

**Climate Change, Social Stress and Violent Conflict**  
**State of the Art and Research Needs**  
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*Abstract*

**A path dependency approach –  
on climate change, social stress and violent conflict**

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Although the origin of the idea of path dependency can not exactly be dated, the notation goes back on Paul A. David and W. Brian Arthur. In their criticism on efficiency fundamentals of neoclassical economics they point out that in a positive feedback process of increasing returns not necessarily the more efficient technology wins. David supports the thesis by research on the evolution of the typewriter and the lock-in of the QWERTY-keyboard. The name of the keyboard consists of the letters printed on the keys of the topmost row of letters on the keyboard. Although this special placing was more a matter of chance than optimal choice and it is long since possible former reasons faded away, it still is dominantly used on present keyboards. “The agents engaged in production and purchase decisions in today’s keyboard market are not the prisoners of custom, conspiracy, or state control. But while they are, as we now say, perfectly “free to choose,” their behaviour, nevertheless, is held fast in the grip of events long forgotten and shaped by circumstances in which neither they nor their interests figured.” (David 1985)

Applied to the Conference topic there are agents who decide how to address climate change, agents who act stressed in a social configuration when affected by climate change and agents who might react in producing violent conflict. In each situation an agent makes a decision and/or ‘acts’ there are certain circumstances which makes him act the way he does. If path dependency is present, these influencing circumstances need not figure the agent or his special interests. Thus it can cause inefficient decisions compared to present preferences, social stress does not have to reflect agents’ interests and violent conflict need not be caused deliberately and goal oriented by present actors. Furthermore path dependent processes have the characteristic of being reinforcing, or even self-reinforcing and resulting in a possible lock-in. Thus if relevant processes concerning climate change, social stress or violent conflict can be described as being path dependent, they have the potential for cascading effects and a lock-in (whatever that might be in the special respect).

Considering the chance of affecting path dependency is especially necessary when considering problem solving or intervening actions. First, the very process in analyzing and problem solving can be path dependent which might result in standard solutions apart from relevant constitutions of the special situation. Second, the problem might be caused by path dependency so it can not be analyzed in rational or linear causality but more a process perspective is needed and the consideration of influencing historical events. Third, if the problem is at least partly caused by path dependency, intervening actions have to regard the non-linearity or stability of path dependent processes and thus to specially include the aspect of path dependency when interfering dynamics.