Evidence is about the past, policy is about the future. Constructive TA and other ways of joint inquiry

Arie Rip (University of Twente)

International Workshop Joint Fact-Finding for the Future, University of Tokyo, 30 September 2014

Evidence is about the past ...

- Has to rely on data that have been collected
- There may be regular patterns, even law-like relationships that allow extrapolation
- Even then, the actual future situations may not resemble the conditions under which the earlier regularities were established
- Futures are to be captured in narratives
- Arie Rip, 'In Praise of Speculation,' Ch. 8 in OECD, Proceedings, Social Sciences for Knowledge and Decision Making, Paris: OECD, 2001, 95-103.

Robustness

- Add the complexities of actual policy making and implementation (cf. Marjan Slob and Jan Staman, Policy and the Evidence Beast (2012), The Hague: Rathenau Institute)
- Instead of evidence-based, go for 'robustness': hard to undermine, can withstand interference or attack, also from stakeholders, politicians
- Is outcome from 'repertoire learning', as in the controversy about the link between smoking and health (see Arie Rip, 'Controversies as Informal Technology Assessment', Knowledge 8(2) (Dec. 1986) 349–371.)

Joint inquiry

- Fact-finding includes "best efforts to interpret uncertainties" (Keystone Center, Nuclear Power Joint Fact-Finding (2007), Executive Summary, p. 9)
- Yes, but that's not enough. There is also indeterminacy, especially about future technology and society.
- Think in terms of 'joint inquiry' and the articulation and learning that can occur (cf. also Peter Adler on 'collaborative inquiry'.)

Joint inquiry (2)

- Philosophical roots in pragmatist philosophy, especially John Dewey (cf. his notion of 'publics' (in the plural) gathering around a shared concern)
- Pre-amble to this workshop: "Joint Fact-Finding can make significant contributions to resolving or preventing science-intensive public controversy."
- Yes and no; the "no" because public controversies may be necessary as opportunities for learning, also because values, interests, and gradients of force are present.

Public engagement?

- Joint inquiry can happen in/through public engagement, but not if public engagement is only oriented towards collecting opinions and preferences.
- This can be done in a sophisticated manner (e.g. Kei Kano, Toward Achieving Broad Public Engagement with Science, Technology and Innovation Policies: Trials in JAPAN Vision 2020. Intntl. J. Deliberative Mechanisms in Science (Hipathia Press) 3(1) (2014) 1-23.)
- Focus groups will do better because there will be interactions, but often the learning that is involved is not reported.

Positions on a continuum?

- Evidence production ↔
- joint inquiry ↔
- collecting opinions/comments
- Only joint inquiry can address indeterminacy (including value and interest indeterminacy)
- Importance of 'framing' (through a narrative),
 Norwegian consumer focus groups discussing nanotechnology
 (H. Throne-Holst): "new technologies are risky", "yes, but old
 technologies can be risky as well," "so let's see what advantages
 new technologies might have." This shapes fact-finding!

Orientation towards the future

- Constructive TA creates evidence-based futures, not based on extrapolation but on scenarios.
- Sociotechnical scenarios (emphasizing technology and innovation) using multi-level pattern analysis and insights from innovation studies -- but the approach is general.
- Essential further step: use the scenarios as a platform for discussion in strategy-articulation workshops with a broad variety of stakeholders (thus, a micro-cosm).
- It is a joint inquiry, even if participants just take home whatever learning they have drawn out, there is no need for a consensual conclusion.

Example: nanotechnology and food packaging

"The food industry is hooked on nano-tech's promises, but it is also very nervous (The Observer, 2006)" [about acceptance]







"Colors without Dyes"

Anticipation on uptake and embedding: depending on who takes the lead, different scenarios unfold

"Waiting game" in food (packaging), attempts to overcome it
 Three scenarios:
 Promise pushed by scientists

Promise pushed by scientists
Regulators become pro-active
Consortium of actors from the whole chain

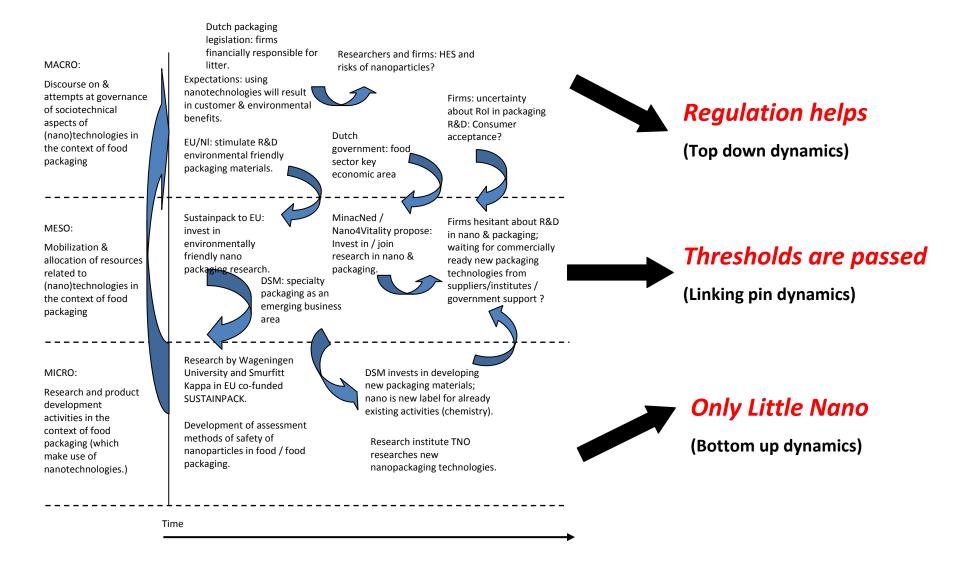
Occurs in almost all our cases; a general pattern?

Development of nano packaging: an impasse?

Dutch packaging legislation:

firms financially responsible for litter. Researchers and firms: HES and risks MACRO: of nanoparticles? **Expectations:** using Discourse on & attempts at nanotechnologies will result in Firms: uncertainty about governance of customer & environmental Rol in packaging R&D: sociotechnical aspects of benefits. Consumer acceptance? (nano)technologies in the Dutch government: EU/NI: stimulate R&D context of food packaging food sector key environmental friendly economic area packaging materials. Sustainpack to EU: invest MinacNed / Nano4Vitality Firms hesitant about R&D in MESO: in environmentally friendly propose: Invest in / join nano & packaging; waiting for nano packaging research. research in nano & commercially ready new Mobilization & allocation packaging. packaging technologies from of resources related to suppliers/institutes / (nano)technologies in the DSM: specialty government support? context of food packaging packaging as an emerging business area Research by Wageningen DSM invests in developing new MICRO: University and Smurfitt Kappa packaging materials; nano is new in EU co-funded Research and product label for already existing activities SUSTAINPACK. development activities in (chemistry). the context of food Development of assessment packaging (which make methods of safety of Research institute TNO use of nanotechnologies.) nanoparticles in food / food researches new nanopackaging packaging. technologies. Time

Three scenarios



Lessons

- There must be something at stake to create incentives for joint inquiry and learning. (People are not keen on putting an effort in learning.)
- Rather than representation of the public (or population), the micro-cosmos must represent the forcefields at play in the real world. Otherwise no learning, only brainstorming.
- Constructive TA is specialized (science, technology, innovation, and their embedding in society), builds on understanding of dynamics. Overall approach can still be used for broader, more complex issues.

Other ways of joint inquiry

- Analysts are exploring more sophisticated methodologies, as in the I2TA project (Shiroyama et al. 2007-2011). One example is problem structuring (Nakagawa et al. Techn. Forecasting and Social Change 77 (2010) 615-638)
- At the other end of the continuum, the new social media and the bloggosphere have unstructured interactions, which may have effects (cf. repertoire learning)



- I have broadened the idea of joint fact-finding
- And introduced a future-orientation
- While maintaining the goal of robustness, and indicating productive methodologies
- Who will actually put effort into realizing all this?
- Will it become part of Responsible Research and Innovation (the latest fashion in the European Union, in addition to Grand Challenges)?