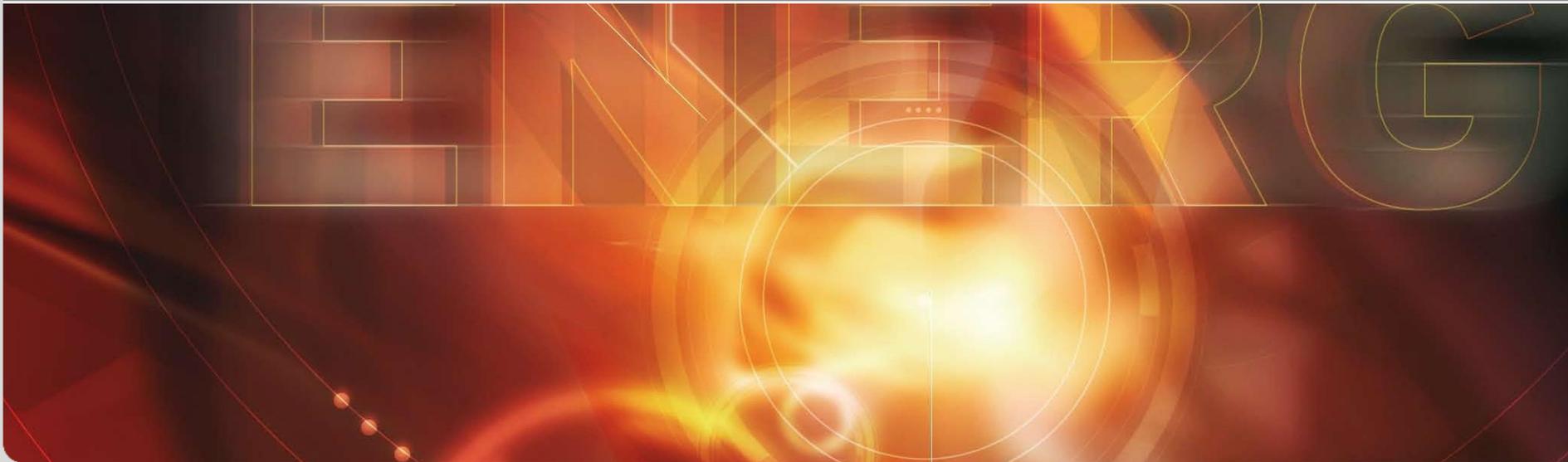


Modes of Orientation and the limitation of consequentialism

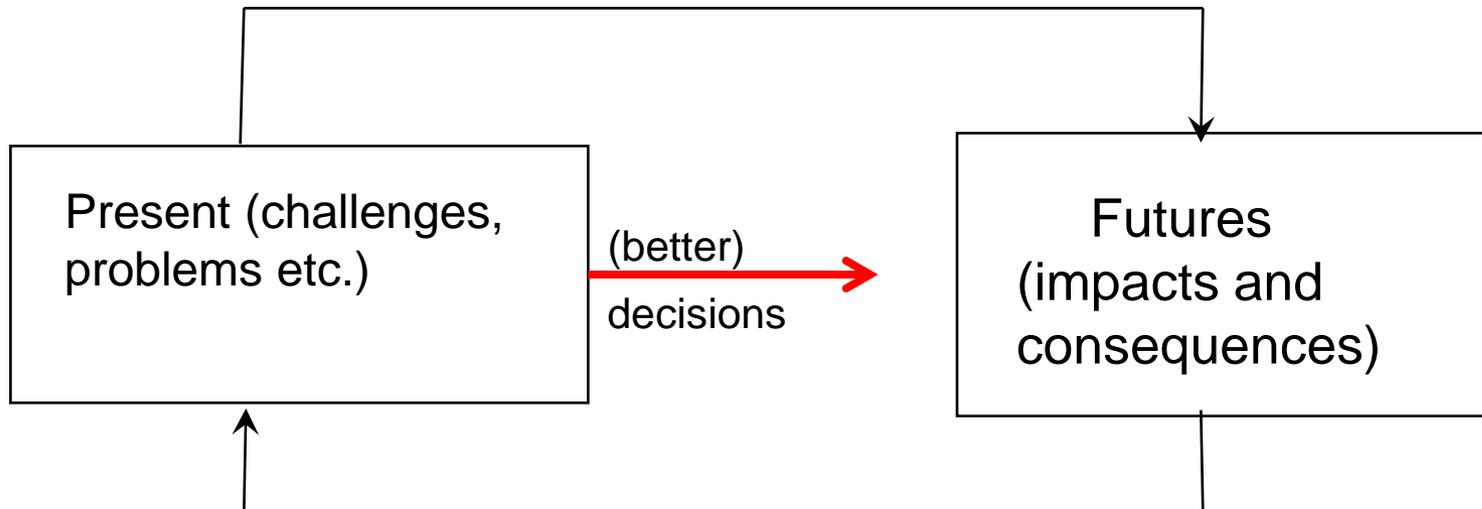
Armin Grunwald

PACITA Conference, 27.2.2015



The consequentialist expectation: providing orientation for the present by deliberating and assessing future „knowledge“

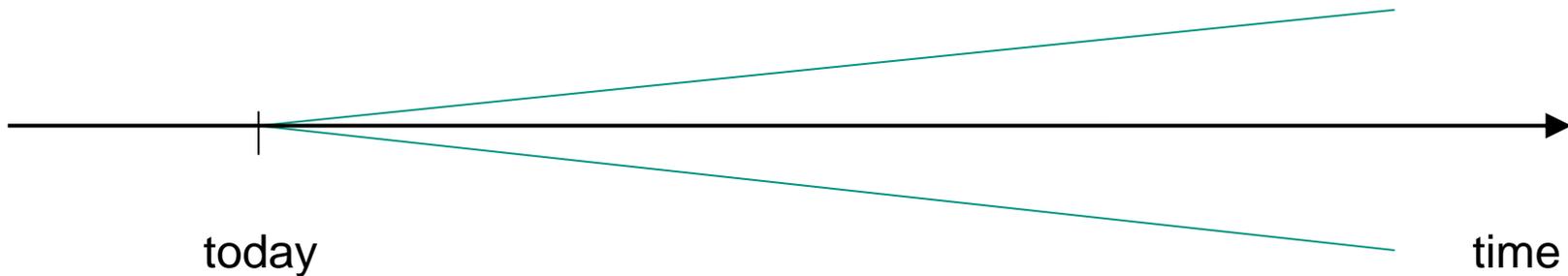
predictions, scenarios, expectations, fears, visions, etc.



orientations, modified problem perception, ideas about desirable and not desirable future societies, consequences for decisions to be made „today“

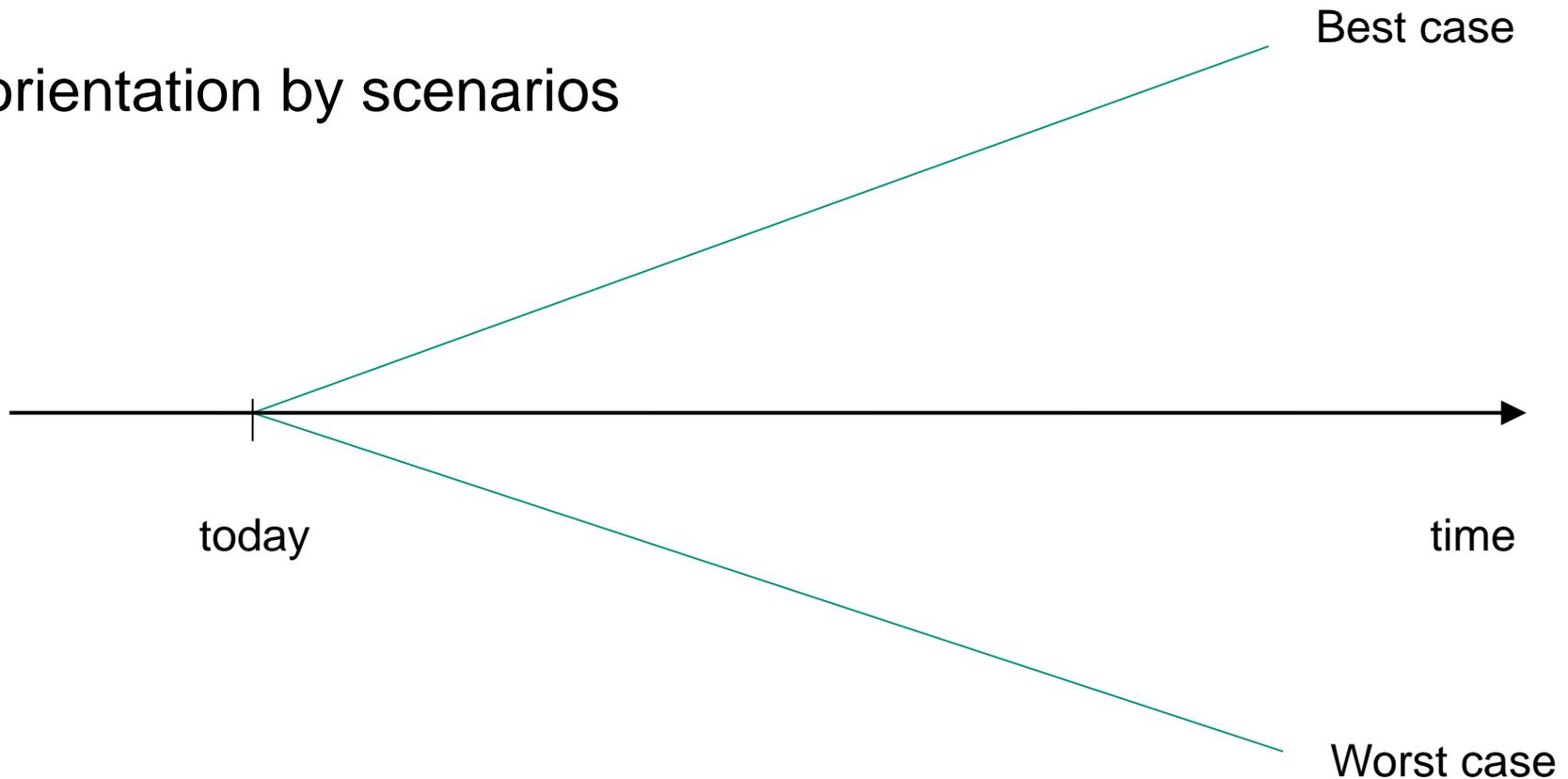
Early TA: future 'cone' with small opening angle

orientation: prediction of impacts and consequences

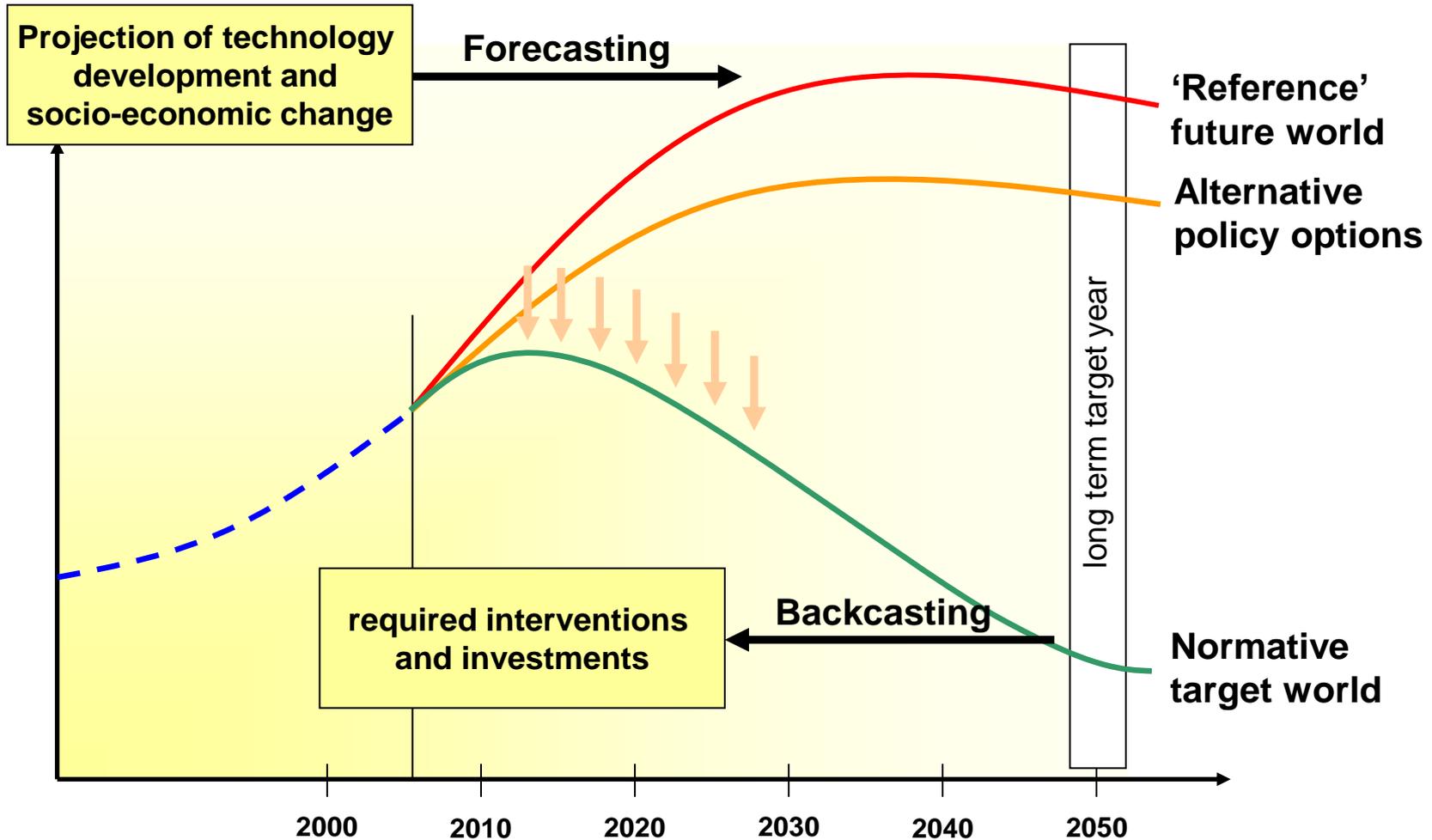


TA today: future cone with larger opening angle

orientation by scenarios



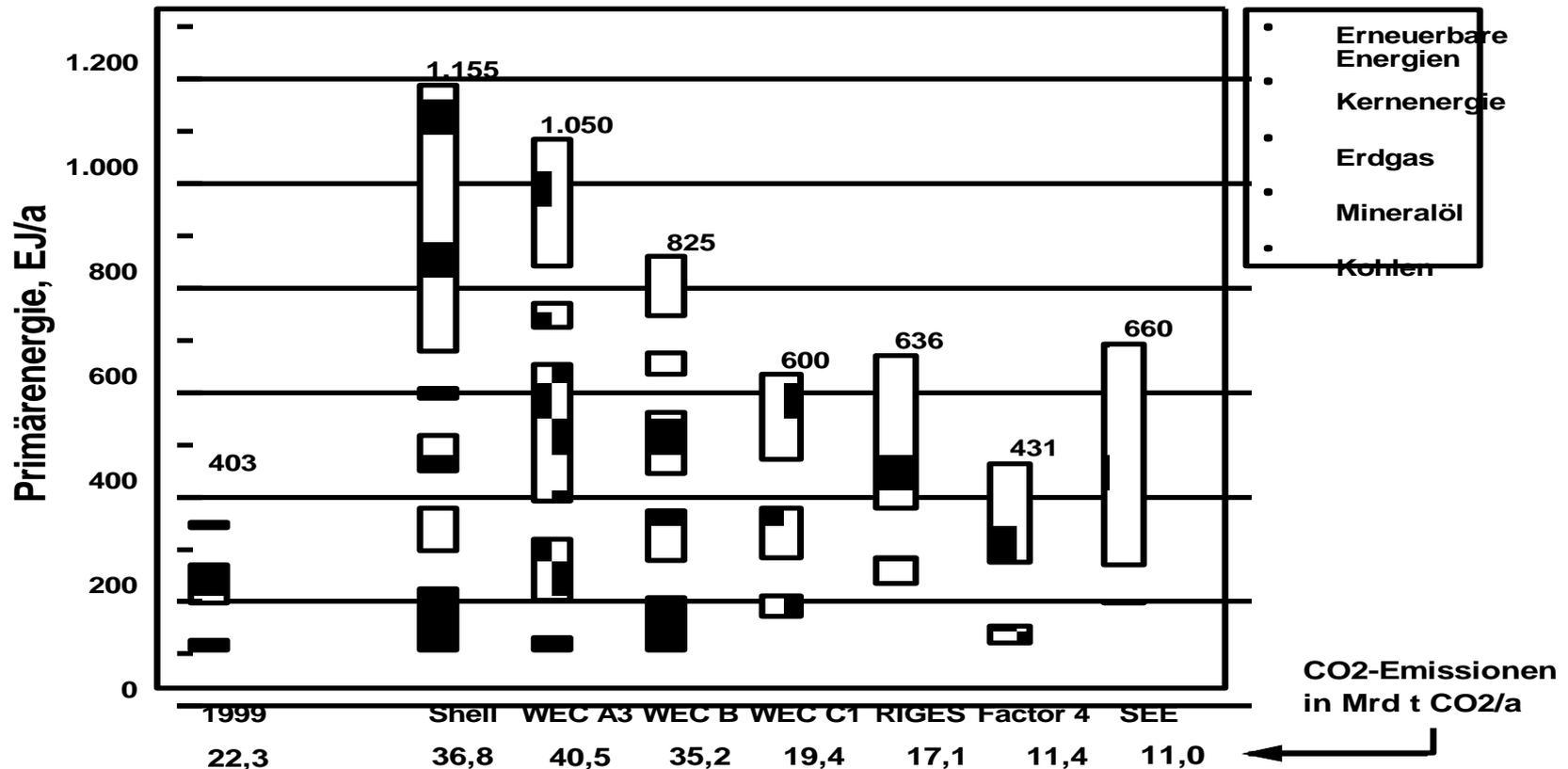
Example: Energy futures orientate energy policies and public debate



source: anonymous

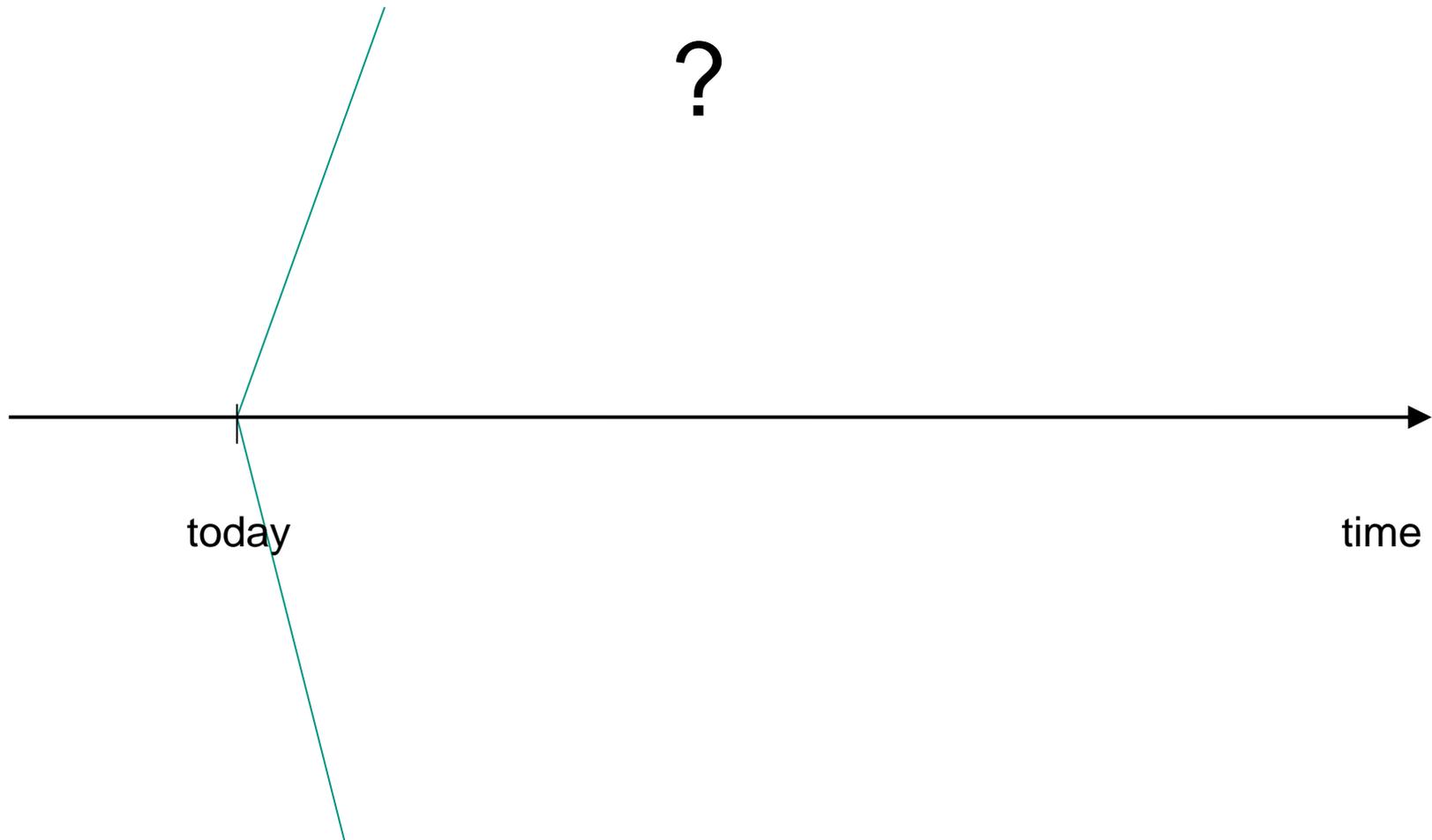
The reality (1): diversity and (?) arbitrariness

Example: Futures of World Energy demand



Aktuelle Szenarien des Weltenergieverbrauchs für das Jahr 2050 und Vergleich mit dem derzeitigen Verbrauch
Weltbevölkerung 2050: 9,5 Mrd. Menschen; Shell-Szenario „Nachhaltige Entwicklung“ (Shell 1995); WEC = Diverse Szenarien der Weltenergiekonferenzen 1995 und 1998 (WEC 1995, 1998); RIGES = „Renewable Intensive Global Energy Szenario“ (Johansson et.al. 1993); Faktor 4 = Szenario aus (Lovins, Hennicke 1999); SEE = Szenario „Solar Energy Economy“ (Nitsch 1999)

What to do in the case of really large opening angle?



Examples for the latter case from the field of NEST visions

- Engines of Creation (Eric Drexler)
 - Why the Future Doesn't Need Us? (Bill Joy)
 - Transhumanist stories about the future: salvation from human deficits
 - Nanotechnology as the „ultimate catastrophe“ (Jean-Pierre Dupuy) or as 3rd Industrial Revolution?
 - Human enhancement in early stages of embryonic development: destroying the precondition of human morality (Jürgen Habermas)?
 - Ubiquitous computing: humanisation of the world or the end of humanity in an infantile mode of existence?
- arbitrary futures? Lack of orientation?

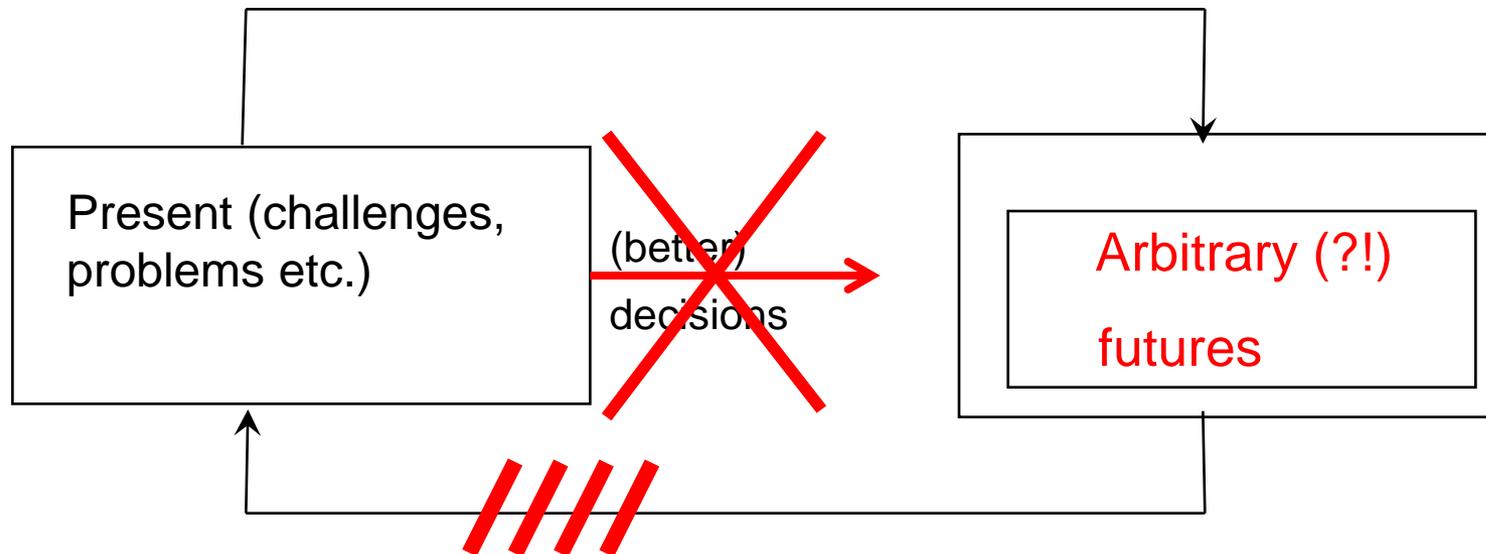
Quote from the field of Synthetic Biology

„Fifty years from now, synthetic biology will be as pervasive and transformative as is electronics today. And as with that technology, the applications and impacts are impossible to predict in the field’s nascent stages. Nevertheless, the decisions we make now will have enormous impact on the shape of this future“ (Ilulissat Statement 2007, S. 2).

→ consequentialism not applicable for providing orientation

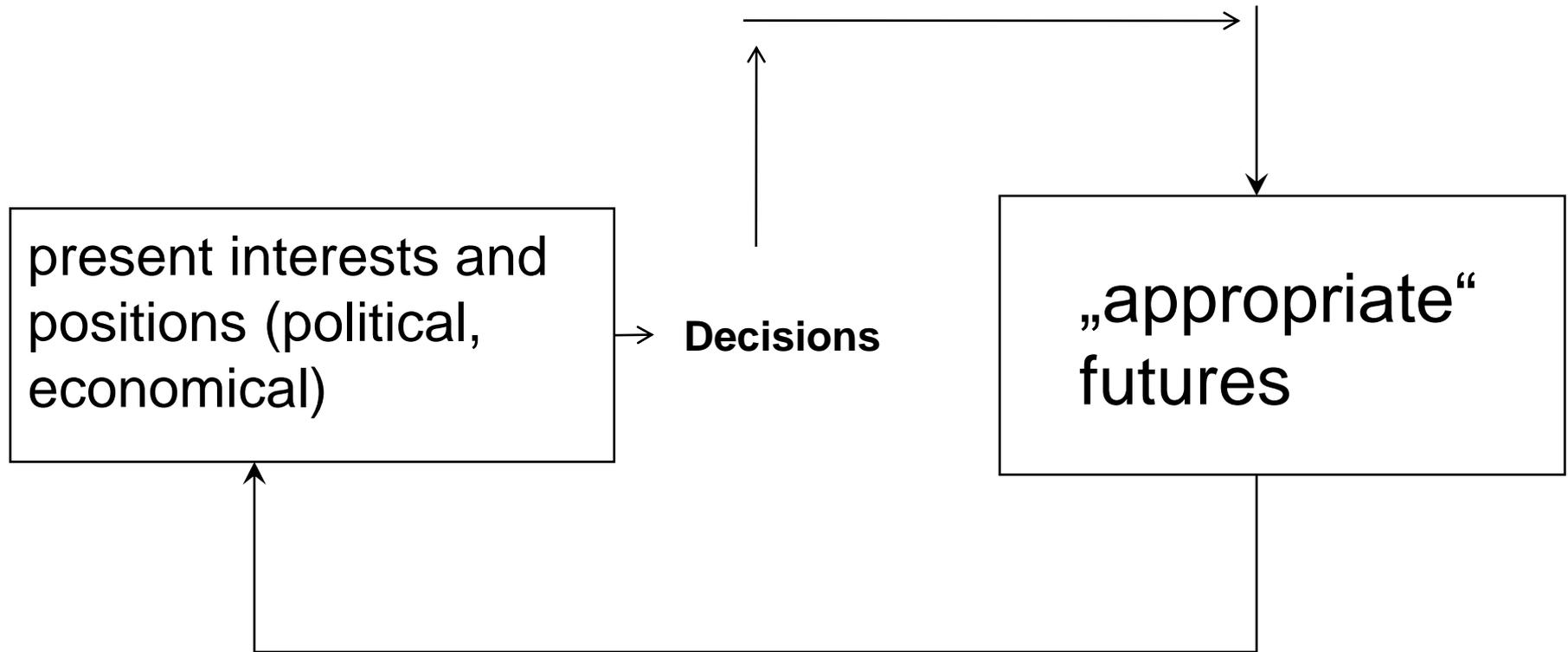
Suspicion 1: orientation as mere illusion because of arbitrary futures

predictions, scenarios, expectations, fears, visions, etc.



orientations, modified problem perception, ideas about desirable and not desirable future societies, consequences for decisions to be made „today“

Suspicion 2: Ideology and misuse



Use of futures to create legitimacy and support acceptance for decisions already been made

What remains?

- ✓ **Mode 1: prognostic orientation**
- ✓ **Mode 2: scenario-based orientation**
- ? **Mode 3: hermeneutic orientation**

Tab1. Wesentliche Eigenschaften der Modi der Orientierung durch Zukunftswissen

| | Prognostic | Scenario-based | Hermeneutic |
|---------------------------------|---------------------------------------|--|--|
| Approach to the future | one future | corridor of sensible futures | open space of futures |
| Spectrum of futures | convergence as ideal | bounded diversity | unbounded divergence |
| Preferred methodology | quantitative, model-based | quantitative or qualitative; participatory | narrative |
| Knowledge used | causal and statistical knowledge | models, knowledge of stakeholders | associative knowledge, qualitative arguments |
| Role of normative issues | Low | depends on case | High |
| Orientation provided | decision-making support, optimization | robust action strategies | self-reflection and contemporary diagnostics |

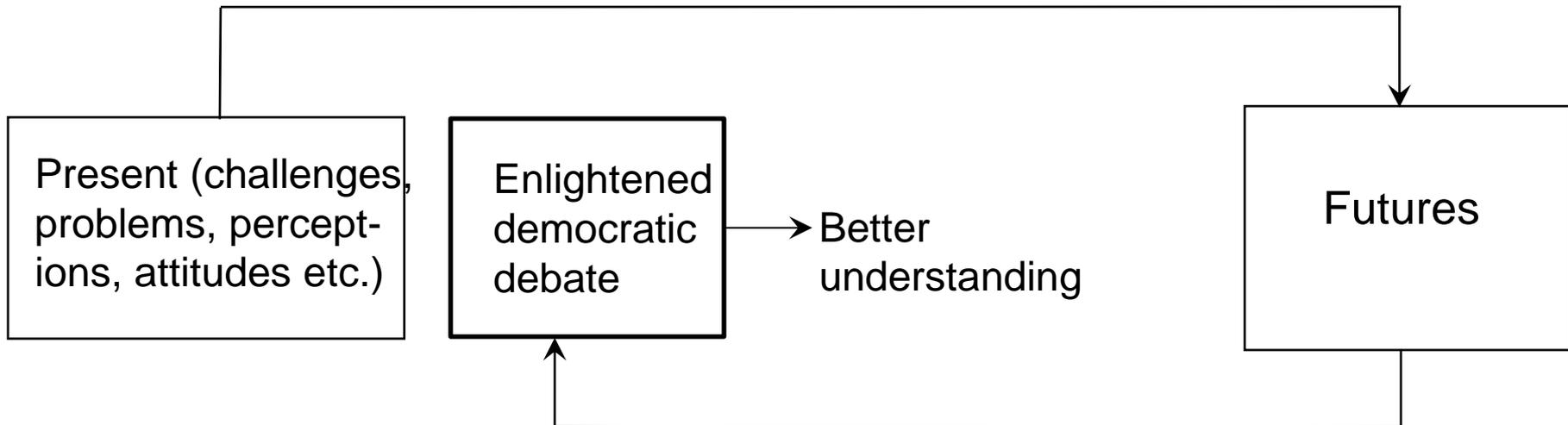
Quelle: Grunwald 2013, modifiziert

Mode 3: Hermeneutic orientation

- Subject: technology futures proposed, communicated, contested (narratives, diagrams, art, movies ...)
- Change of perspective: those futures are investigated not with respect to what they might us tell about future developments but with regard to the question what they might tell us about ourselves (in the sense of a contemporary diagnostics)
- Hermeneutic analysis consists of the analysis of the content of the futures, of their construction process and of the communication processes around them
- The hermeneutic analysis includes the investigation of the diagnoses, premises and intentions of the constructing actors and of actors in the field responding to them
- Uncovering the assignment of *meaning*: meaning is assigned to new technologies by relating them with futures – but how?

Instead: learning for democratic debate

construction of futures: narratives, expectations, fears, visions, etc.



hermeneutic analysis of futures: uncovering premises, criteria of relevance, values, interests, judgments about the future society, assumptions etc.

Thank you!

Paper based on:

- Grunwald, A. (2013): Modes of orientation provided by futures studies: making sense of diversity and divergence. *European Journal of Futures Studies* 15:30 DOI 10.1007/s40309-013-0030-5
- Grunwald, A. (2014): The Hermeneutic Side of Responsible Research and Innovation. *Journal of Responsible Innovation* 3/2014

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