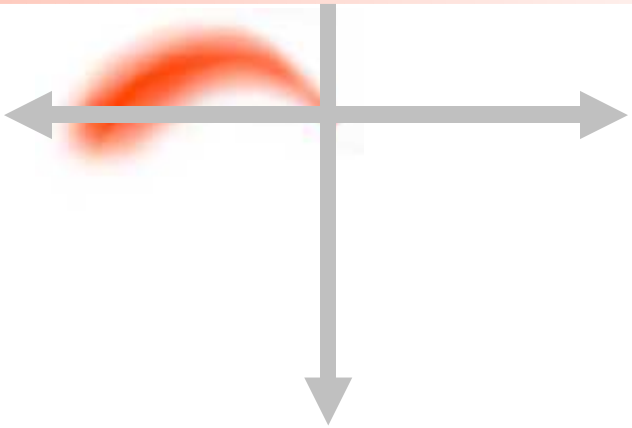
Adaptation is forced on nations and firms through the workings of impersonal forces



Social and institutional structures tend both to limit and to shape the nature of events

International relations become increasingly fractious and complex.

- Effective US hegemony in the international arena, NAFTA boom
- Japanese banking reform and institutional re-design
- European restructuring
- A dominant paradigm: competition, no boundaries, no limits
- … but, an underlying entanglement of commerce and government



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Rigidities such as labour and sectoral protection or subsidy lessened
Management teams exposed to international capital market norms
Labour mobility and equilibrating wage rates
Genuine regionalisation in decision-taking

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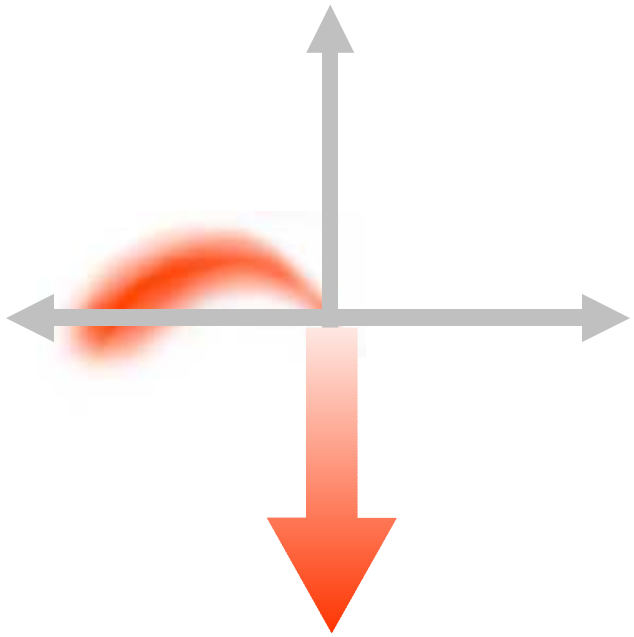

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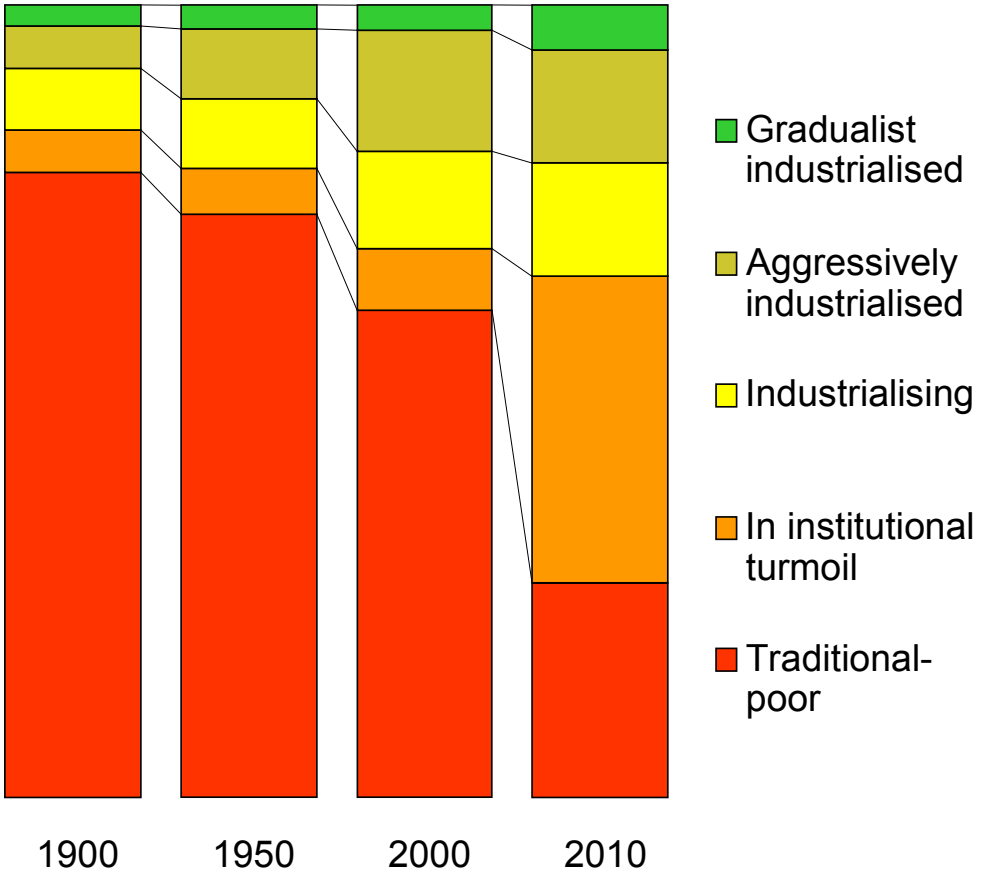
Proportional make-up of world population



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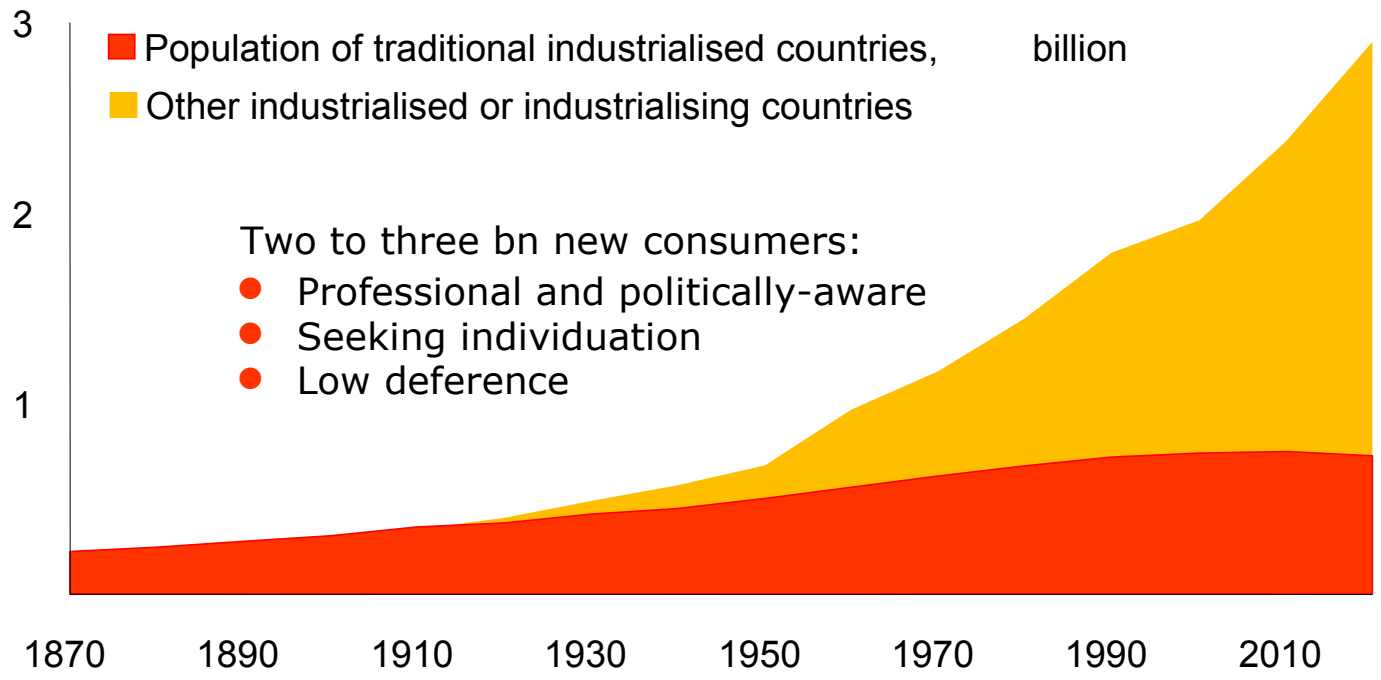

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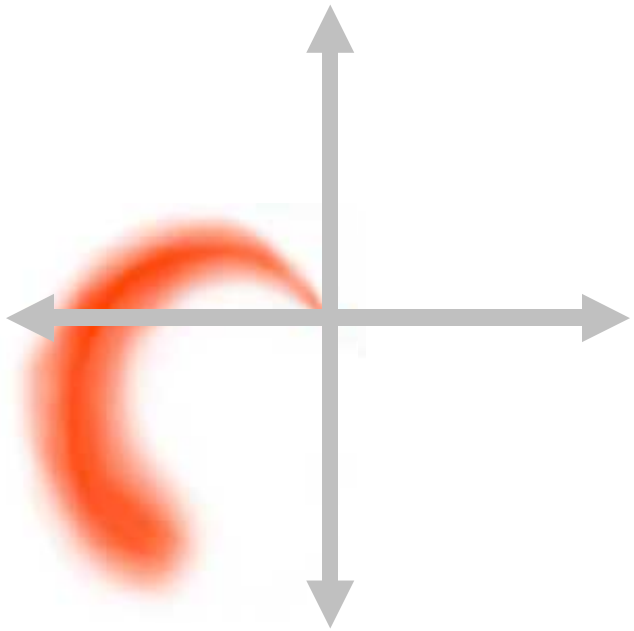


Social and institutional structures tend both to limit and to shape the nature of events

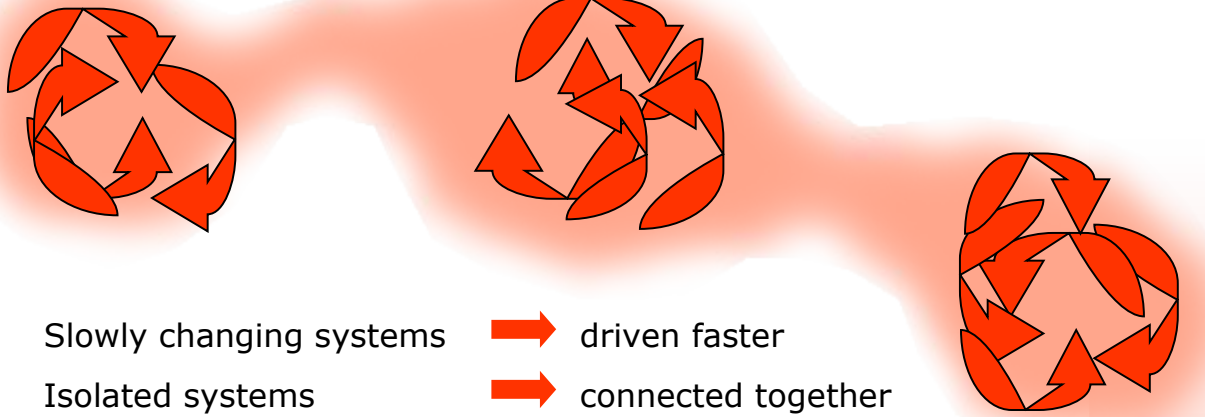
International relations become increasingly fractious and complex.

In the industrial world

- The “faster, faster” syndrome
- Over-close state and private sector relations
- A growing rejectionist movement: modernity,pluralism

In the developing world

- Economic disruption and economic under-governance
- Weak tacit institutions, traditional power loses respect
- New consuming classes begin to pursue identity branding
- Trans-national political movements, resisting rich world hegemony
- Two billion still living in absolute poverty, but increasing orchestrated



Slowly changing systems ➡ driven faster

Isolated systems ➡ connected together

- Economic disruption and economic under-governance
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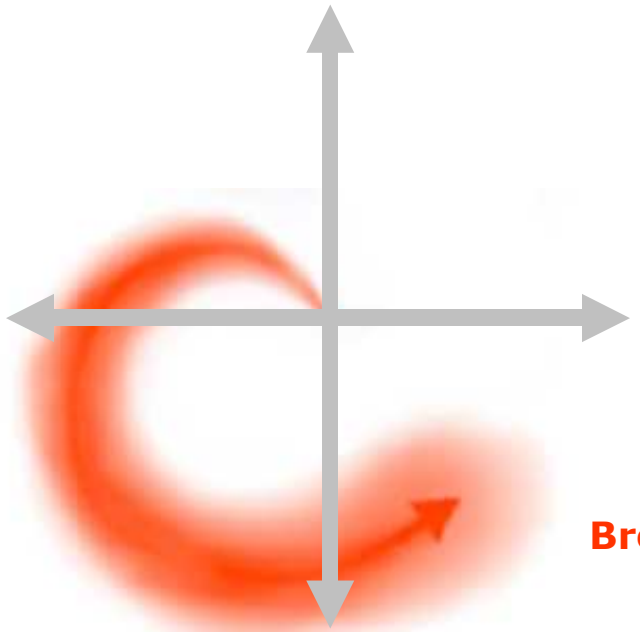
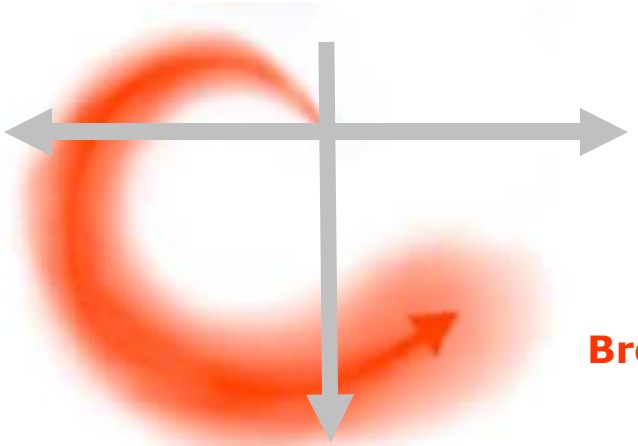


Broken Edge

International relations become increasingly fractious and complex.

- Industrial world stock market re-adjustment
- Economic turmoil in the industrialising markets
- The former prevailing paradigm - competition, growth - discredited
- Crisis in the poor countries, rejectionism and renaissance of terrorism
- Latent international political movements, popular concerns now unleashed
- Withdrawal from outsourcing and un-economic "policy-related" investments

Adaptation is forced on nations and firms through the workings of impersonal forces



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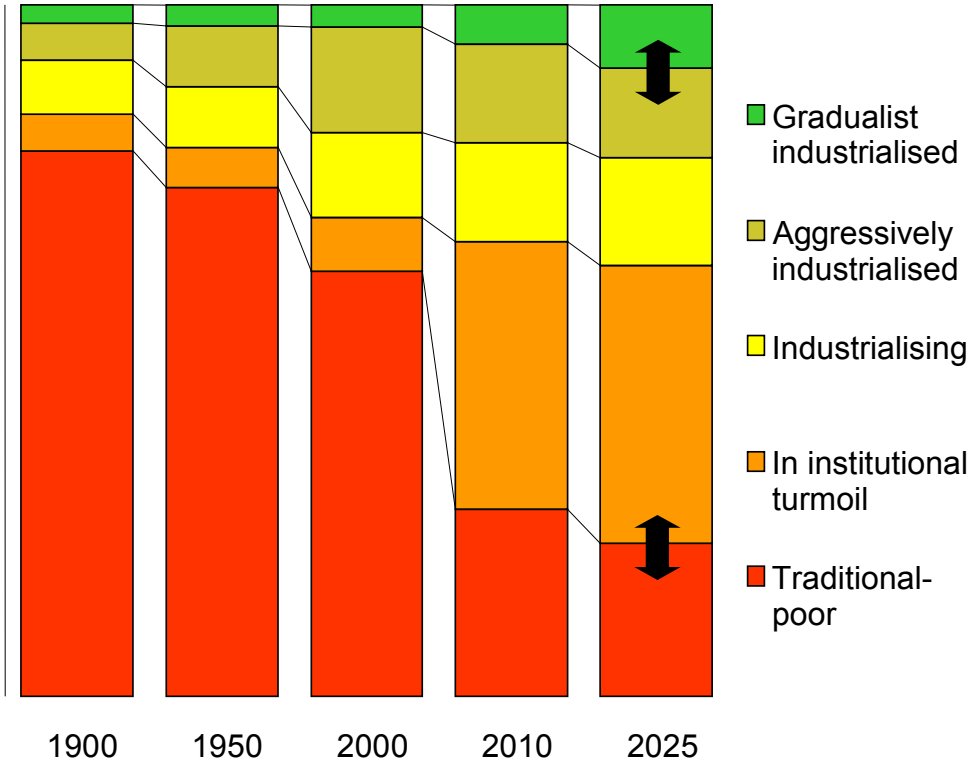
Re-thinking the paradigm

Persistent instability

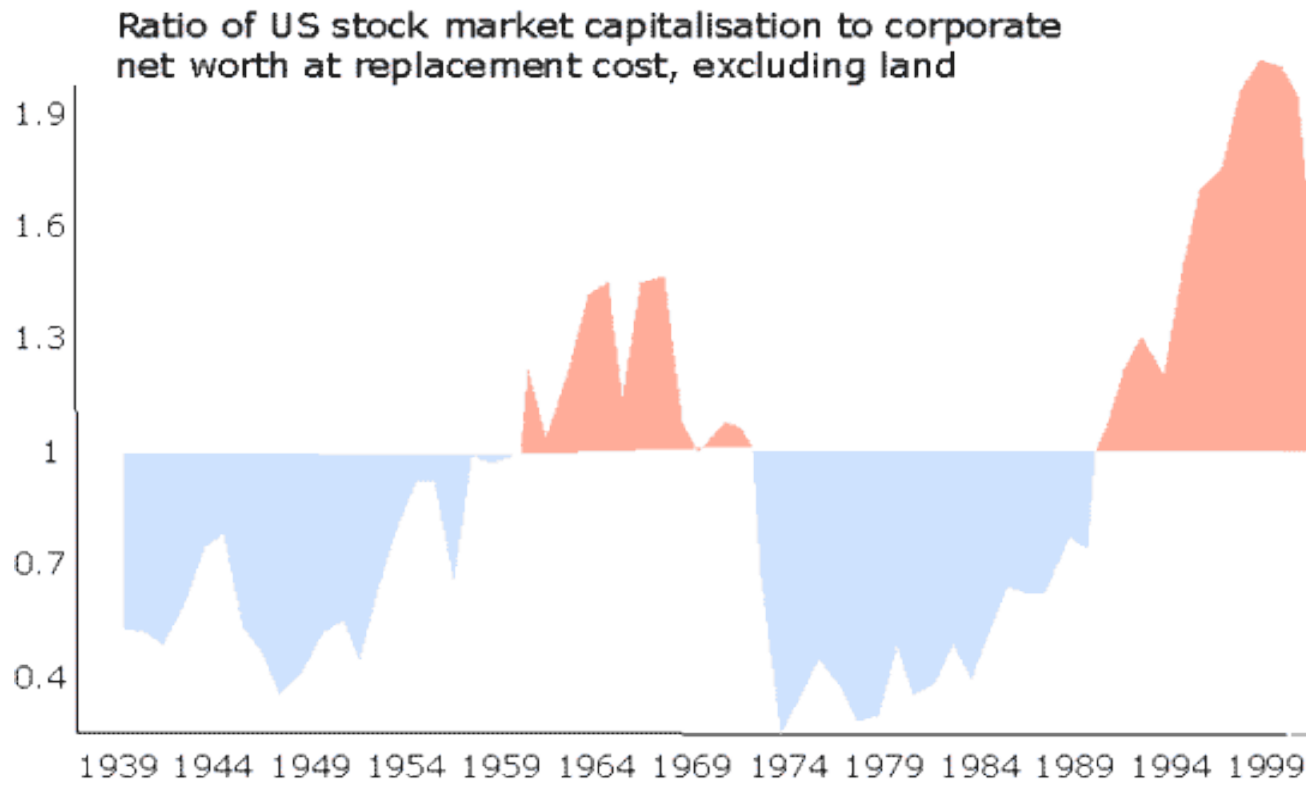


Re-thinking the paradigm

Managing complexity

- Political cohesion and closure:
  - ➔ Coping with demographics
  - ➔ Absorbing fast change
- In commerce:
  - ➔ Resilience & adaptation
  - ➔ Competitiveness
  - ➔ Triple bottom line
- Managing the new linkages:
  - ➔ Equity, or anyway legitimacy
  - ➔ Finding sources of security

Suppose that the paradigm has already failed…



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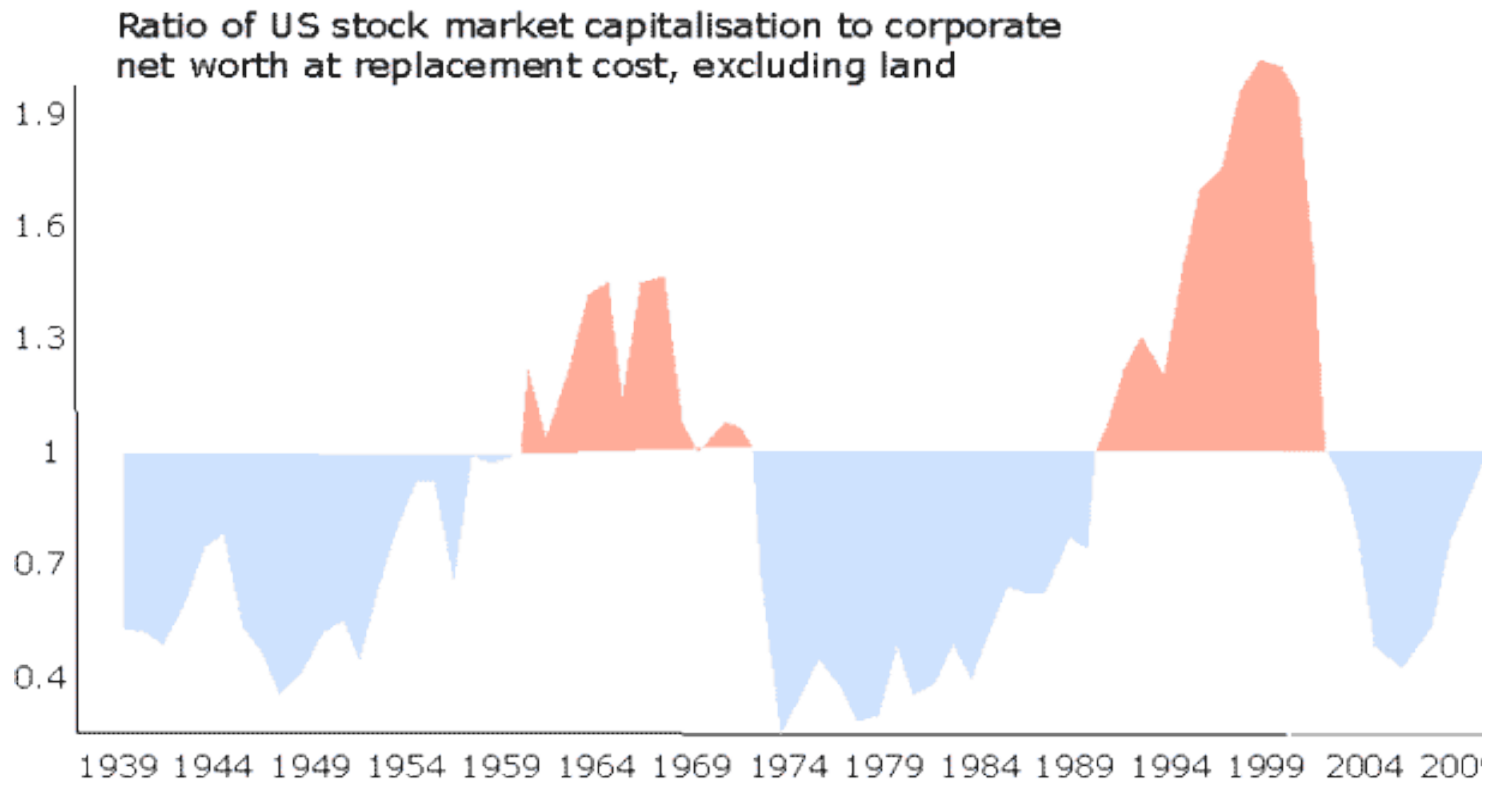
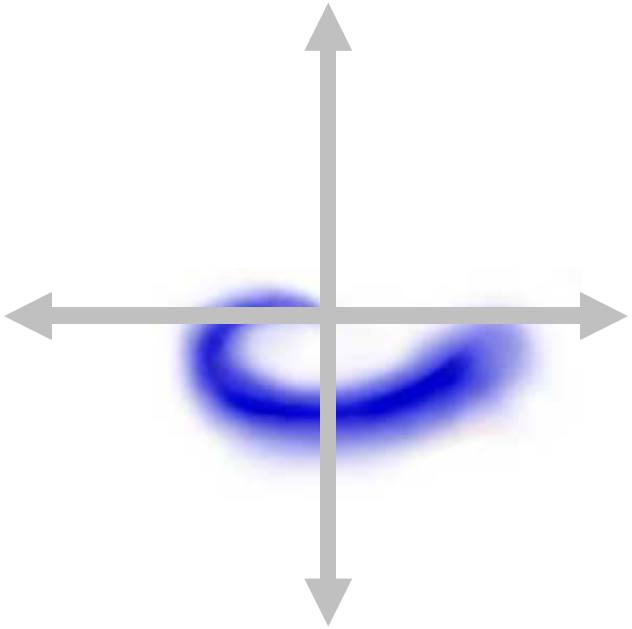


- Political cohesion and closure
  - pensions, confidence, jobs
  - activism, systems-blocking
- In commerce
  - suppression of innovation
  - minimimalism and pragmatism
- Managing the new linkages
  - Little attempted or achieved

The international environment becomes increasingly open and well-policed

Adaptation is forced on nations and firms through the workings of impersonal forces



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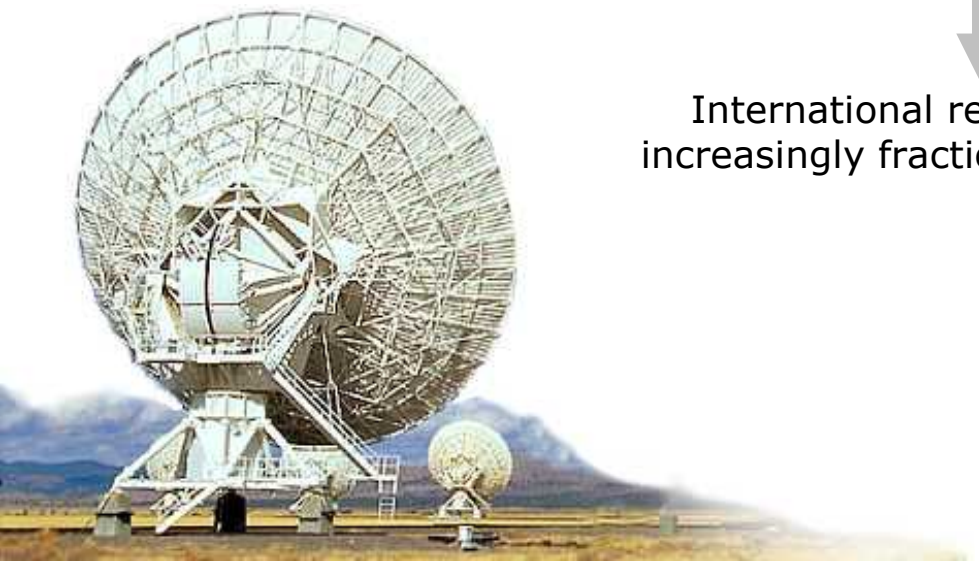
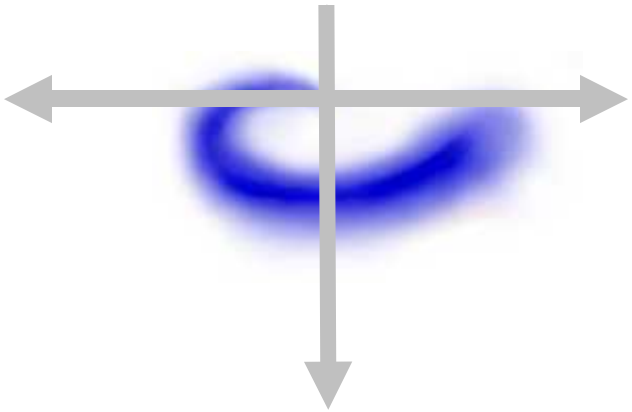


Initially:

- Populist, hobbyist and issue-driven activist politics paralyse decision taking
- Pro-welfare programs, institutional reforms are stopped or put into reverse
- State borrowing increases, but without tax rises: inflation

… and elsewhere in the world

Adaptation is forced on nations and firms through the workings of impersonal forces



Social and institutional structures tend both to limit and to shape the nature of events

International relations become increasingly fractious and complex.

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- Slow economic growth produces hardship, but also a time to absorb change
- The new middle class see the industrial world as an old fashioned model
- Relations between these countries, and with the poor nations mature
- Extremist groups find less to react against, & are openly triumphant

However, a successful model for wealth creation and complexity management is emerging in the old industrial nations:

- Managing complexity requires careful analysis, communication and trust
- High-level governance works best through networks of subsidiary debate
- Closure comes from finding trusted, accessible ways of talking about issues
- Explicit steps must be taken to create and maintain this insight and trust
- Analysis is best done in expert networks, but *using* analysis requires more and different kinds of work in make it accessible and trusted

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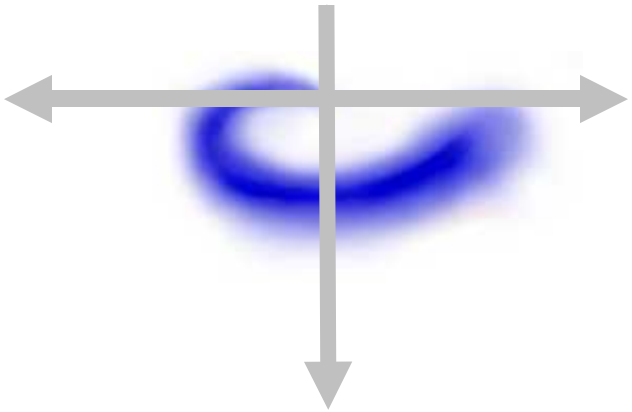

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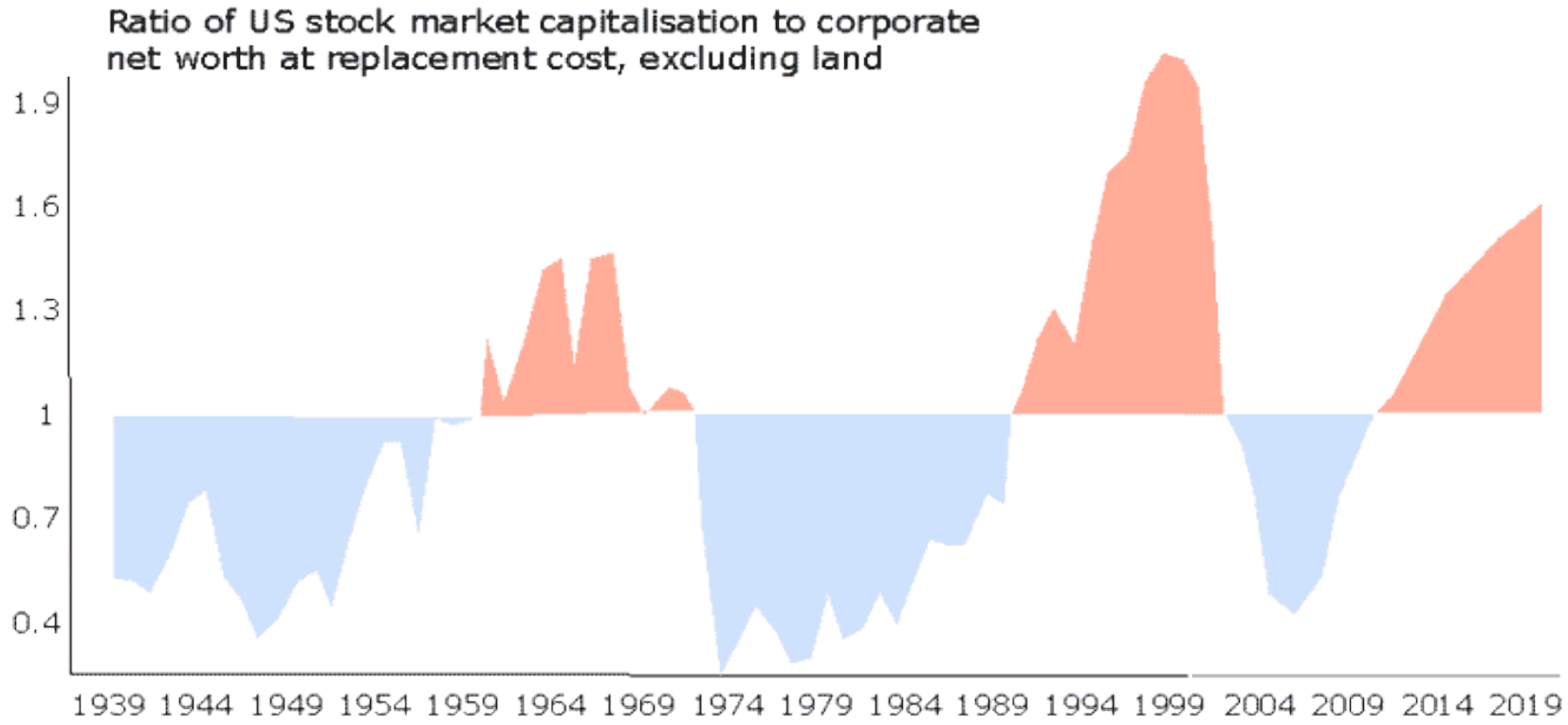
- The fit with the needs of the knowledge economy is tight
- The link to international systems of collaboration is also strong
- The basis is set for a gradual return to collaborative, rapid growth



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New Deal

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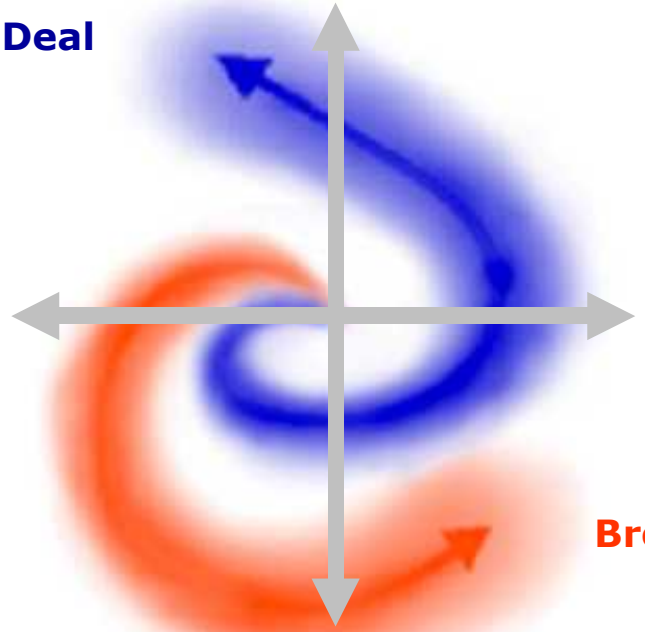

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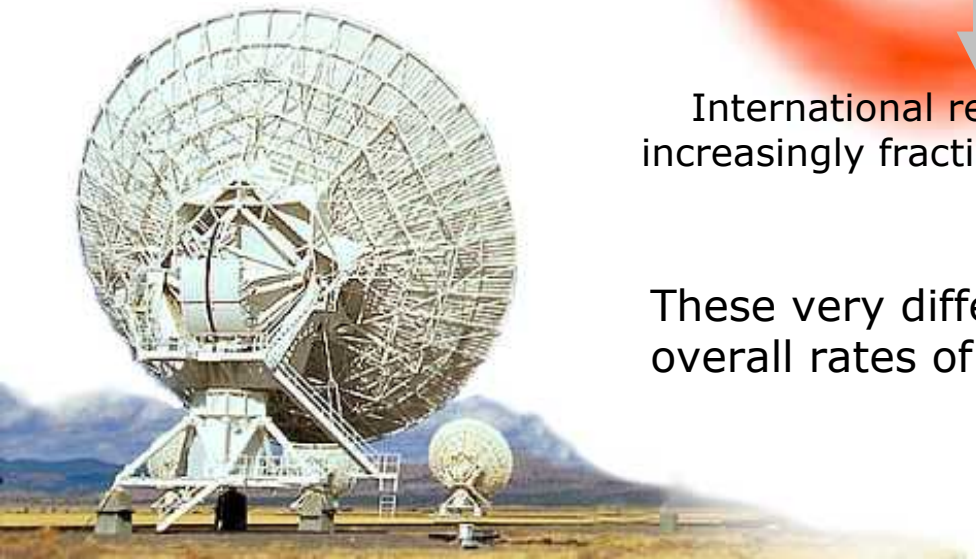
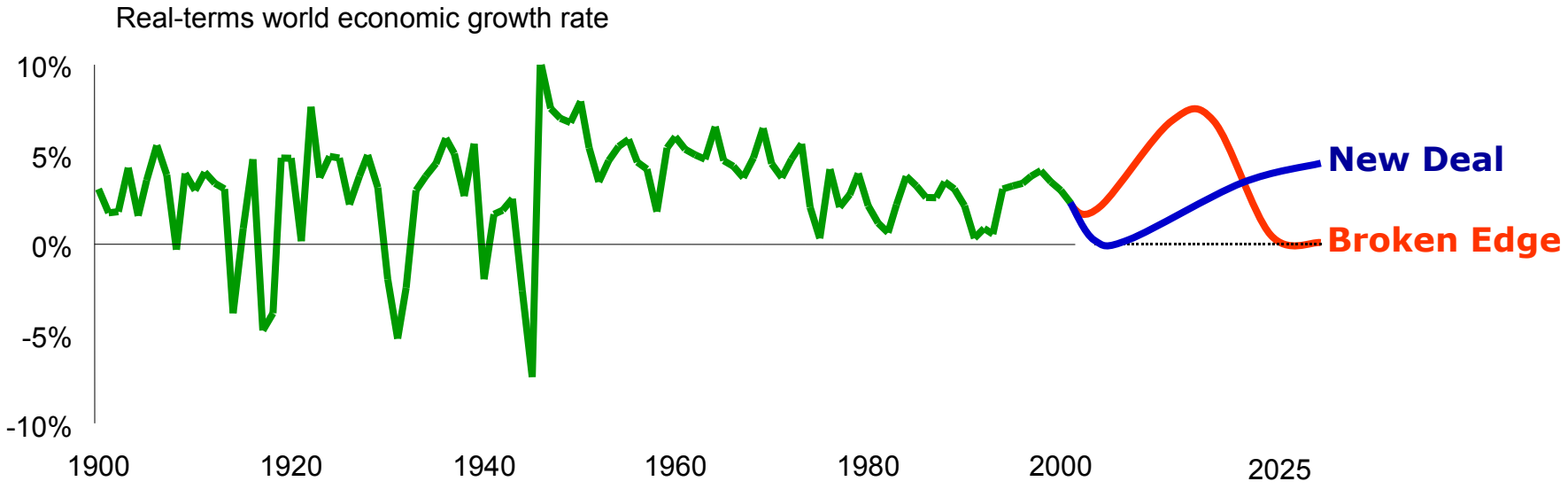
Broken Edge

International relations become increasingly fractious and complex.



These very different worlds generate roughly similar overall rates of economic growth



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- It is not possible to make only one part of a society more complex
- Commerce is affected by many forces which drive it very quickly
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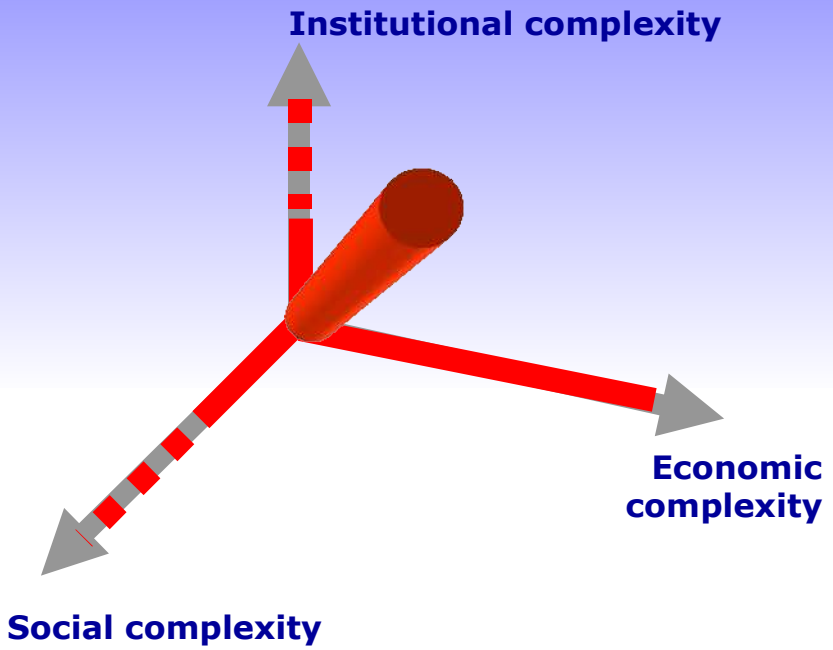

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- It is not possible to make only one part of a society more complex
- Commerce is affected by many forces which drive it very quickly
- Conflict will arise if one area runs too much ahead of others

- Complexity management is itself a major source of wealth
- The world's social framework is going to change sharply
- Existing systems of governance are unlikely to be able to cope, either nationally nor internationally, with foreseeable complexity

- Failure to address these issues will polarise the world in ways which make the major issues virtually impossible to address

These very different worlds generate roughly similar overall rates of economic growth

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The *Challenge* Network

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