

## The ethics of radiological risk governance – The justice of justification as a central concern

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*ICRP 2015*

*3<sup>rd</sup> International Symposium on the System of Radiological Protection*

*Seoul, 22 October 2015*

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## The ethics of radiological risk governance – The justice of justification as a central concern

1 On the need for new governance methods

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1 On the need for new governance methods  
A number of radiological risk governance issues in the nuclear energy context show a need for a more deliberate approach to (nuclear) energy governance

Fair and effective energy governance is hindered by a comfort of polarisation over the nuclear issue that does not only play in public discourse but that is deeply rooted in the working of science, politics and the market;


reference Meskens, Gaston. 2013. "The Trouble with Justification – Getting Straight on the Science and Politics of Nuclear Energy." *Energy Strategy Reviews*

While EURATOM research is 'broadening' by way of including social and ethical aspects and the involvement of civil society, one can observe a problematic orientation towards a positivist approach to low dose risk research;

reference Meskens, Gaston, 2015. "Overcoming the framing problem - A critical-ethical perspective on the need to integrate social sciences and humanities and stakeholder contributions in EURATOM radiation protection research", *Journal of Radiological Protection* (forthcoming)

In Fukushima, the issue of the so-called '100 mSv threshold' is an issue in urgent need of formal public deliberation among all concerned parties. Although there is major support for the vision that no such threshold exists, it now serves post-accident politics that are not to the benefit of the citizens.

That deliberate approach is not needed to the benefit of policy or the industry, but in the interest of social justice.



## The ethics of radiological risk governance – The justice of justification as a central concern

- 1 On the need for new governance methods
- 2 Dealing with risk: between knowledge and fairness
- 3 Fair and effective risk assessment: three reflections
- 4 The bigger picture: the idea of a fair dealing with complexity
- 5 An ethics of care for our modern coexistence
- 6 An ethics of care to inspire new governance methods
- 7 Consequences for the system of radiological protection

# 2

## Dealing with risk: between knowledge and fairness

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2012  
Interdisciplinary  
Study

Synthesis  
Report

### Topical socio-economic reports / expert viewpoints

[...]

"Risk governance:

What is an acceptable level of (nuclear) risk for the public at large?"

my answer:

*There exists no objective (scientific, economic, social, political or philosophical) rationale for the determination of the acceptable level of nuclear risk for the public at large.*

*An acceptable nuclear risk is simply a risk that an informed democratic society justifies as acceptable.*

Benefits and  
Limitations of

**Nuclear Fission**  
for a **Low-Carbon**  
**Economy**



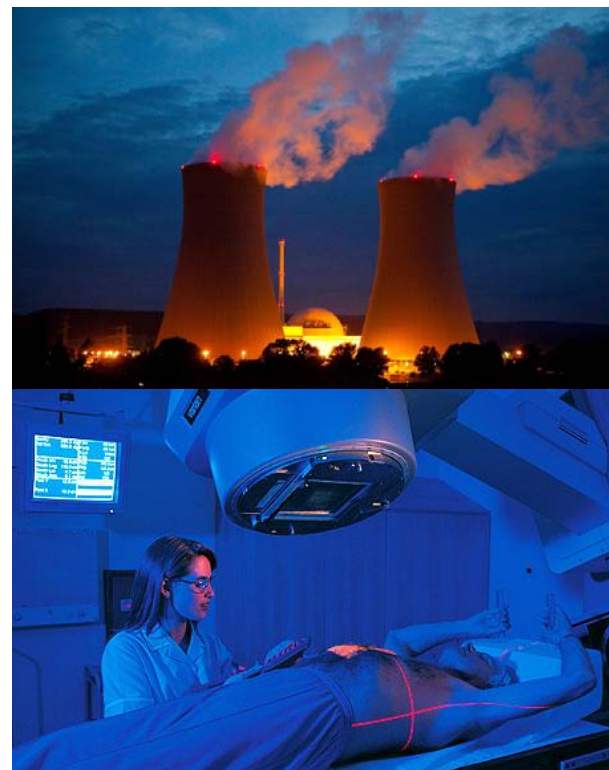
<http://www.eesc.europa.eu/?i=portal.en.events-and-activities-symposium-on-nuclear-fission-papers>

## 2 Dealing with risk: between knowledge and fairness What is an 'acceptable risk'?

do we need **calculation**  
to support **informed consent**?



do we need **informed consent**  
to support **calculation**?



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# 3

## Fair and effective risk assessment: three reflections

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3

### Fair and effective risk assessment: three reflections

The assessment of what is an acceptable risk for society is not a matter of science; it is a matter of justice

- A risk is not a mathematical formula; it is a potential harm that
  - you cannot completely know and
  - you cannot fully control
- Acceptable risk?
 

People will accept a risk they cannot completely know and that they cannot fully control simply when they **trust** that its justification is **marked by fairness**.

Fairness: the **possibility of self-determination** ensured by 'the right to be responsible'



- For any health risk that comes with technological, industrial or medical practices and that has a wider impact on society, 'the right to be responsible' equals 'the right to co-decide'. **Enabling this right is a principle of justice**

3 Fair and effective risk assessment: three reflections  
Societal trust in the assessment of what is an acceptable risk for society should be generated 'by method instead of proof'

- No scientific or political authority can determine alone what would be an acceptable risk for society.
- Good science and engineering, open and transparent communication and the 'promises' of a responsible safety and security culture are necessary conditions but can never generate societal trust in themselves.
- ↘ The reason is that there will always be essential factors beyond full control: nature, time, human error, misuse of technology, which implies that one always has to deal with **incomplete and speculative knowledge** and **value pluralism** (also in post-accident conditions).
- Confronted with the need to deal with incomplete and speculative knowledge and value pluralism, **the challenge of science** in risk governance is not the production of credible proofs, it **is the construction of credible hypotheses**.
- ↘ Fair risk governance is risk governance **of which the method of knowledge generation and decision making is trusted as fair** by society. When the method is trusted as fair, that risk governance **has also the potential to be effective**, as the decision making will be trusted as fair also with those who would have preferred another outcome (the 'democracy principle').

### 3 Fair and effective risk assessment: three reflections

A fair dealing with the complexity of risk assessment and justification requires new governance methods

Today, the governance methods we use to make sense of the complexity of risk assessment and justification are driven by the doctrine of scientific truth and the strategies of political 'positionism' and economic profit.

- For the assessment of what is an acceptable health risk for society, one would wonder whether these methods
  - really enable 'the right to co-decide' (as a principle of justice);
  - are really able to generate societal trust by way of their very method.
- One could wonder how, in the broader societal context, **virtues relevant for radiological protection** (beneficence, non-maleficence, prudence, justice, dignity, honesty, truthfulness, empathy ...) **can ever 'work'** in a world still ruled by the doctrine of scientific truth and the strategies of political 'positionism' and economic profit.

It seems as if those virtues always need to 'resist' the methods driven by these doctrines and 'work' against them.

# 4

## The bigger picture: the idea of a fair dealing with complexity

reference    *Meskens, Gaston. 2015. "Global Governance as Ethical Commitment - A New Vision on Solidarity for Sustainable Development." In Sustainability - Global Issues, Global Perspectives. Cognella Academic Publishing.*

see    <https://theacademiaforum.wordpress.com/2015/06/30/global-governance-as-ethical-commitment-a-new-vision-on-solidarity-for-sustainable-development/>

4 The bigger picture: the idea of a fair dealing with complexity  
The social problems we face today are ultimately complex



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The bigger picture: the idea of a fair dealing with complexity  
The social problems we face today are ultimately complex

Characteristics of a complex social problem

**interdependence**

**diversified impact**

**organisational complexity**

factual complexity

**relative responsibilities**

**knowledge problem**

**evaluation problem**

**authority problem**

complexity of interpretation

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4 The bigger picture: the idea of a fair dealing with complexity  
The social problems we face today are ultimately complex



Taking this complexity serious, the idea is that the traditional governing methods of international politics, representative democracy, the market and science are not longer able to grasp the complexity of these social problems.

# 5

## An ethics of care for our modern coexistence

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5 An ethics of care for our modern coexistence  
'Western philosophy' normative ethical theories...

→ may seek reference in 'universally applicable principles'  
(Kantian) deontology, consequentialism (utilitarianism)

danger risk of overlooking the particular of specific situations

→ may seek reference in evaluating particular situations  
'particularism'

danger risk of self-protective relativism (cultural, social, political)

→ may seek reference in virtues ('being good')  
virtue ethics (Aristoteles)

problem virtues do not (always) unambiguously translate into concrete action

→ may seek reference in the care for human relationships  
ethics of care

problem works for close relations with known people; unclear how it could work for  
distant relations with strangers

## 5 An ethics of care for our modern coexistence

- The idea of complexity enables an ethics of care that could work for our distant relationships with strangers.

5

An ethics of care for our modern coexistence

The 'fact of complexity' brings along three new characteristics of modern coexistence

**connectedness**

We are connected with each other 'in complexity'. We cannot any longer escape or avoid it. Fair dealing with each other implies a fair dealing with the complexity that binds us.

**vulnerability**

In complexity, we became intellectually dependent on each other, while we face our own and each other's 'authority problem'. We should care for the vulnerability of the ignorant and the confused, but also of 'mandated power'.

**(sense for)  
commitment**

Our experiences now extend from the local to the global. As intelligent reflective beings, to become involved in deliberating issues of general societal concern became a new source of meaning and moral motivation.

5

An ethics of care for our modern coexistence

An ethics of care for our modern coexistence supports the value of the principles of fairness in risk governance

**connectedness**

**vulnerability**

**(sense for)  
commitment**

An ethics of care perspective  
on our modern coexistence 'bound in complexity'  
provides a powerful reference to defend the principles of

precaution  
informed consent  
inclusion of the potentially affected  
accountability towards next generations

against the doctrine of scientific truth  
and the strategies of political 'positionism' and economic profit

5

An ethics of care for our modern coexistence

An ethics of care for our modern coexistence gives new meanings to the ethical values (virtues) underpinning the system of radiological protection

**connectedness**

**vulnerability**

**(sense for)  
commitment**

For every professional  
(scientist, engineer, medical doctor, manager or policy advisor, ...)  
concerned with radiological protection

the virtues of  
beneficence, non-maleficence, prudence, justice, dignity,  
honesty, truthfulness, empathy ...

receive an enriched ethical meaning when understood  
as grounded in a care for human relationships 'bound in complexity'

5	<p>An ethics of care for our modern coexistence</p> <p>The new characteristics of coexistence imply the need to be intellectual solidary in the way we make sense of complexity for social organisation</p>
	<p>intellectual solidarity as an ethical commitment</p> <p><b>connectedness</b> the joint preparedness to enable and participate in intellectual confrontation with respect to the ratio's we use to defend our interests, hopes, hypotheses, believes and concerns to relativise our uncertainties and doubts</p> <p><b>vulnerability</b> the joint preparedness to acknowledge each other's authority problem &amp; the vulnerability of the next generations</p> <p><b>(sense for) commitment</b> the joint preparedness to enable and support 'intellectual emancipation' of others with the aim to provide every human being with the possibility to develop a (self-)critical sense and to be a (self-)critical actor in society</p> <p>⌋ Today, we don't live in a world inspired by intellectual solidarity, but we have the capacity to foster it and to put it in practice.</p>

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5

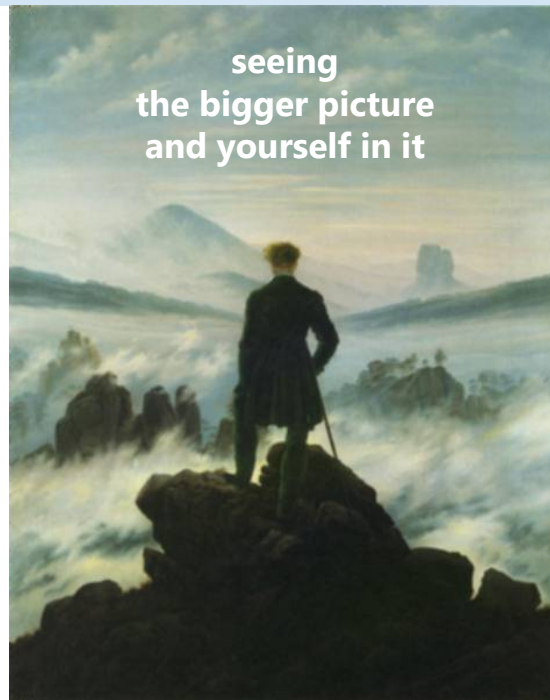
An ethics of care for our modern coexistence

A sense for intellectual solidarity implies one common virtue for everyone concerned

→ **reflexivity** as an **ethical attitude** (an **ethical 'experience'**)

with respect to the own position, interests, hopes, hypotheses, believes and concerns, and this in any formal role or social position (as scientist, engineer, politician, manager, citizen, civil society representative, activist, ...).

seeing  
the bigger picture  
and yourself in it



Caspar David Friedrich  
"Wanderer above  
the Sea of Fog"  
1818

Adopting this attitude requires **reflexivity** as an **intellectual skill**, seeing the bigger picture and yourself in it (with your interests, hopes, hypotheses, believes and concerns);

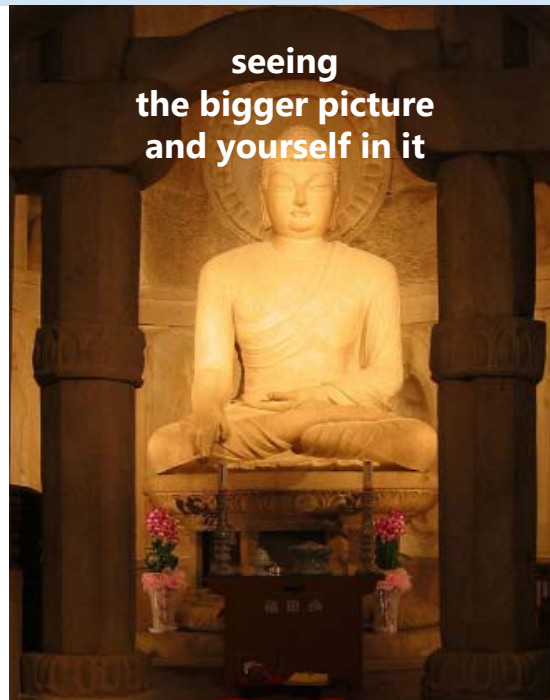
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Gautama Buddha at  
Seokguram Grotto,  
Gyeongju,  
South Korea

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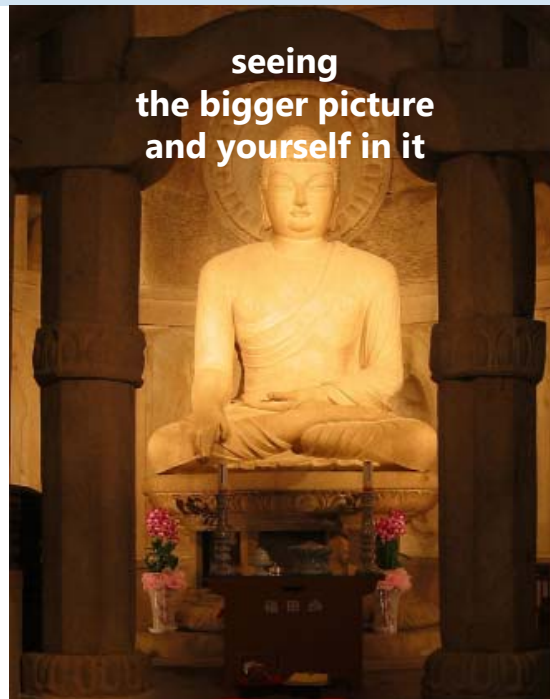


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Reflexivity as a skill may benefit from solitary reflection but it cannot be 'taached'.

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Dialogue  
on human rights,  
World Summit on  
Sustainable  
Development,  
Rio de Janeiro, 2012

Adopting this attitude requires **reflexivity** as an **intellectual skill**, seeing the bigger picture and yourself in it (with your interests, hopes, hypotheses, believes and concerns);

Reflexivity as a skill may benefit from solitary reflection but it cannot be 'taught'.

For all of us, **it essentially emerges as an ethical experience in interaction with others** in informal dialogue and in formal practices of education, research and political deliberation.

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# 6

## An ethics of care to inspire new governance methods

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An ethics of care to inspire new governance methods

The proposed ethics of care perspective inspires and supports new practical forms of democracy, research and education

connectedness

vulnerability

(sense for)  
commitment

An ethics of care perspective  
on our modern coexistence 'bound in complexity'  
provides a powerful reference to defend the value of (and the need for)

**inclusive democratic deliberation** as a collective learning process,  
bottom-up, connecting the local and the global;

**transdisciplinary and inclusive research**, seeking synergy among  
'disciplines' and between expert knowledge and lay knowledge;

**education inspired by plurality** and with a focus on **developing an  
ethical sense** and the capability of critical contextual thinking.

against the doctrine of scientific truth  
and the strategies of political 'positionism' and economic profit

- Virtues would be stimulated by these methods instead of hindered.
- We don't need to wait for a utopian total reform of society. These new forms of democracy, research and education **are possible today**.

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# 7

## Consequences for the system of radiological protection

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## 7 Consequences for the system of radiological protection

The justice of justification, ensured by the possibility of self-determination of the potentially affected (ensuring their 'right to be responsible') should be the central concern of risk governance and related systems of protection.

- The system of radiological protection **cannot and should not be stretched to provide the full rationale for societal justification.**
- In its recommendations, the ICRP could include critical considerations on why and how politics and science should foster the possibility of self-determination and involvement of the potentially affected as a way to ensure fairness in justifying radiation risks, taking into account the different application contexts.
- ↘ Given the central role of science in radiological protection, the ICRP should actively promote a 'richer' conception of science, being a transdisciplinary and inclusive science.

That science would in principle **be able to inform policy in a more reflexive and thus deliberate way** while it would at the same time **be more resilient itself against strategic interpretation** of its produced knowledge and hypotheses from out of politics, civil society and the market.