



Why don't we just do the right thing?

Matthias Kaiser

Prof.Dr.phil., Sekretariatsleder
Den nasjonale forskningsetiske komité for naturvitenskap og
teknologi (NENT)
og Professor II ved Senter for vitenskapsteori, UiB

www.etikkom.no

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Unability to let words being followed by deeds?

- Decisions for sustainable development?
 - Rio? E.g. Energy policy?
 - Climate change? Copenhagen? Or Mexico?
 - And more (Millenium Goals etc.) ...
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Explanatory "frameworks"?

- Political economy of power / class ("Marxist"?)
 - Post-modernity? -> fragmentation of society and proliferation of beliefs?
 - Or some version of "naturalism": evolution only maximising not optimising strategy; competition and benefit seeking contrary to holistic management?
 - Or some version of "idealism": concepts collide and frameworks of thinking (paradigms) get in the way?
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Example food security:

- Food and the population issue
 - Food and climate
 - Food and natural resources
 - Food and health
 - Food and markets / economies?
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Solutions?

- Either one-dimensional,
 - All vegetarians?
 - Aquaculture: developing the wrong species at the wrong places?
 - Food safety at the price of food security?
 - Or / and institutional decisions tools based on "limited" (?) notion of rationality:
 - risk.-cost-benefit analysis?
 - Economic thinking versus ethics: discount rates?
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Some problems:

- (ethical) values differ
 - No good probabilistic estimates of outcomes,
 - Whose costs? Whose benefits?
 - Critical assumptions problematic (e.g. growth)
 - Local (non-global) benefits open for free-riders
 - Result: agents waiting for each other, no action, no commitment.
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1. Understanding complex systems

- Large number of parameters
 - Multiple equilibria points
 - Emergent properties
 - Non-linearity, non predictability
 - Limited manipulation
 - Major inherent system uncertainties
 - Open systems interacting with other open systems
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Consequences?

- Give up Cartesian thinking / Newtonian frameworks
 - Look at resilience for management:
 - Tolerance of disturbances before major shifts
 - Social, ecological, economic,...?
 - Contextualisation of risks
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2. Decision heuristics

- Herbert Simon (1957) Models of Man on bounded rationality.
 - Not optimising, but satisficing!
 - Implicit criticism of economic rationality
 - Also A. Sen (on values etc).
 - Decision heuristics!
 - Evolutionary anchored?
 - Rules of thumb?
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Decision theory and social psychology

- Decision theory -> normative?
 - Social psychology -> descriptive?
 - Kahnemann, Tversky and others:
heuristics that lead to cognitive bias or fallacy
 - Gerd Gigerenzer et al.:
heuristics that lead to better decisions than formal methods (Bayesianism, multiple regression analysis)
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Heuristics e.g.:

- the availability heuristic (judging the frequency of an event by the ease with which it comes to mind),
 - anchoring heuristic (adjusting the judging of probability depending on the initial fixation),
 - attribute substitution (judging a complex problem, e.g. a moral one, by relating to a known but different problem),
 - framing (a tendency to react to a problem based on how it is presented),
 - Recognition heuristic (selecting an object from a set of alternatives based on one or few recognised values of the object)
 - etc.
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The potential of heuristics for sustainable development?

- Framing? Levelling out GHG emissions of 18000 cars a reason for a "vegi-Thursday" (Gent)?
 - Planning? Dietary habits of consumers easier to adjust than with principles options?
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3. Values

- Value trade-offs versus value changes?
 - Economy: trade-off
 - Ecology: change
 - Choice of instruments: economic incentives, polluter-pays, trading of quotas, mitigation banking etc.
 - Or: education, dialogue
 - But: values are constitutive of our identity?
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4. Evidence

- Kitcher's call for "well-ordered science"
 - Ravetz, Cartwright, Montuschi et al translate this into "evidence for use"
 - Evidence: frequentist versus Bayesian schools.
 - Evidence-based policies?
 - Randomized controlled trials?
 - But: only truth in basic exact sciences?
 - Context and causal interactions!
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Juggling with concepts for sustainability?

