The King's College 'Future of Nuclear Power in Europe' Study: Policies, Perceptions and the Communication of Risk

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The Future of Nuclear Power in Europe:

- Work packages:
  - 1. Energy Policy in Germany, France, and the U. K. since WWII
  - 2. Security of Supply
  - 3. Economics, Non-proliferation and Safety
  - 4. Nuclear Waste
  - 5. Public Perceptions/Attitude Formation
  - 6. New Options and Technology
  - 7. Red-teaming Exercise (March 1st-3rd)

Outline of Presentation:

- Setting the scene
  - Key policy energy policy drivers.
- Shared messages and issues identified across work-packages:
  - Differences in language.
  - Differences in perceptions of risk.
- The role of TRUST
- Suggestions for communicating risks and re-building trust.

Setting the Scene: What is Driving Energy Policy?

- Internationally shared energy concerns and objectives.
  - Security of supply
  - Economic feasibility
  - Environmental and social impacts.
- Dwindling resources and climate change.
- Nuclear stigma and public perceptions.

Expert and Public Discourse: Comparing Apples and Oranges

- Expert and public differences in the understanding and definition of ‘security’ (Laughton, 2003).
- Variation in views of environmental disputes.
- Experts see the public lack consistency in their energy choices (Smith, 2002).
- Lay-people and experts are:
  - 1) Speaking different languages.
  - 2) Solving different problems.
  - 3) Disagree about what is feasible.
  - 4) See the facts differently. (Tanaka, 1998)

Differences in Perceptions of Risk:

- Attitudes towards energy production systems are largely driven by the perceptions of risks associated with those systems.
- The influence of perceived risks outweighs the influence of perceived benefits.
- The different values assigned to risk and acceptability of technologies by experts and the public lead to miscommunication, confusion and controversy.

Differences in Perceptions of Risk (2):

- **Expert Perceptions of Risk:**
  - Cause and effect
  - Quantify amount of harm:
    - Number of deaths or injuries (see next slide).
    - Exposure
  - Type of risk:
    - Suspicion of hazard
    - Possibility of an accident
    - Exposure to a pollutant
    - Evidence of damage
    - Occurrence of an accident

- **Public Perceptions of Risk:**
  - Qualitative characteristics include:
    - Familiarity of the risk
    - Controllability
    - Number of people impacted by the risk.
  - Public perceptions of nuclear power risks are maintained via:
    - Memorability
    - Imaginability

Risks Creating Equal Influence in the Probability of Death (Wilson, 1979).

1. Smoking 1.4 cigarettes.
2. Travelling six minutes in a canoe.
3. Travelling 300 miles in an auto.
4. Living 50 years within five miles of a commercial reactor.

The Role of Trust:

- Trust is imperative for effective risk communication to take place.
  - Trust has been shown to reduce social uncertainty and complexity, and influence risk perceptions and the acceptance of risks.
  - Distrust has been associated with technological stigma, and the social amplification of risk that often follows major public policy failings.
- Five components of trust (Renn and Levine, 1991):
  - 1) Perceived competence
  - 2) Objectivity
  - 3) Fairness
  - 4) Consistency
  - 5) Faith
- Trust is context-specific because it is based on similarity and agreement.

The Role of Trust (2):

- Focus on:
  - The importance of the issue at stake.
  - High moral importance vs. low moral importance.
  - Concentrate on local relationships and interactions.

- Successful stakeholder engagement:
  - Should only be interpreted within the context of pre-existing social relations.
  - Create an awareness of shared values and agreement.
    - Common goals, overlaps of interest.

- Trust is easy to destroy and extremely difficult to rebuild, with the most common of trust-damaging incidents being caused by companies or governments

What Does This Mean for Nuclear Power?:

- The public do not believe they are in control of the decisions about acceptable risks.
- Public opinion polls as road maps.
- Establishing relevance.
- Identify shared values and agreement.
- Set an example.

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THANK YOU!!!

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