

# A theory of sustainable climate change adaptation

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”I’m fixing a hole where the rain gets in  
And stops my mind from wandering”

The Beatles

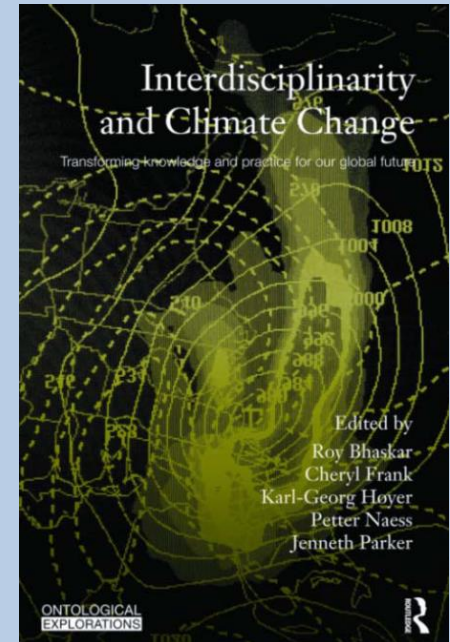
What if adaptation distract us from solving the  
real problem?

# Four theoretical strands

- .. on the role of **economic growth** as a driver of environmental problems (cf. Georgescu-Roegen, 1971)
- ..on the **societal production of risk** and loose vs tight coupled and low vs high complex societies (Perrow 1985, 2007)
- ..on economic and non-economic **rebound mechanisms** (cf. Santarius et al, 2016)
- ..on the critical understanding of **sustainable development** (cf. Lafferty and Langhelle, 1998; Holden et al 2017)

# Seven (+1) theses on CO<sub>2</sub>-reductionism and its interdisciplinary counteraction

- **Three varieties of CO<sub>2</sub> reductionism in current climate policy**
  - Climate gas issues are reduced to CO<sub>2</sub>
  - Energy issues are reduced to CO<sub>2</sub>
  - Environmental issues are reduced to CO<sub>2</sub>
- **Seven thesis on the interdisciplinary counteractions**
  1. Reuniting CO<sub>2</sub> with other Greenhouse Gases
  2. Reuniting CO<sub>2</sub> with Fossil Energy
  3. Reuniting CO<sub>2</sub> with Energy
  4. Reuniting CO<sub>2</sub> with Consumption
  5. Reuniting CO<sub>2</sub> with Economic Growth
  6. Reuniting CO<sub>2</sub> with Sustainable Development
  7. Uniting CO<sub>2</sub> with the Post-Carbon Society



Høyer, 2010

**A proposed eighth thesis**

**8. Uniting CO<sub>2</sub> with climate change adaptation**

# CC adaptation-reductionism and its interdisciplinary counteraction

- **CC adaptation reductionism**
  - CC vulnerabilities are reduced to local vulnerabilities, not addressing trans-border vulnerabilities
  - CC adaptation goals are primarily related to that of maintaining business as usual
  - CC adaptation is reduced to primarily addressing local natural hazard events
- **Four main thesis on the interdisciplinary counteractions**
  1. Unite CC adaptation with CC mitigation
  2. Unite CC adaptation with Energy
  3. Unite CC adaptation with Consumption
  4. Unite CC adaptation with Economic Growth
  5. Unite CC adaptation with Sustainable Development

# Thesis 1- 4

## 1. Unite CC adaptation with CC mitigation

- Be aware of, describe and address the mutual rebound effects between CC adaptation and mitigation

## 2. Unite CC adaptation with Energy

- Be aware of, describe and address the CC vulnerabilities of transforming society from a fossil to a 100% renewable energy society

## 3. Unite CC adaptation with Consumption

- Be aware of, describe and address the possibilities that consumption patterns may increase CC vulnerabilities (e.g. increase in meat consumption can put higher pressure on the food production capacity of arable and)

## 4. Unite CC adaptation with (critiques of) Economic Growth

- Be aware of, describe and address the possibilities of economic growth being a driver for increased CC vulnerabilities (e.g. urbanization and the growth of cities on areas prone to urban flooding and/or sea level rise)

# Thesis 5: Unite CC adaptation with Sustainable Development

- **However, not any understanding of “sustainable development” should be applied**
  - A major problem here is that the official UN understanding of “sustainable development” has since the presentation of the goal in 1987 been seriously diluted (Aall, 2014) and stymied (Lafferty, 2012), resulting in less focus on the issue of ecological limits (Holden et al, 2017)
- **Thus, the understanding of sustainable cc adaptation that should be applied is an adaptation that:**
  - avoids any loss of biological diversity
  - avoids resulting in a more unjust distribution in time and space of burdens and satisfaction of basic needs
  - is cause-oriented (aims at addressing the root causes of climate change vulnerabilities other than mitigating GHG emissions), not merely effect-oriented (protecting society against climate change)

# Deep CC adaptation strategies

- **Reduce energy use**
  - Reduce the total energy use in High Income Countries (HIC) in order to address deep CC vulnerabilities from converting into a 100% renewable energy society
- **Reduce mobility**
  - Reduce global passenger and freight transport mobility in order to address deep CC vulnerabilities from countries and regions becoming increasingly economically dependent of high levels of mobility
- **Increase ruralisation**
  - Reduce major CC vulnerabilities relating to a world that are moving beyond 50 % of the global population living in cities
- **Reduce meat consumption**
  - Reduce major CC vulnerabilities relating to a reduction in global food production, thus applying more area-efficient food production regimes
- **Apply a long time horizon**
  - In principle, most mitigation efforts should be done by 2050, thus resulting in transforming into a post-carbon society, whereas climate will change and society will have to adapt to the consequences of such changes for decades after 2050, perhaps even centuries



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