

Enforcing trust? Why the politics of nuclear terror can never inspire a political dialectic on nuclear energy technology.

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Why the politics of nuclear terror can never inspire a political dialectic on nuclear energy technology.

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- (A brief history of) Justifying nuclear as an energy source:
- The comfort of polarisation
- Deconstructing & reconstructing the debate
- The nuclear energy justification question is a moral question
- The idea 'justification' (an ethics of method, instructing a politics of confrontation)
- Moral pluralism & nuclear: putting the ethics of method to test

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(A brief history of) Justifying nuclear as an energy source

A coming of age in two phases



1st period (pre – Chernobyl): nuclear as a modernist tour de force

justifying nuclear as a **promising** energy source:

unlimited resource, cheap

technocratic approach to **risk management** (f.i. sea dumping of waste)

mid-70's boost: political alternative for oil



2nd period (post – Chernobyl): seeking a new rationale

justifying nuclear as a **trade-off** in the frame of a bigger problem:

climate change, the need for “sustainable energy systems”

comparative approach to **risk management**, although “public acceptance as key criterion”

focus shift: from safety to waste (with proliferation in the back)

(A brief history of) Justifying nuclear as an energy source

- The last decade, many countries considered the nuclear option again, often with 'public support'
 - although not because of a sudden belief in nuclear, but because of fear for climate change

- Due to Fukushima, safety is again top priority in public and political discourse
 - citizens do not understand why it was ever possible to build those reactors on a known fault and at the side of the 'ring of fire'



(A brief history of) Justifying nuclear as an energy source

- After 9/11, nuclear security was heavily challenged, but this did not affect basic safety designs of nuclear power plants
- After Fukushima, rationalisations on the justification of nuclear seem to move in various and often opposing directions:

politics

German energy policy ► ◀ UK energy policy

media

“Fukushima: the end of a nuclear era”



“Fukushima proves nuclear safety”

→

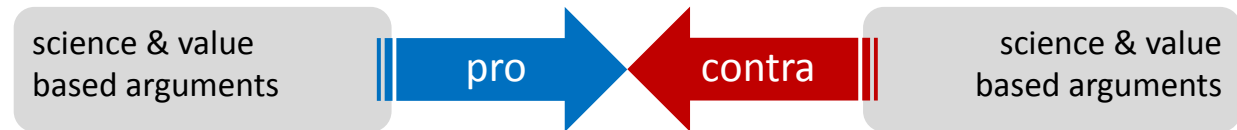
Two symptoms of an underlying strategically maintained political polarisation around nuclear energy

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The comfort of polarisation

The comfort of polarisation

- The **discourse** on the acceptability of nuclear is not an ratio \leftrightarrow emo debate, but a ratio \leftrightarrow ratio debate

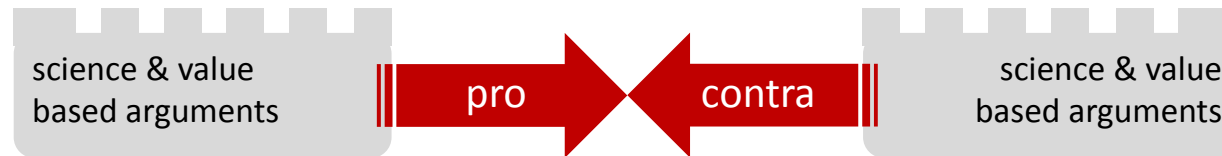


- but ■ What we see is that **opposing rationalisations do not converge**, but remain stuck over conflicting evidences
- The result is an **enduring polarisation** that hinders a deliberate justification process around nuclear energy that would generate societal trust

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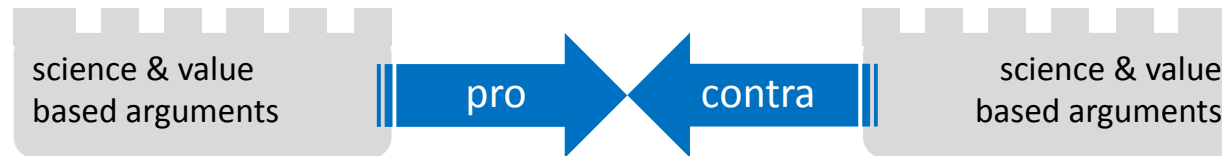
The comfort of polarisation

- Since the beginning of the nuclear era, opinion makers have been divided into two camps



The comfort of polarisation

- Since the beginning of the nuclear era, opinion makers have been divided into two camps



- but ■ These camps are now turned into non-overlapping **comfort zones**, maintained by strategic and often populist simplifications of arguments pro/contra
- As in a joint conspiracy, both make no effort to convince each other, but focus on 'the general public'
 - the pro-camp tries to convince it,
 - the contra camp claims to represent it

The comfort of polarisation

- The comfort of polarisation manifests in **policy, science and the public discourse**

- The result is a global (nuclear) energy policy that maintains a a political power vacuum that
 - gives a **free way to the international market** game
 - hinders a global ethics of **democracy in risk governance** and of **liability in case of accidents**

The comfort of polarisation

Considering 'ethical implications' of using nuclear

- Can we speak of 'ethical implications' of using nuclear as an energy source?

Traditionally, they are connected to the three general challenges nuclear has to deal with:

- risk control ↔ acceptance & dealing with accident consequences
- waste disposal: siting and the transgenerational burden
- potential misuse of the technology

- Critical discourse refers to potential or observed adverse effects that raise questions on whether nuclear is 'ethically *justified*' or 'ethically *justifiable*'

- This discourse is meaningless

... as long as it does not instruct the ways we make sense of the issue at stake in knowledge generation and decision making, or (in other words)

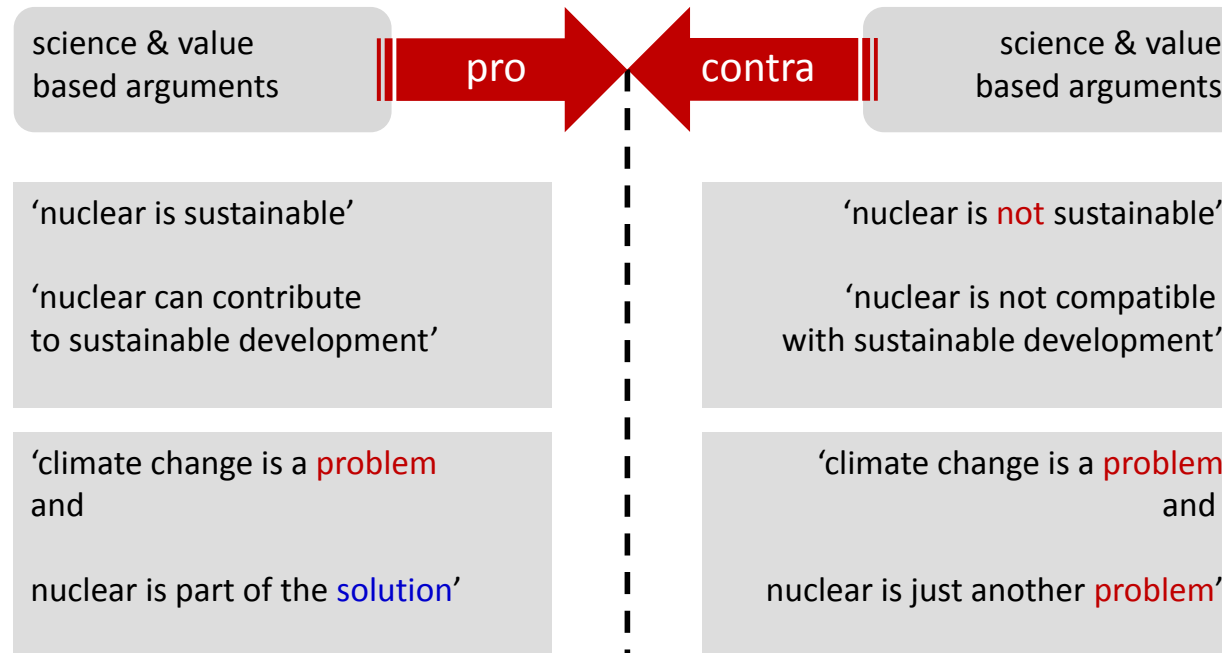
... as long as it does not inspire a political dialectic related to the issue

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Deconstructing & reconstructing the debate

Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

- ▶ Conflicting opinions on nuclear in relation to climate change and sustainable development



Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

- ▶ 'nuclear is sustainable'
- ▼ the stability and reliability of the fuel market
- ▼ the low carbon dioxide burden of the nuclear fuel cycle
- ▼ the competitive price of nuclear electricity in base load
- ▼ available solutions for radioactive waste disposal
- ▼ good NPP safety records of modern & 'safer' future plants
- ▼ fuel cycles can be made proliferation-safe

Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

- ▶ 'nuclear is not sustainable'

- ▼ the stability and reliability of the fuel market
- ▲ limited U resources
- ▼ the low carbon dioxide burden of the nuclear fuel cycle
- ▲ significant underestimated CO₂ emissions
- ▼ the competitive price of nuclear electricity in base load
- ▲ subsidies, not enough provisions for waste & dismantling
- ▼ available solutions for radioactive waste disposal
- ▲ unproven technical solutions, questionable social solutions
- ▼ good NPP safety records of modern & 'safer' future plants
- ▲ TMI, Chernobyl, Fukushima, old plants, human error, force majeure
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- ▲ warfare, irresponsible regimes, proliferation, terror

Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

which of these issues **could be** resolved
in a fair, open and transparent dialogue?

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Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

1, 2 & 3: **can be** resolved
in a fair, open and transparent dialogue

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- 2 ▼ the low carbon dioxide burden of the nuclear fuel cycle
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- In principle, it is sufficient to try to acquire knowledge, apply causal reasoning and **make fair estimates** about the situation (which doesn't mean that this is an easy task)
- We could **compare different views** and try to **find out why they differ**.
- We could draw conclusions from these comparative assessments, reach a consensus on the knowledge base and inform policy about these

Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

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→ The result would be **an estimate that is supported by societal trust because of the deliberate and inclusive research method** and not because of a predicated scientific proof

in addition Also comparison of nuclear with alternatives is possible
The consensus on the knowledge can be adapted continuously
It would not be too bad if we would turn out to be wrong

Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

4, 5 & 6: engaging in deliberate and inclusive research methods is possible
but not sufficient to generate societal trust

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Deconstructing & reconstructing the debate Conflicting opinions, conflicting evidences?

4, 5 & 6: engaging in deliberate and inclusive research methods is possible
but not sufficient to generate societal trust

- The issues are marked by 'risk' that needs to be 'controlled'
- Essential factors are beyond full control: **human culture, nature, time**
- It is impossible to prove who is right and who is wrong
- Comparison of views triggers **values** deeply rooted in culture
- All this complicates the comparison of nuclear with alternatives

4 ▼ available solutions for radioactive waste disposal

▲ **unproven technical solutions, questionable social solutions**

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Deconstructing & reconstructing the debate

Intermediate conclusion

good science + a responsible safety culture + public transparency
are necessary but **insufficient conditions for societal trust**

- which implies that **policy**, in these cases,
will have to rely on 'opinions that cannot be turned into facts'
- and that **policy choices**, in these cases,
can be 'rational-political', but not rational-scientific

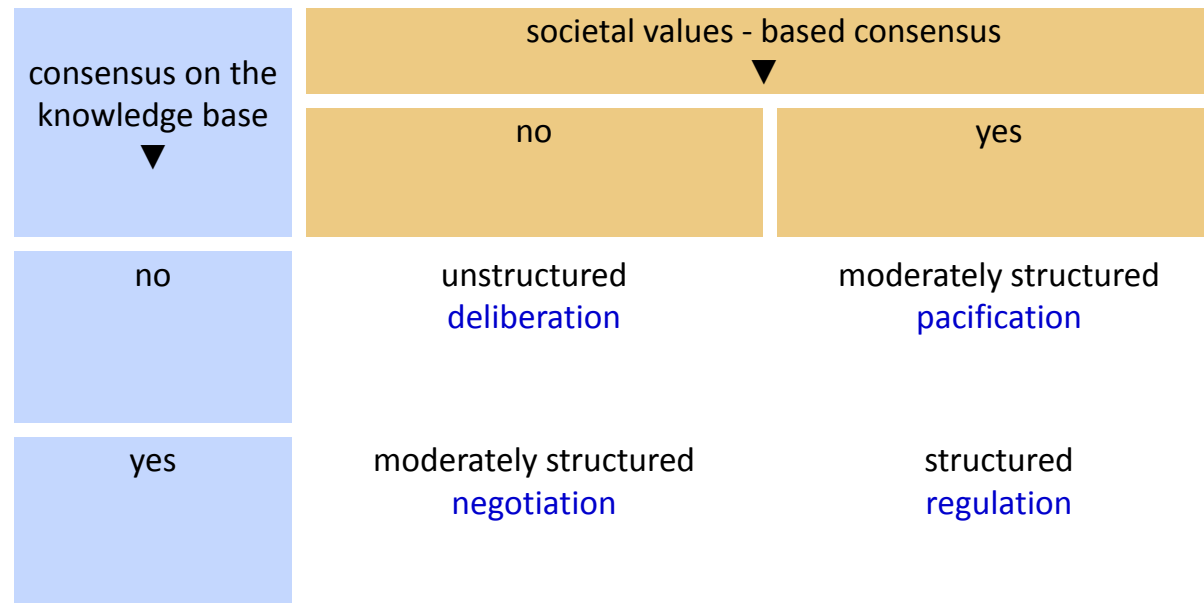
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The nuclear energy justification question is a moral question

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- The societal justification of applications of nuclear technology is a complex 'unstructured' problem
- 'unstructured' problem: a problem where there exists a debate on the scientific facts as well as on the values at stake
- Four **models of 'governance'**
(adapted from Hisschemöller & Hoppe 1996)



The nuclear energy justification question is a moral question

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- ‘unstructured’ problem: a problem where there exists a debate on the scientific facts as well as on the values at stake
- Four **models of ‘governance’** / *examples*

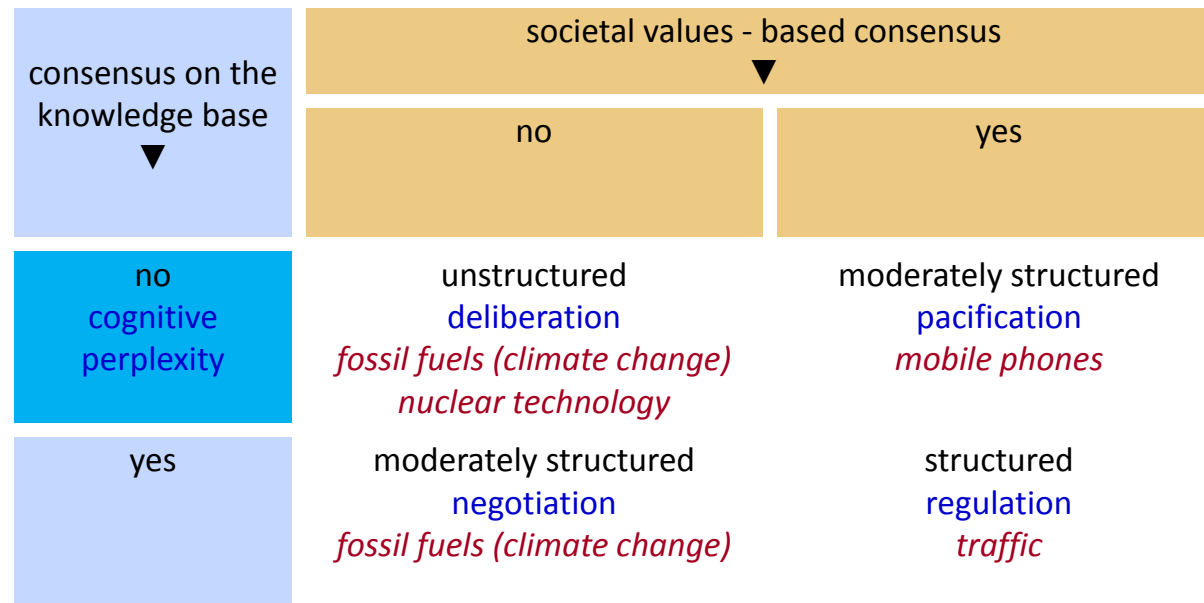
| | | |
|--------------------------------------|--|--|
| | societal values - based consensus ▼ | |
| consensus on the knowledge base ▼ | no | yes |
| no | unstructured deliberation <i>fossil fuels (climate change)</i> <i>nuclear technology</i> | moderately structured pacification <i>mobile phones</i> |
| yes | moderately structured negotiation <i>fossil fuels (climate change)</i> | structured regulation <i>traffic</i> |

The nuclear energy justification question is a moral question

- The societal justification of nuclear energy technology is troubled by **cognitive perplexity**.

That is:

Risk assessment has to deal with uncertainties, ambiguities, unknowns and unknowables inherently connected to the concerned natural, technical and social phenomena, **which implies science has to make use of hypotheses, probabilities and prognoses**

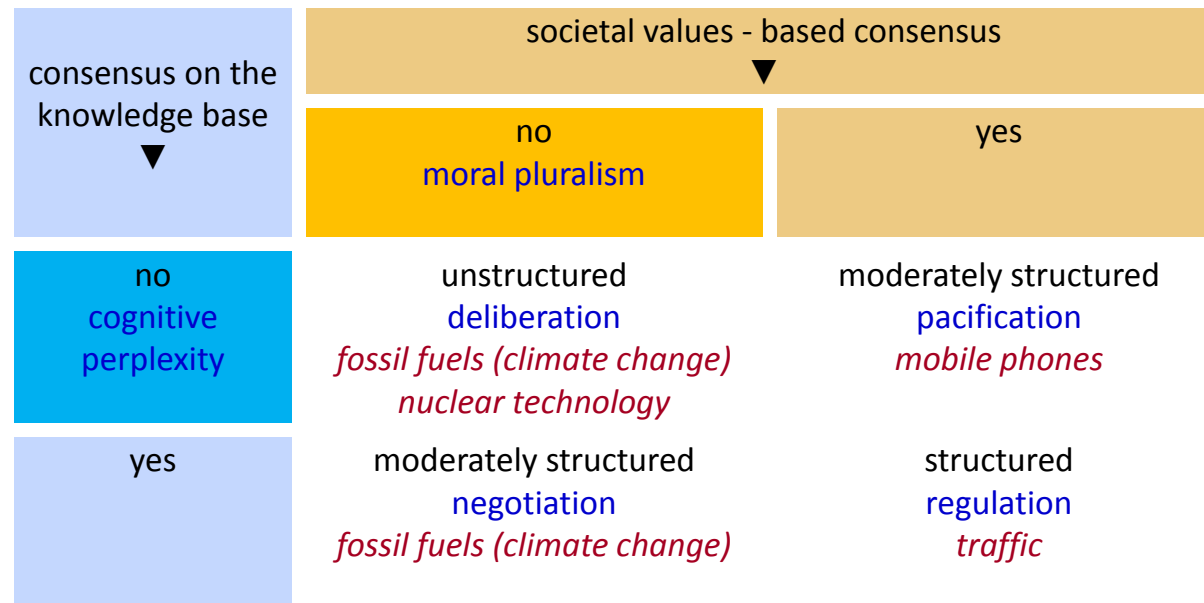


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- The societal justification of nuclear energy technology is troubled by **moral pluralism**.

That is:

Even if we would all agree on the scientific knowledge base for the assessment of the risk, **opinions would still differ on its acceptability**. **Science** may thus inform us about the technical and societal aspects of options, it **cannot instruct or clarify the choice to make**.

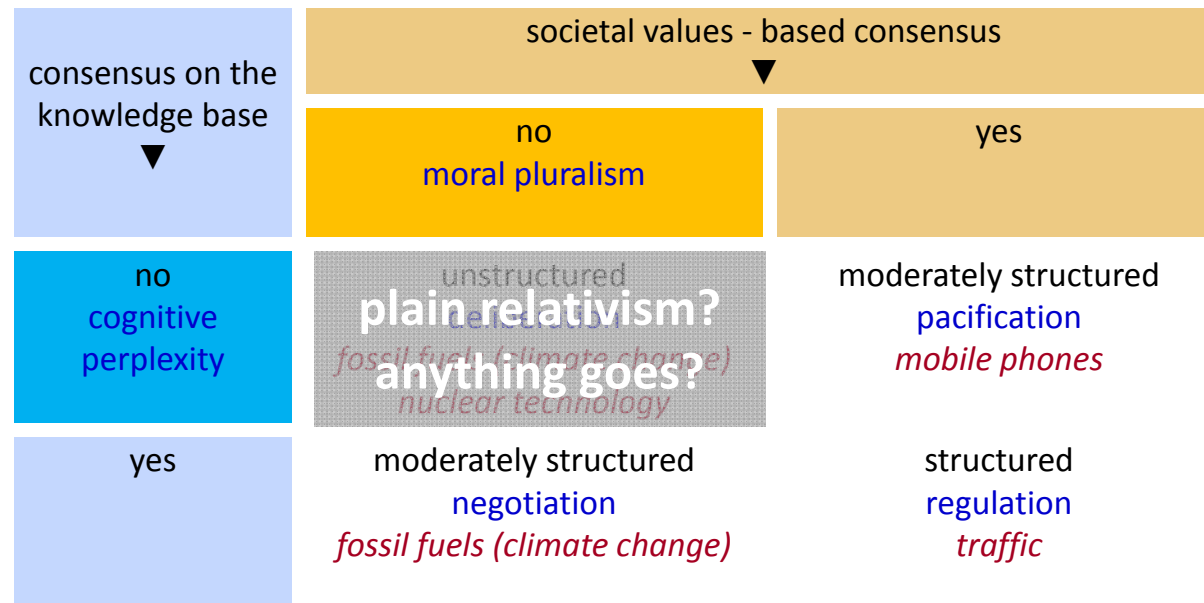


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The idea 'justification': an ethics of method, instructing a politics of confrontation

- deliberation leans on an **ethics of method**, concerning a joint willingness to
(set 'boundary conditions')
- organise deliberation within the 'neutral frame' of energy governance and in the spirit of social justice
- treat renewable energy and energy savings not as trade-offs but on the basis of their ideological merits in the context of sustainable development
- see 'technological risk' simply as an 'artefact of civilisation', not (only) as a historical product of ill-considered technocratic politics
- confront nuclear with the other problematic energy technology (fossil fuels) in a resigned but responsible energy politics 'anticipating full alternatives' (whether they come or not)
- ('organise engagements')
- include all concerned actors in research and policy
- engage in
 - acquiring **knowledge** of each other's **values**
 - a joint **evaluation** of each other's **knowledge**

The idea 'justification':

an ethics of method, instructing a politics of confrontation

- this requires attitudes of **public transparency**, **public reflexivity** and **the preparedness to accommodate with** all actors concerned

an ethics of the critical-analytical

→ public transparency = 'showing that your acts are consistent with your words'

→ public reflexivity = developing a language of ethics / an ethics of language as scientists, engineers, managers, politicians, activists, citizens, communicators, beyond facts, concerns and interests, **to reason in public**

about what you **believe** but cannot **prove**
what you **fear** but cannot **account**
what you **hope** but cannot **guarantee**

an ethics beyond the critical-analytical

→ a preparedness for accommodation needs

- a sense for **solidarity with and social justice towards the 'powerless'**, *including those who do not longer exist, including those who don't exist yet*

- a sense for **accountability** towards **victims of collateral harm** and towards **future generations** (by providing them with a resigned explanation of why we thought this was the best thing we could do)

The idea 'justification':

an ethics of method, instructing a politics of confrontation

- 'putting the ethics of method into practice' as a political dialectic, by way of a politics of confrontation that works on two levels

- enforcing →
 - implement boundary conditions
 - organise engagements
 - include civil society (beyond party & nation state politics) in research and policy
 - organise and moderate thematic processes of public transparency and reflexivity
 - approach and organise energy governance as a matter of intra- and intergenerational social justice alongside other themes of sustainable development

- enabling →
 - stimulate and support public reflexivity through a transdisciplinary and inclusive approach to education and research

- The result would be a process of political deliberation that would generate 'resigned societal trust' *only because of its method* instead of based on its outcomes (resigned trust = jointly generated resigned trust)

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Moral pluralism & nuclear: putting the ethics of method to test

Moral pluralism & nuclear: putting the ethics of method to test recall

4, 5 & 6: engaging in deliberate and inclusive research methods is possible but not sufficient to generate societal trust

- The issues are marked by 'risk' that needs to be 'controlled'
- Essential factors are beyond full control: **human culture, nature, time**
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▲ **TMI, Chernobyl, Fukushima, old plants, human error, force majeure**

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seeking trust by an ethics of method, instructing a politics of confrontation

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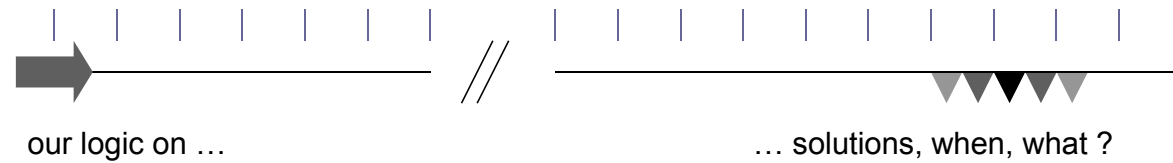
Moral pluralism & nuclear: putting the ethics of method to test

1. Radioactive waste disposal and intergenerational social justice

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1. Radioactive waste disposal and intergenerational social justice

■ Radioactive waste disposal: retrievable or non-retrievable?



← CEVI workshop 12011
reflection on our logic ?

■ Dealing with radioactive waste puts the 'accommodation as a sense for accountability towards future generations' to an extreme test:

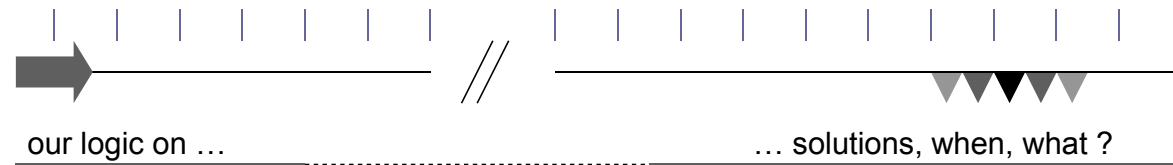
dilemma accountability as care ↔ accountability as leaving freedoms of choice

- a central concern of the metacriterion of 'sustainable development' (SD)
- SD is not 'minimising' the burdens for future generations
 - SD is not 'maximising' the benefits for future generations
 - SD is not 'balancing' the benefits and burdens for future generations
 - SD is enabling future generations to decide how to distribute 'their' benefits and burdens (according to their views, knowledge and values)

Moral pluralism & nuclear: putting the ethics of method to test

1. Radioactive waste disposal and intergenerational social justice

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dilemma accountability as care ↔ accountability as leaving freedoms of choice

way out a resigned trust based on active rememberance instead of on passive rememberance (active forgetting)

in practice long term storage in international cooperation with the aim to develop and institutionalise a more robust democratic process meanwhile

+ a 'politics of resigned explanation' to next generations on why we thought this was the best thing we could do

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Moral pluralism & nuclear: putting the ethics of method to test

2. Post nuclear accident social justice

Moral pluralism & nuclear: putting the ethics of method to test

2. Post nuclear accident social justice



World Press photo 2006

<http://www.greenpeace.org/international/press/releases/greenpeace-wins-world-press-ph>

Social justice **beyond social constructions of accountability**

Chernobyl is a disaster in many respects, but the link between microcephaly *as a genetic effect* and radiation cannot be proven

way out:

joint problem *redefinition* based on a resigned trust that this can be done at any time

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Moral pluralism & nuclear: putting the ethics of method to test
3. The impossible pacifism of the advocates of nuclear energy (?)

Moral pluralism & nuclear: putting the ethics of method to test

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Observations

from the current politics of nuclear terror

- In UN negotiation context, nuclear is hijacked in a strategic framing:
 - ↓ In 15 years of UN negotiations on climate change and sustainable development , nuclear has never been officially debated
 - ↑ Opening the United Nations Non-Proliferation Treaty (NPT) Review conference 2010, Ban Ki-moon declared that *“Advancing the peaceful uses of nuclear energy cannot be held hostage to either disarmament or non-proliferation.”*
http://www.un.org/apps/news/infocus/sgspeeches/statments_full.asp?statID=802
- Advocates of nuclear energy don't show up at UN NPT conferences
- Shape 2012 (March 2012, Brussels), the 2nd Summit of Honor on Atoms for Peace and Environment, organised by the nuclear industry, envisioned a nuclear-weapon-free world but did not invite speakers from the nuclear energy opponents side

Moral pluralism & nuclear: putting the ethics of method to test

3. The impossible pacifism of the advocates of nuclear energy (?)

- In seeking societal trust, even concerned with the proposed ethics of method, advocates of nuclear energy will only get a fair chance if they also openly distance themselves (in word and deed) from military applications of the technology

why? an ethics of method *concerned with public transparency and reflexivity and with accomodation towards the powerless* cannot but to drive them towards pacifism 'outside the neutral frame of energy governance'

- In other words,
Concerned with the proposed ethics of method, the claim that **"we can't help it that others are misusing our technology"** cannot be longer used as an excuse

Moral pluralism & nuclear: putting the ethics of method to test

3. The impossible pacifism of the advocates of nuclear energy (?)

- In a global political process that aims to ban nuclear weapons ('towards zero'), the advocates of nuclear energy are an essential actor, but
- 1 → **any consideration on cutting existing links between peaceful and military use is locked in the blind alley of the current NPT negotiations**
 - building nuclear weapons is possible without engaging in peaceful applications of nuclear technology, but more difficult to organise secretly
 - the current NPT has historical rational roots, but is essentially powerless and unfair
 - the five weapon states (US, Russia, France, UK, China) have 'overlaps' of their peaceful and military R&D contexts
 - in general, the politics of military deterrence became a hoax (being it market driven)
 - in particular, the politics of nuclear terror in the Iran case is a hoax; it is a symptom of a war of cultures

Moral pluralism & nuclear: putting the ethics of method to test

3. The impossible pacifism of the advocates of nuclear energy (?)

- In a global political process that aims to ban nuclear weapons ('towards zero'), the advocates of nuclear energy are an essential actor, but
- 2 → although nuclear energy advocates could try to unlock this impasse with an active pacifism, when leaving the neutral thematic context of energy governance to meet other actors concerned with nuclear disarmament, they would need to meet and accommodate *again* with their 'opponents from the energy front

Moral pluralism & nuclear: putting the ethics of method to test

3. The impossible pacifism of the advocates of nuclear energy (?)

- A reflexive, transparent and social justice based energy governance that includes nuclear
+
total transparency with regard to military-related activities

is not enough
- The two previous factors together make it impossible to advance an energy policy that includes nuclear and that is build on resigned trust around the non-proliferation issue