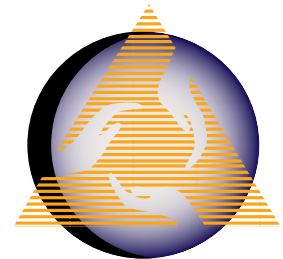


Mr Blair Is Right!

Richard S.J. Tol
Hamburg, Vrije and Carnegie
Mellon Universities



What's Danger?

- To an individual, something is dangerous, if that something would hurt one, and if that something could occur with a small chance
- If the probability is too high, one'd call the action silly or foolish, not dangerous
- Avoiding dangers, one seeks to make the chance or hurt smaller until probability times impact vanishes into insignificance
- Hurt is equivalent to a welfare loss; welfare is economics jargon for a well-structured preference ordering

What's Danger? (2)

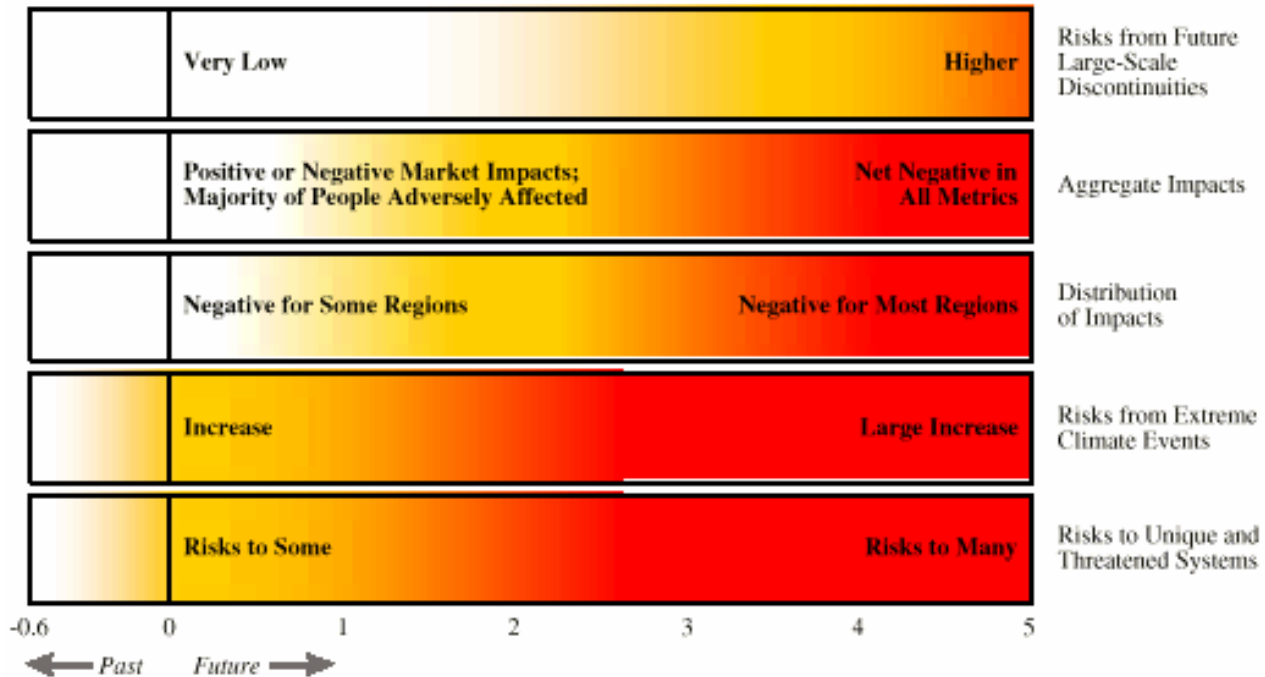
- Welfare / utility theory gives a reasonable description of individual behaviour, grounded in notions of rationality and evolutionary selection
- At the level of society, danger would be described as at the individual level: a not too high, not too low chance of something bad happening
- Analogously, bad is seen as a loss of social (rather than individual) welfare

What's Danger? (3)

- Social welfare is some aggregation of individual welfare
- However, unless society consists of less than three individuals (or the economy of less than three goods), unless all preferences are equal, or unless someone dictates tastes or outcomes, individual welfare cannot be consistently aggregated to social welfare (Arrow, 1951)
- As there is no social welfare function, there cannot be a definition of danger that is agreeable to everyone

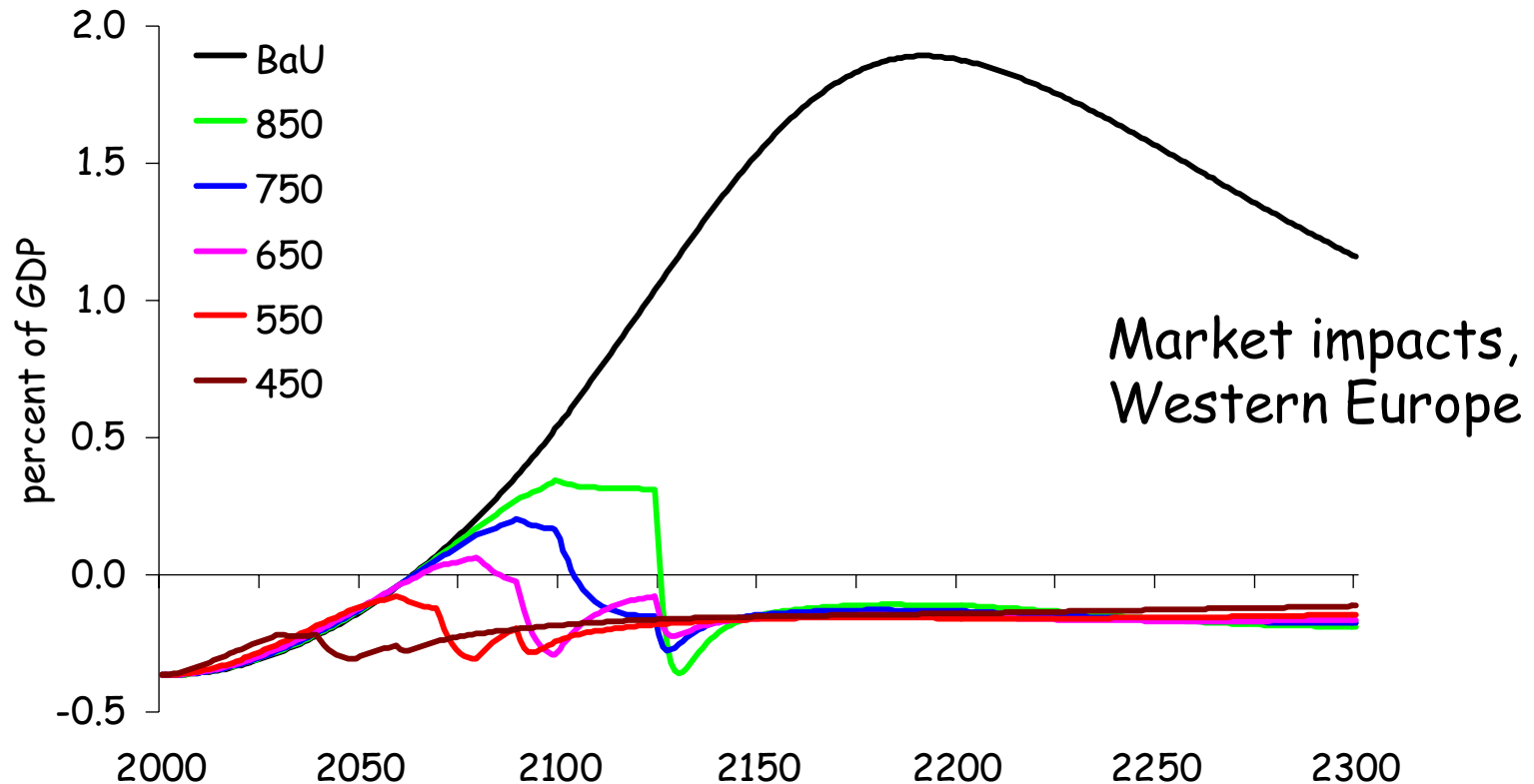
Vague Dangers

- Although we cannot agree on danger, we could explore alternative definitions and see whether we can agree on action needed



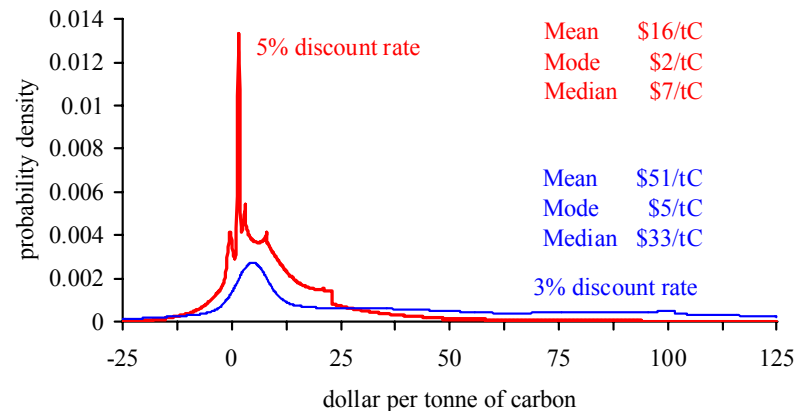
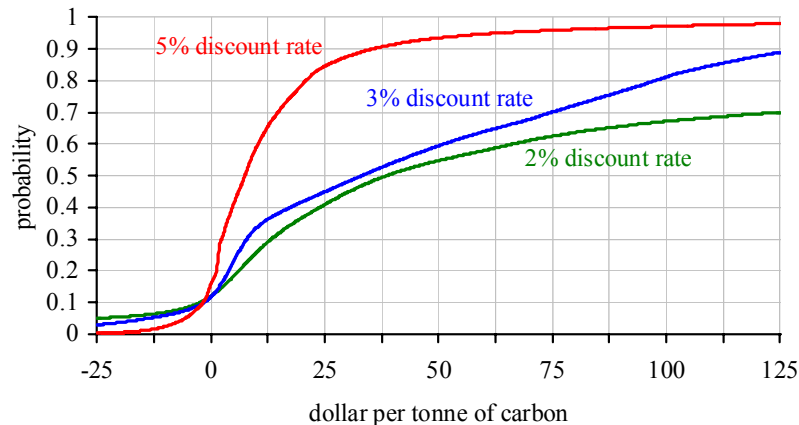
Avoiding Vague Dangers

- We cannot agree on danger and on action, but what impacts can be avoided?



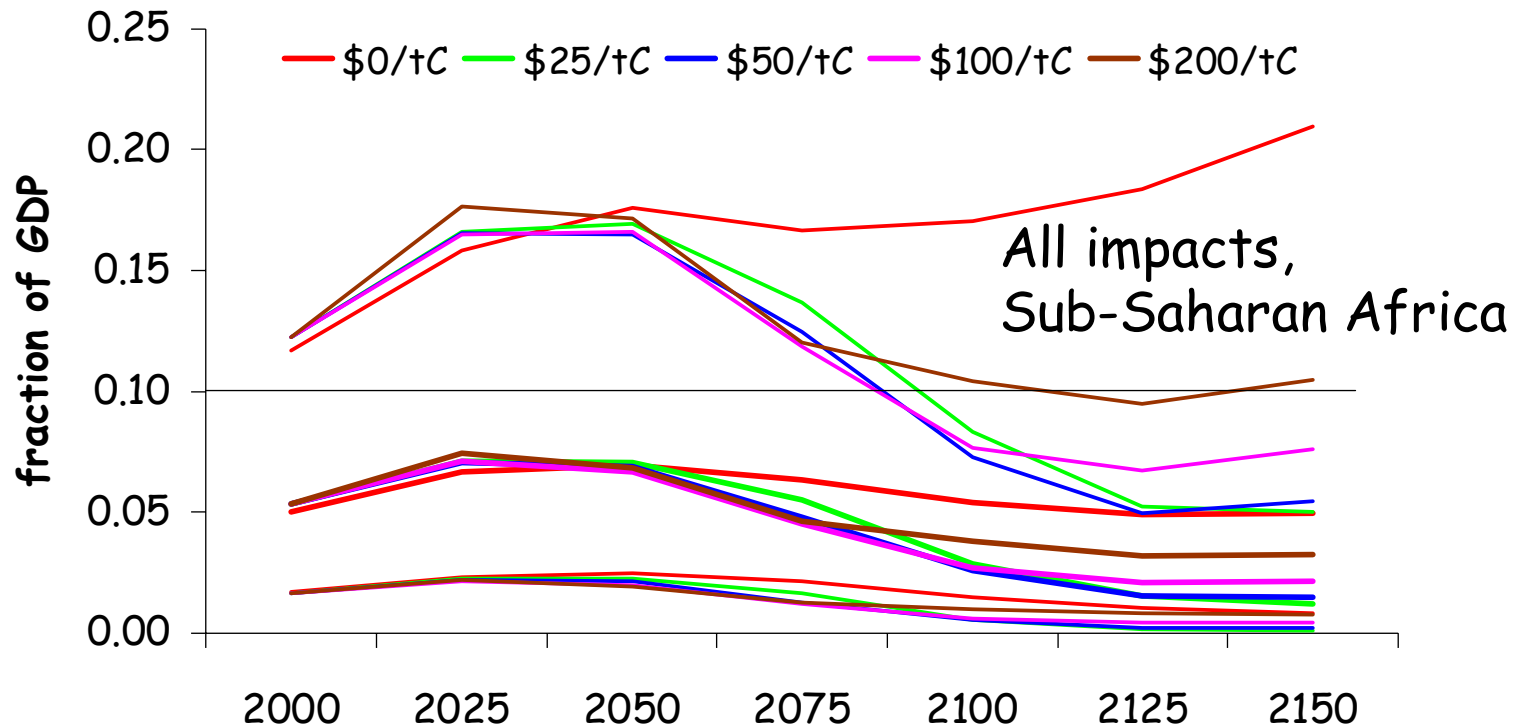
The Social Costs of Carbon

- It is this sort of analyses that lead to low marginal damage costs (5-10 \$/tC), but the marginal costs are highly uncertain
- I did a meta-analysis of 108 published estimates of the social costs of carbon



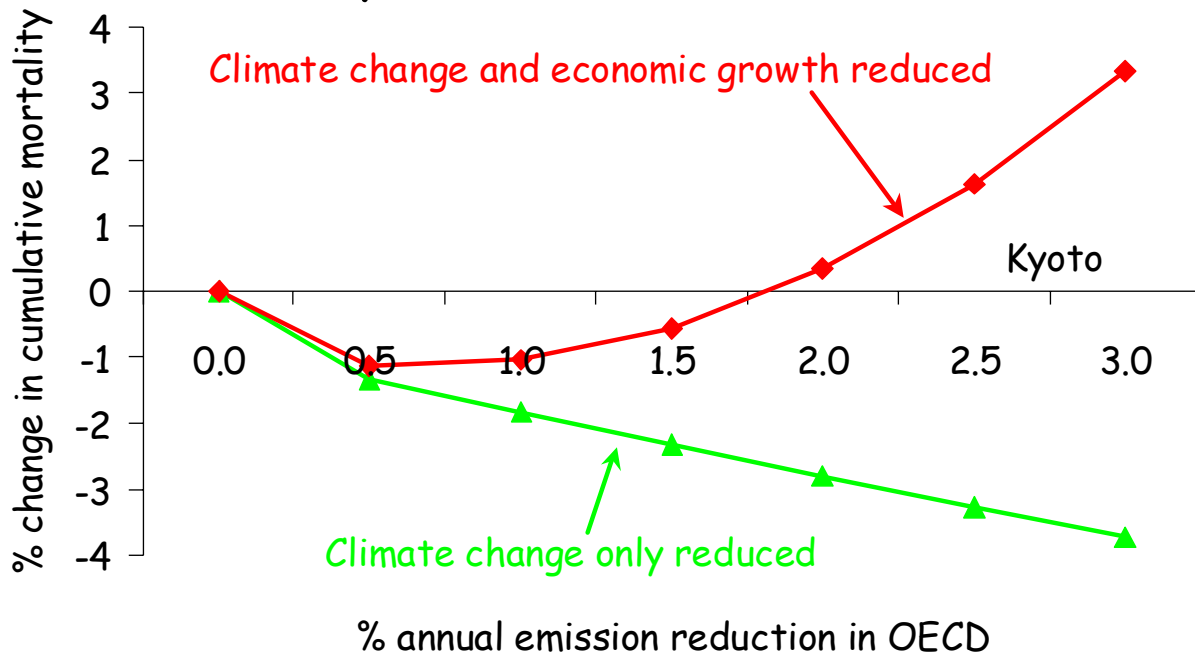
Clear and Present Danger

- Let's define danger as a 10% chance of 10% of the people losing 10% of their income



Dangerous Mitigation

- Mitigation slows economic growth - a bit in the OECD, a lot in Africa - and reduces spending on health care, and increase vulnerability to malaria



Is Mr Blair Right?

- It is impossible to define dangerous (at the social level) in an objective and agreeable manner
- The large, negative impacts of climate change can be taken away by modest emission reduction
- More stringent emission reduction may increase climate change impacts through reduced economic growth and falling sulphur emissions