Nuclear power and society: Technical democracy on trial

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Understanding the Societal Challenges Facing Nuclear Power

What does the field of science and technology studies tell us about the issues facing nuclear power?

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Three idealtypes of technical democracy:

1. Technocratic / Enlightenment
2. Public debate on alternative technological options
3. Codesign of socio-technical systems
   (Callon 1998)
Some common bases for the technical democracy:

- Principles of good governance and regulation
- Scientific advice
  - Principles of quality, independence, transparency
  - Plurality of expertise (contradictory, counter-expertise)
    - In France: ASN, IRSN, CNE, HCTISN, etc.
- Technological assessment
  - In France, prominent role of OPECST
- Public debate on alternative technological options
- Codesign of socio-technical systems

The key questions are
- What is to be debated?
- What are the links between what is debated and the decision making process?

Is nuclear power …
- A divisible issue?
- A non-divisible issue?
- **Divisible conflicts** center on questions of “more or less” and distributive justice, such as the "distribution of the social product between classes";
- **Non-divisible conflicts** that instead develop around "either/or" issues, such as religious or ethnic feuds or conflicts over issues like abortion
Divisible conflicts lend themselves fairly well to negotiation and are generally resolved by compromise solutions. Value added of debate and co-design.

Non-divisible issues can hardly be negotiated. Hirschman identifies two ways to overcome such issues:

- to conclude a "pact of 'tolerance' so that each 'lives and lets the other live in peace'"
- or, a more radical solution that can also be understood in a metaphorical sense, to "eliminate one of the competing groups altogether". A “fait accompli” logics. Limitation: long standing contestations, impossibility to implement.
Different reasons to consider that nuclear energy production is a non-divisible issue.

Example of the design and implementation of the French program in the 60’s and 70’s:

- Technocratic governance
- Solutionism
- The society has to follow

Argument: the divisibility issue is partly due to the technology, partly due to the way it is developed.

Solutionism (technology fix) does not leave any place for debate and negotiation
Is it possible to conceive the nuclear energy production as a divisible issue?

- Divisibility of the technology – the materiality issue
  - Small Modular Reactors?
  - Association with smart/decentralised grids
- Divisibility of the technology – Keeping the future open:
  - Don’t put all the eggs in the same basket: Explore the different possibilities for decarbonation
  - Avoid irreversible decision: keep the diversity of the energy-mix compatible with decarbonation

Underlying questions:
- Security and economic issues?
- Which role of the State?