



Social and Behavioral Change to Adapt to Climate Change

Discussion

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The Social Dimension of Adaptation to Climate Change

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The Need for Adaptation to Climate Change

COP15 at Copenhagen has shown that it is practically impossible to achieve a peak of emissions before 2020.

If we abstract from the possibility of large negative emissions targets the 2°C target is practically impossible (at 2100).

Even with strong action it will be hard to contain temperature increase below 2.5-3.0°C.

Medieval Warm Period temperature in Central Europe was 1-1.4°C higher than in 1960.

- Adaptive capacity is the ability or potential of a system to respond successfully to climate variability and change, and includes adjustments in both behaviour and in resources and technologies. [IPCC WG2 Ch 17]
- Capacity to plan adaptation
- Capacity to adapt autonomously

Change You Can Believe In ?

The success of adaptation will largely depend on the extent to which individuals and societies will be willing, and capable, to accept change:

- cultural habits and customs may retard the adoption of new technologies, especially in developing countries;
- lack of farsightedness at government level might reduce adaptation capacity also in developed countries.

Social and cultural limits to adaptation can be related to the different ways in which people and groups **experience**, **interpret** and **respond** to climate change. [IPCC WG2 Ch 17]

A Social and Behavioral Perspective

Factors affecting the capability of communities and individuals to adapt to climate change [IPCC WG2 Ch 17]:

- social capital
- social networks
- values
- perceptions
- customs
- traditions
- level of cognition

Lesson of a Thousand Years Ago - Brian Fagan

Medieval Warm Period temperature in Central Europe was 1-1.4°C higher than in 1960.

- Impact on history of Europe
- Success and failure of Genghis Khan
- Implosion of Maya civilization

Changes in precipitation patterns seem to be more important than changes in temperature

The Method of Historic Analysis

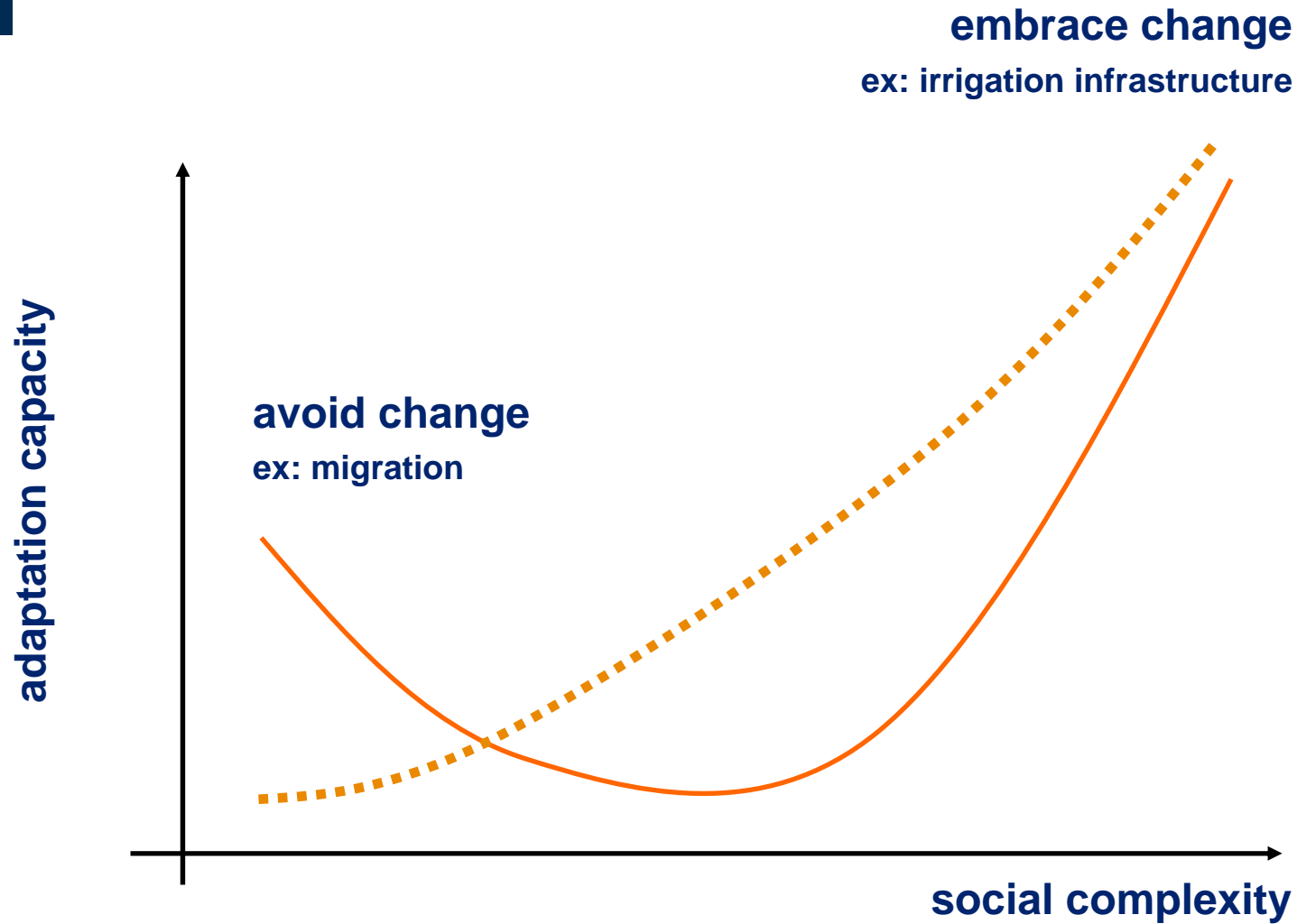
Pros:

- climate change vs weather variability
- laboratory experiment at society-level
- insights for agricultural societies

Cons:

- absence of counterfactual
- poor data to draw causality relationships
- present societies are much more complex but also more capable to react to changes

Social complexity and Adaptation Capacity



The Perception of Vulnerability: Irene Lorenzoni

- "Elderly **do not generally perceive themselves as vulnerable** to heat waves".
- Is this the same for other people, in other social contexts?
- Is it a cognitive problem or people systematically misjudge the level of risk that they face?
- How much reputation/shame affect the perception of risk?
- Actions: policies to align the social knowledge and perception of risk to reality.

The Perception of Vulnerability: Irene Lorenzoni

Is it possible to draw insights from other areas of research?

- why it is necessary to enforce motorbike helmets or safety belts use?
- vaccines in developing countries
- HIV tests / prevention

Experimental development economics (Banerjee and Duflo, 2009):

- Banerjee, Duflo, Glennerster and Kothari (2008): offering mothers one kilo of dried beans (worth about 60 cents) for every immunization visit increases the probability that a child is fully immunized by 20%.
- A reward of 10 cents got 20 % more people in Malawi to pick up the results of their HIV test (Thornton, forthcoming)

Learning: Chris High

Bridging the cognitive gap of:

- Vulnerability
- Adaptation strategies

Learning of an agent and learning within the wider social organization

Independence and oversight

Agent-centred reflexive adaptation

- learning from experience causes the actor to reassess the goals as well as the methods and resource uses that shape adaptive strategies (Pelling, High, Dearing and Smith, 2008)

Shadow system: informal knowledge and experience sharing, sometimes in conflict with the canonical system

From the development economics literature

- Learning About a New Technology: Pineapple in Ghana (Conley and Udry, 2005).
- Trust and climate (Durante, 2010)

