EC vision on the question of transparency in the field of nuclear research

First man splitted the atom, now the atom splits man.

Gerhard Uhlenbruck (German aphorist and former immunologist at the Max Planck Institute for Brain Research

The nuclear debate: a cognitive conflict able to generate opportunities for sustainable development

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Aarhus Convention & Nuclear (ACN): European Roundtable on information and public participation in the field of Radioactive Waste Management (RWM); 13-15 January 2021

EURATOM: "new ideas for lasting peace and prosperity"

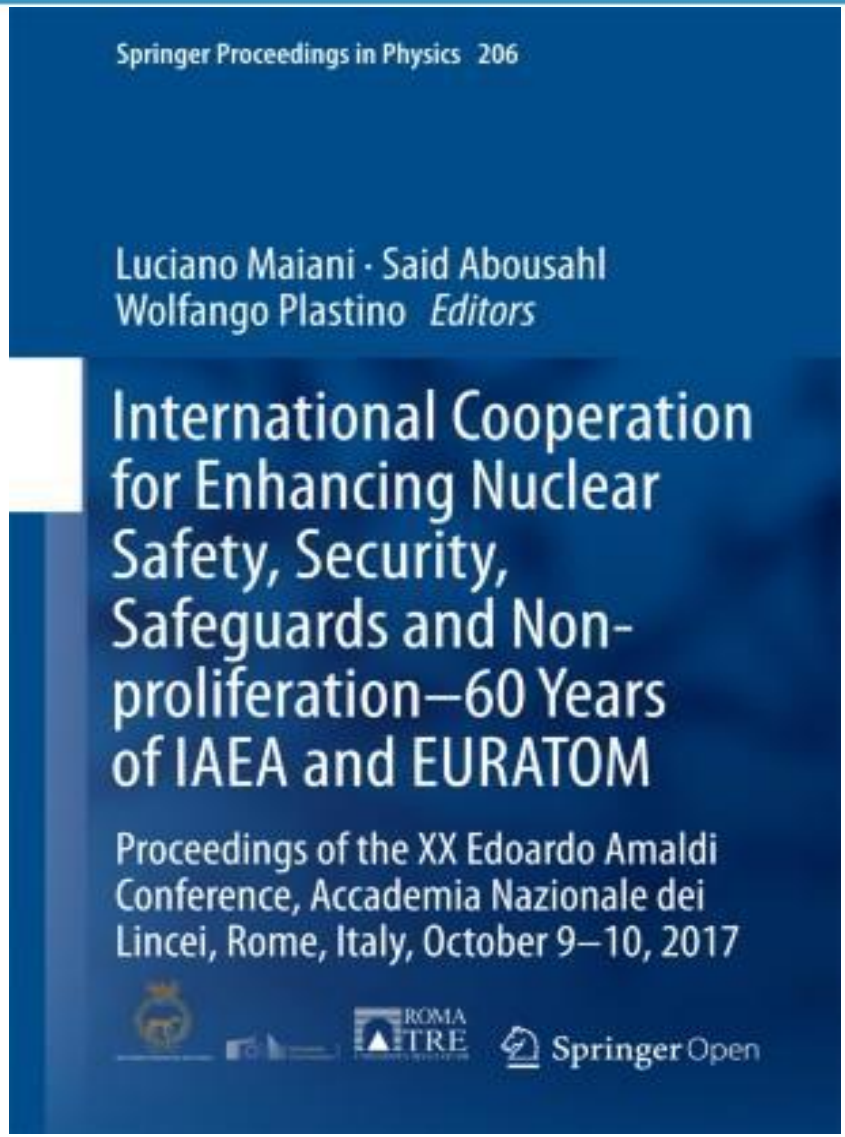

Après deux ans de difficiles négociations

EURATOM
ET MARCHÉ COMMUN
signés à Rome par les Six

Ces traités marquent une étape décisive sur la voie de l'intégration européenne

An extraordinary novelty: the JRCs

- Established in 1957
- 6 sites
- 3000 staff (75% scientists)
- 42 large scale infrastructures
- 120 databases and more than 100 models
- 1000 research partner organisations
- 40-50% of scientific papers are among the top 25% most cited worldwide
- In 10 key scientific fields, JRC is ranked among the 15 best research organisations in the world
- **Research to support safeguards**



CTBTO Science and Technology for a Safer World (https://link.springer.com/chapter/10.1007/978-3-662-57366-2_25 –open access)

Research in the field of SS&H (social sciences & humanities)

- Bringing an understanding of the public to science and of science to the public
- Stimulate “slow brain” agora-context discussion against “fast brain” echo chambers’ resonance

Low acceptance of nuclear energy: survival-based biases and polarised attitudes

Fast brain versus slow brain: fast brain irrational decisions from survival-based cognitive biases

- the negative psychological impact we feel from a danger is twice as strong as the positive impact of a gain of a similar thing, therefore when judging a dangerous issue, rather than careful analysis, we take instinctual decisions (TED: the psychology behind irrational decisions - Sara Garofalo)

Challenge of knowledge: the more knowledgeable people are, the more polarised their attitudes become

- thus telling people more, about e.g. genetically modified food or nuclear energy, is more likely to generate protest rather than support
- the Monty Hall problem shows people critical attitude towards a challenge of knowledge, in this case in the field of probabilities (TED: Should I stay or should I switch doors?)

Cosmic rays, radiation from the space (a “kiss & go” return ticket to the moon gives the dose absorbed in a year on earth)

Danger of disinformation for misuse of science, low-quality info and fake news: public support for science is decreasing

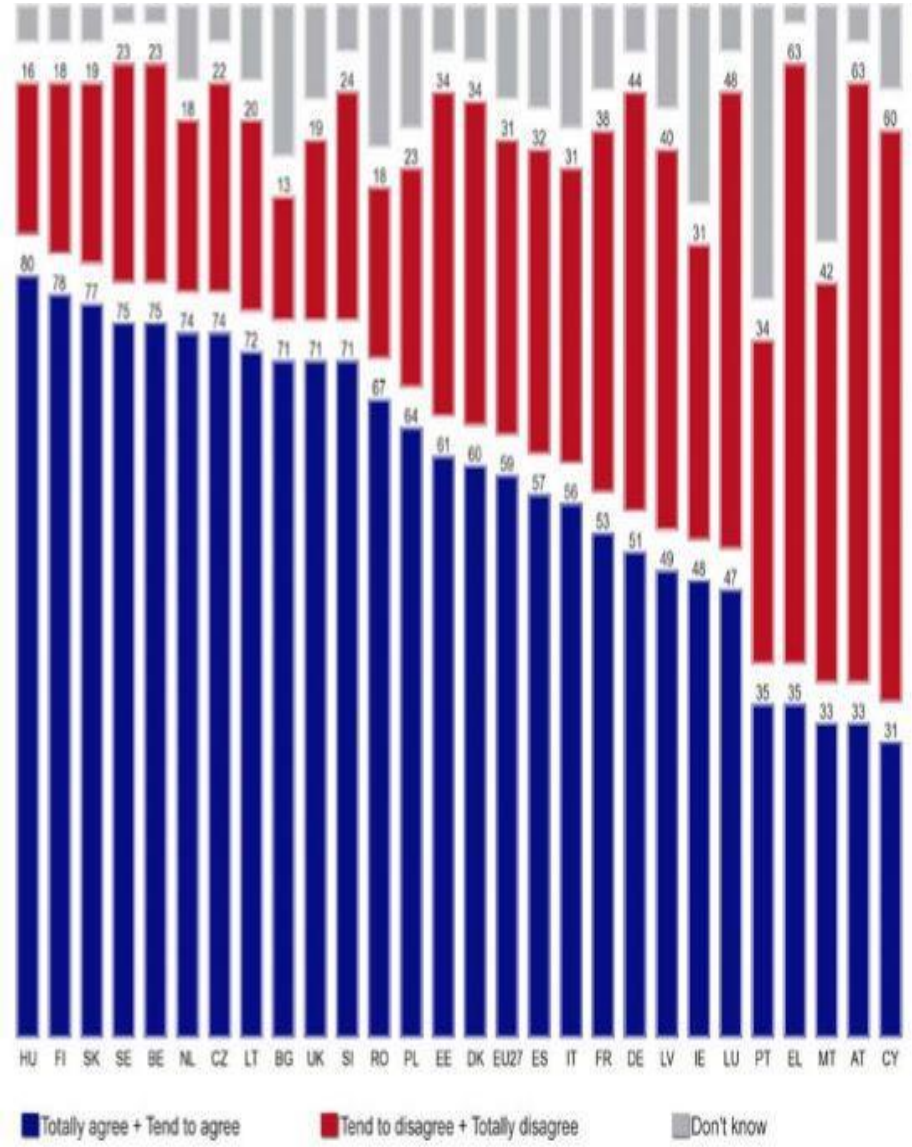
- Disinformation has an increasingly adverse effect on society and democratic processes
- Populism and economic interests could intentionally spread disinformation to mislead the public and shake its trust in relevant EU strategies/ projects
- Pope Francis' encyclical: need of a holistic strategy to "fight the technocratic paradigm which dominates economic and political life"

Misleading information and psychological transference

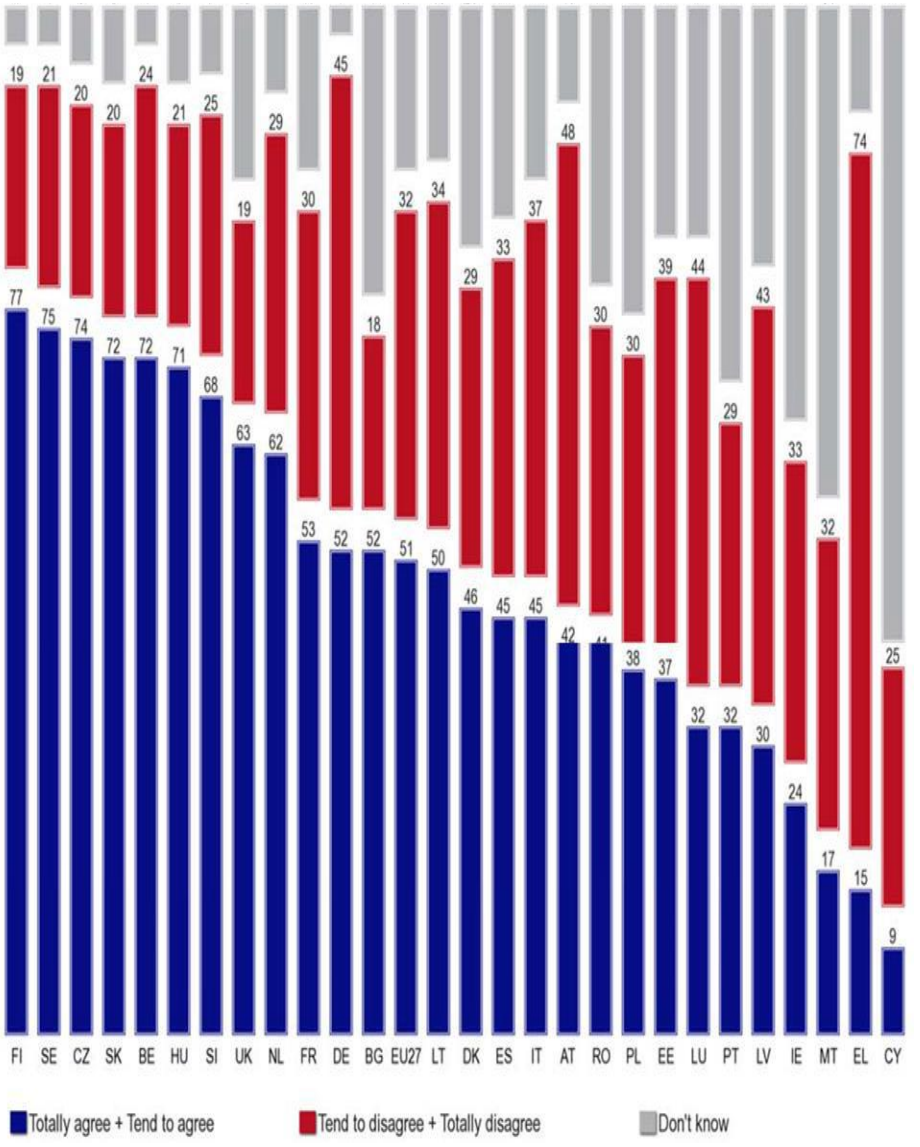
- Today's meaning of the word NUKE:
  a nuclear weapon or a nuclear-powered electric generating plant (Merriam-Webster)
- Accidents at nuclear military installations are associated with accidents at a nuclear power plant:
  Arte-tv documentary on the Arkansas accident entitled "1980, accident nucléaire en Arkansas"

Trust for nuclear energy changes when crossing EU member countries' borders (Eurobarometer 2010)

Is it possible to operate a nuclear plant in a safe manner?



Is your national nuclear authority able to guarantee plant operational safety?



Bridging the gap of the nuclear cognitive conflict: “scientist science” for “citizen science”

Bridging the gap (bringing an understanding of the public to science and of science to the public):

- EURATOM HoNESt project in the field of Social Sciences & Humanities (SS&H)
  - nuclear acceptance is high in countries with:
    - trust towards decision-makers
    - bottom–up public engagement (public participation to the decision process)
    - quality of transparent information: “only increasing the amount of engagement (if the methods employed are ineffective or unjust in the experiences of stakeholder groups), is unlikely to build knowledge, trust or support”
- Current EURATOM DG RTD work program is further focusing on support to “citizen science” (a quest for truth) through “scientist science” (science-based evidence)

Let’s work together to build trust, education and development… without fear!