The politics of hypothesis

An inquiry into the ethics of scientific assessment

Gaston Meskens
Science & Technology Studies Unit, SCK•CEN (Belgium)
Centre for Ethics and Value Inquiry, University of Ghent (Belgium)
gaston.meskens@sckcen.be

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The politics of hypothesis
An inquiry into the ethics of scientific assessment

Theoretical frameworks (points of departure)

1 Risk and justice

2 An ethics of care for our modern coexistence

Focus on science

3 Seeking societal trust: the challenge for science

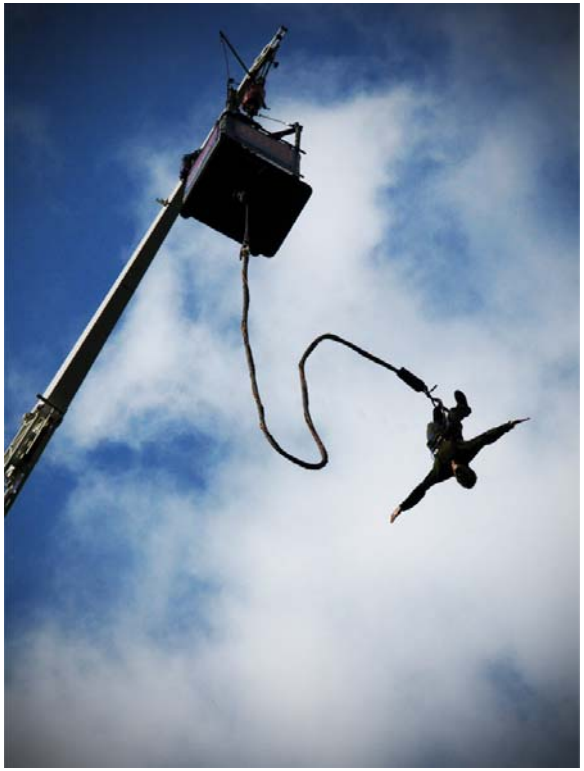
4 Good science for better policy making

1 Risk and justice

Gaston Meskens, gaston.meskens@sckcen.be

1 Risk and justice

do we need calculation
to support informed consent?



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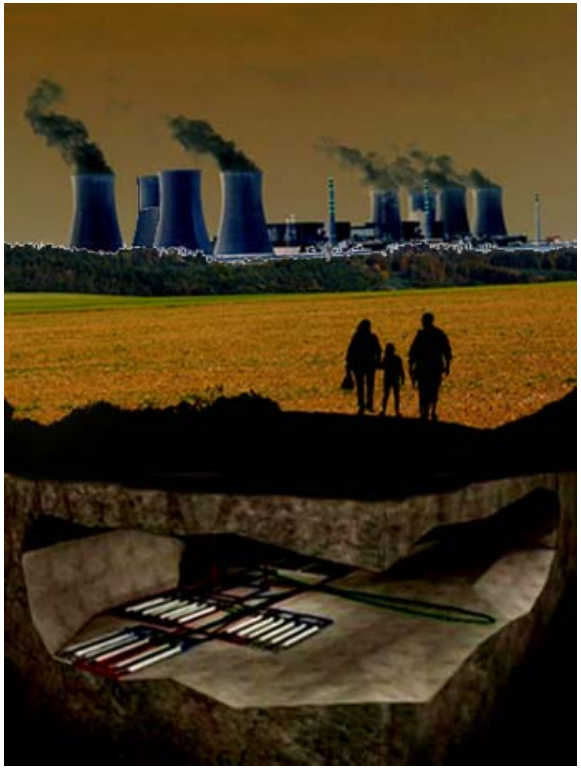

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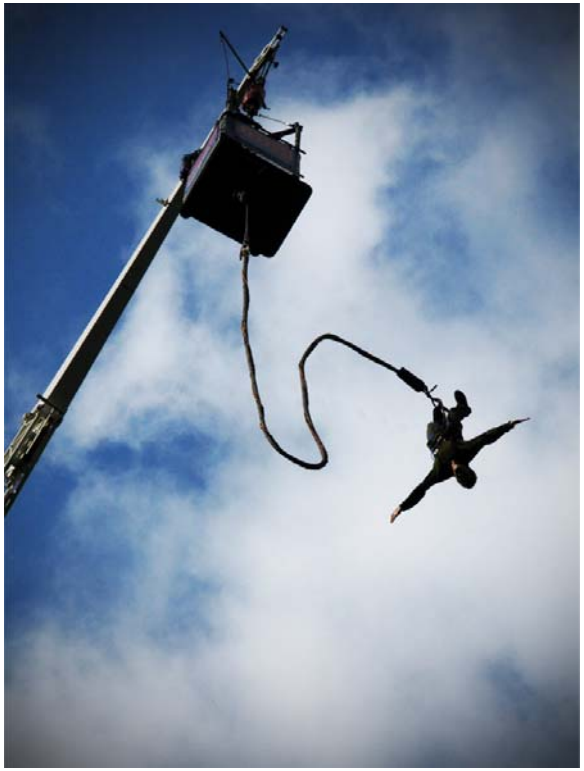

do we need informed consent
to support calculation?

1 Risk and justice

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'

risk for society / risk taken by an individual		
	the right to co-decide	from a joint decision follows
↑	**the right to be responsible**	↓ **the right to be protected**
↓	the freedom to hurt yourself	

- 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**

1 Risk and justice

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

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Gaston Meskens Science & Technology Studies Unit, SCK•CEN (Belgium)
Centre for Ethics and Value Inquiry, University of Ghent (Belgium)

2 An ethics of care for our modern coexistence

reference Meskens, Gaston, 2016, *Better living (in a complex world) - An ethics of care for our modern co-existence*, book chapter in 'Ethics of Environmental Health', Earthscan (Routledge) (forthcoming)

2 An ethics of care for our modern coexistence

The social problems we face today are ultimately complex

Gaston Meskens, gaston.meskens@sckcen.be

2 An ethics of care for our modern coexistence
Seven characteristics of a complex social problem

1 interdependence

2 diversified impact

3 need for integration ('holism')
> organisational complexity

factual complexity

4 relative responsibilities

5 knowledge-related uncertainty

6 value pluralism

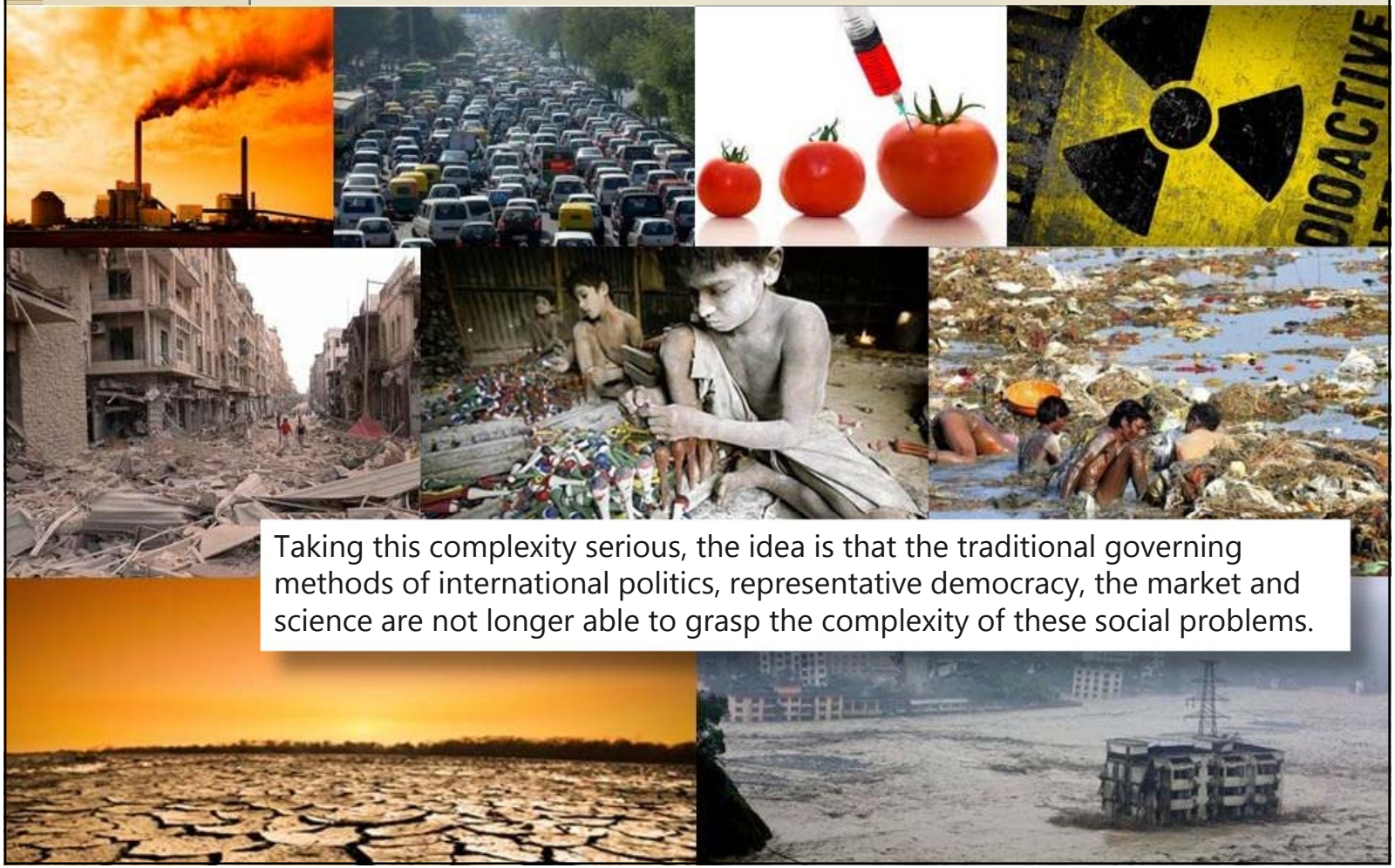
7 the relativity of authority in making sense of the problem

complexity of interpretation

question what would it imply to deal with this complexity in a 'fair' way?

2 An ethics of care for our modern coexistence

The real problem: obsolete but strategically maintained governing methods that hinder the possibility of a 'fair dealing with complexity'



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.

Gaston Meskens, gaston.meskens@sckcen.be

2 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.

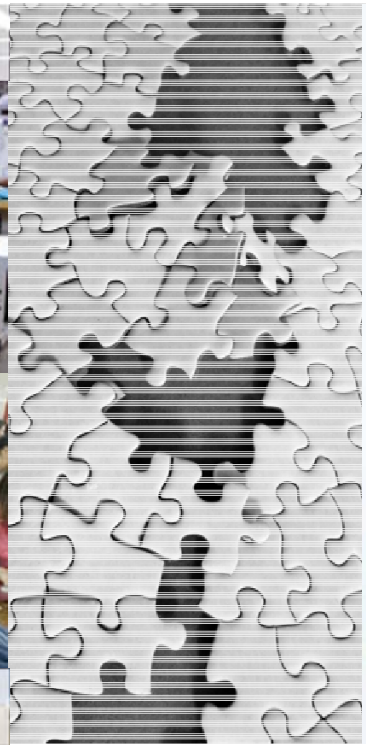
2 An ethics of care for our modern coexistence

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

connectedness

vulnerability

(sense for) commitment



2 An ethics of care for our modern coexistence

A fair dealing with complexity requires forms of democracy, research and education that are open and (self-)reflexive

(democracy, research and education being the three 'formal' governing methods we use to make sense of societal organisation and our coexistence)

- **inclusive democratic deliberation** as a collective learning process, bottom-up, connecting the local and the global;
- **holistic, transdisciplinary and participatory research**, seeking synergy between expert knowledge and local indigenous knowledge;
- **education** inspired by **plurality** and with a focus on developing ourselves as 'cosmopolitans beyond comfort zones' (by **developing an ethical sense** and the **capability of critical contextual thinking**).

↘ These 'advanced' governance modes have the potential to generate societal trust solely by their very method instead of by a promised outcome.

↘ We don't need to wait for a utopian reform of society. These new forms of democracy, research and education **are possible today**.

3 Seeking societal trust: the challenge for science

3 Seeking societal trust: the challenge for science
To what extent should scientists be concerned with fairness?

Traditional understanding: caring for objectivity and independence

However

- We know that the practice of scientific research is influenced by

→ the market
→ political programmes (research funding opportunities, custom-made research)
→ competition

but also by

↘ the ideology of finding and presenting the truth
↗ 'self-organised' quality control (through peer review)

- All this tends to stimulate

→ knowledge brokerage, (delivering knowledge in the 'right form' to the user)
→ tailor-made scientific consultancy
→ political 'science shopping'

3 Seeking societal trust: the challenge for science
Dealing with 'the politics of hypothesis'

- Many scientific hypotheses are nowadays granted with a social, political or commercial function.

  They are prematurely released from the laboratory, without full support from empirical evidence but with a specific task: to warn the world about dangerous situations or evolutions, or to inform it about promising trends and capacities.

  And, whether in the area of environmental protection, health or technology assessment, in many cases, they are produced as 'if-then' hypotheses upon explicit request from politics or the market.

- What kind of science do we talk abouot?

  'science that matters for social justice'

  ↘ science aimed to deliver evidence to guide policy concerned with social well-being

example dealing with risk-inherent technologies applied in/for food, energy, health care, construction, …

3 Seeking societal trust: the challenge for science
Dealing with 'the politics of hypothesis'

- Confronted with the need to deal with incomplete and speculative knowledge and value pluralism in providing policy advice on issues of social well-being, **the challenge of science** is not the production of credible proofs, it **is the construction of credible hypotheses**.





3 Seeking societal trust: the challenge for science
Dealing with 'the politics of hypothesis'

- Confronted with the need to deal with incomplete and speculative knowledge and value pluralism in providing policy advice on issues of social well-being, **the challenge of science** is not the production of credible proofs, it **is the construction of credible hypotheses**.

- In the general interest of rendering hypotheses with credibility, **science has no choice but to 'open up its method'** for

1. the integration of social sciences and humanities;
2. involvement of 'informed civil society';
3. involvement of the potentially affected.

- In the particular post-accident situation in Fukushima, this is the only way to restore public trust in institutions and finally deliberate an agreement on required post-accident measures to the general interest of the affected population.

  In this process, the academia, in cooperation with civil society, has an essential role of 'mediator of process' to play.

4 Good science for better policy making

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There is a need for a new vision on science, informed by ethics, able to grasp the complexity of issues such as risk-inherent technology assessment

- In the last decades, various academic visions have emerged on what science 'should do', 'can do' or on what science 'actually is'.

→ post-normal science (Funtowicz, Ravetz),

→ second-mode science (Gibbons, Nowotny),

→ Longino's ''social empiricism'

→ the arguments of Harré and Van Langenhove with respect to a necessary new ontology of the social sciences in the interest of their 'usability',

→ the views of Kitcher on science and democracy ('well-ordered science') and ethics ('there are no ethical experts')

→ ...

- More recently, also policy became concerned with science and research practices 'better able to respond to complex challenges'

4 Good science for better policy making

There is a need for a new vision on science, informed by ethics, able to grasp the complexity of issues such as risk-inherent technology assessment

- Scientific research that needs to take into account knowledge-related uncertainties and value pluralism cannot solely rely on the natural, engineering and technical sciences alone.

- 'Good science for better policy making' is science that

→ 'integrates' social sciences and humanities and views from informed civil society and citizens into research that traditionally relies on the natural, engineering and technical sciences

(better) → generates policy-supportive knowledge in a **holistic**, **transdisciplinary** and **participatory** way, or thus **knowledge as a synergy of insights** from

- the natural, engineering and technical sciences;
- the social sciences and humanities;
- informed civil society and citizens.

- The motivation for this approach is 'ethical' (being a fair dealing with the complexity of complex social problems in which science plays a central role)

- The overall ethical attitude (or virtue) is the **preparedness** of all concerned to accept the need for this kind of science and the preparedness to foster it.

4 Good science for better policy making
How can it inform policy in a better way?

- Good science for better policy making (as characterised before)

→ **helps to improve the understanding of concrete challenges** within specific research fields that have implications for the wider society outside of the reseach office or laboratory (f.i. low radiation dose health effects);

→ **facilitates stakeholder participation** in research and decision making processes that rely on science and engineering;

→ **enables the research to become self-reflexive** and thus

(1) – as an ethical accountability towards society – **to become critical with regard to its own working**, in the sense that the research can become better aware of

→ the social, political, cultural and historical context wherein it operates;
→ the rationales, possibilities and limitations of its own research methods and the relevance and possible interpretations of its own hypotheses.

(2) **to become more resistant** to pressure from politics and the market to deliver evidence it cannot deliver.

→ is thus, in general sense, **able to generate trust by its method** instead of by anticipated outcome.

4 Good science for better policy making
How does it work in theory?

key words

↘	**holism**	instead of **reductionism**
	the idea that	we need to see 'sociotechnical systems' as wholes ('bigger than the sum of their parts') and that their functioning cannot be fully understood solely in terms of their parts
↘	**transdisciplinarity**	instead of **disciplinary truth-thinking**
	the idea of	knowledge as a synergy of insights from various 'disciplines' to inform research and education
↘	**participation**	instead of **top-down paternalist technocracy**
	the idea that	participation is not only motivated from the perspective of social justice, but also based on the insight that, if nobody has the truth, we can only 'know together'.
↘	**resignation**	('enlightened resignation'), taking into account that sometimes we need to act in uncertainty and that we cannot fully control the future

4 Good science for better policy making
How does it work in practice?

1 ■ Through the organisation of dialogues

↘ between people who normally would not meet

↗ about topics that would normally not be treated

within a research domain that traditionally relies on natural sciences and technology development alone.

2 ■ with a focus on **analysis** – **critique** – **possibilities** with regard to

reference meaning and use of values (objectivity, sustainability, justice, precaution, …)

methods scientific methods, methods of political decision making

tools (of policy formulation): foresight research models, multi-criteria analysis

languages deconstruction of specific languages (political, scientific, commercial, …)
development and use of a 'deliberate reflexive language' to inform policy

3 ■ supported by research and decision making policies that stimulate this advanced approach and that provide guidance and financial means for its organisation.