

Nuclear power and society: Technical democracy on trial

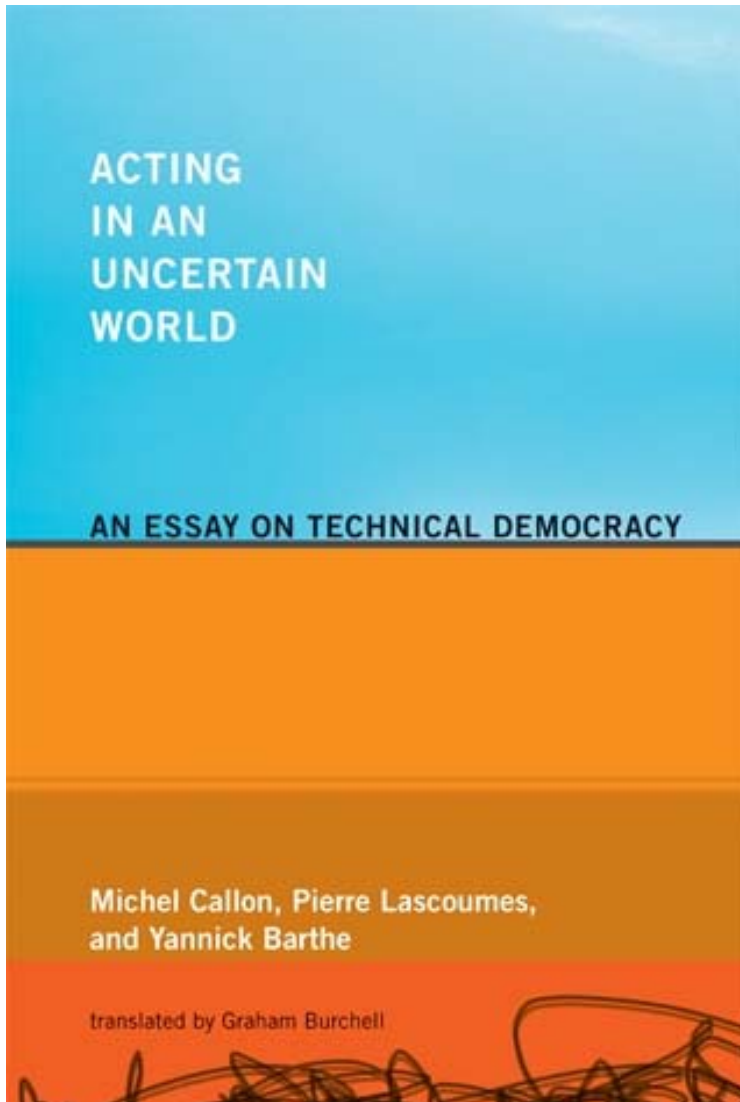
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Understanding the Societal Challenges Facing Nuclear Power

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***

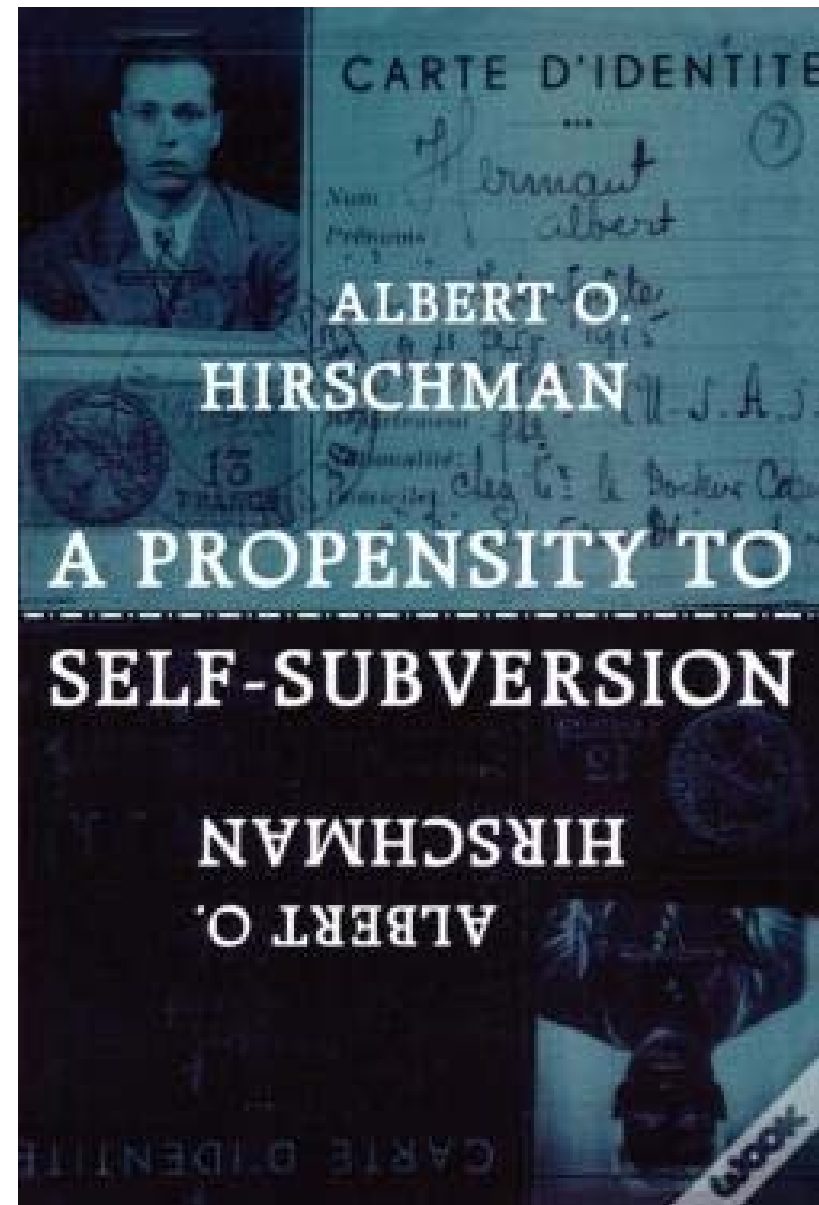
The key questions are

- 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?