JÜLICH
FORSCHUNGSZENTRUM

EMF Risk Communication Five Cardinal Rules

Peter Wiedemann

13. Februar 2009

Overview

Introductionary remarks

5 cardinal rules

Summary

Societal Worries

There is a public debate about possible adverse health effects from exposure to RF EMF from cellular phones and base stations. This issue keeps busy many political decision makers across Europe.

JÜLICH
FORSCHUNGSZENTRUM

Focus

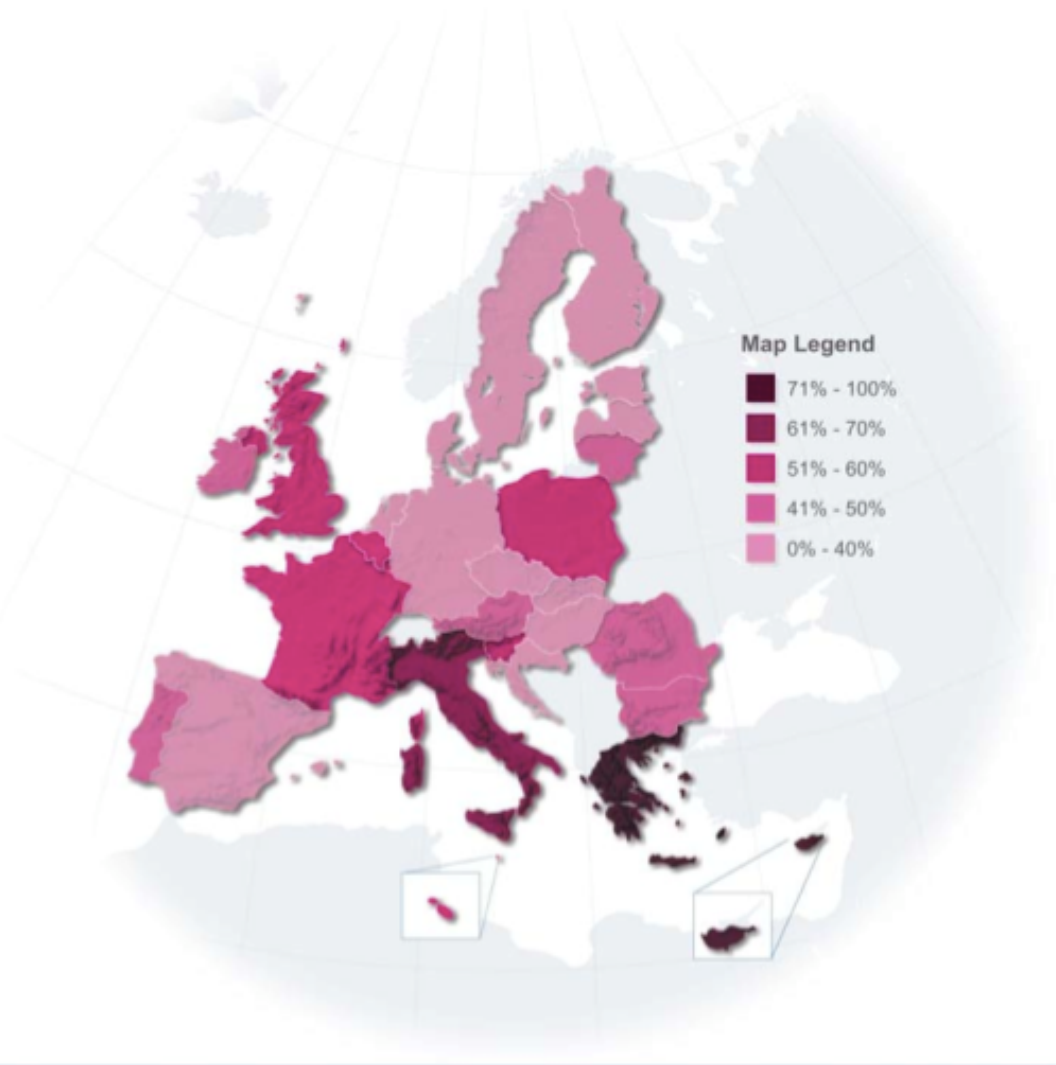
- Base stations
- Cell Phones
- Powerlines

Question: QB2. Are you concerned over the potential health risks of electromagnetic fields?

Answers: Very concerned + fairly concerned

EL	86%
CY	82%
IT	69%
LU	60%
SI	59%
PL	58%
MT	57%
BE	52%
FR	52%
UK	51%
PT	49%
EU25	48%
IE	47%
AT	41%
LT	41%
LV	39%
ES	38%
SK	38%
DE	35%
NL	31%
CZ	31%
EE	31%
HU	31%
DK	30%
FI	28%
SE	27%
BG	46%
RO	45%
HR	38%

CY (tcc): 49%



JÜLICH
FORSCHUNGSZENTRUM

The Other Side ...

Positive expectations about the impact of cell phones on daily life in the next 20 years:

66% of the Europeans

Special Eurobarometer 225, 2005

Do we have disturbed perceptions about risk perceptions?

Challenges

- Which objectives should risk communication have?
- Which issues should risk communication focus on?
- What core messages should be delivered?

Five Cardinal Rules

- Focus the right problem
- Helping people to get the entire picture
- Take into account that people require straightforward messages
- Acknowledge the limits of research
- Be aware of side effects of your communication

Issue 1: Focus the right problem

What to assess:

- The EMF risk issue is not only a cell phone or even cell tower problem

How to assess:

- The issue is the weight of evidence with respect to adverse health effects
- Science first

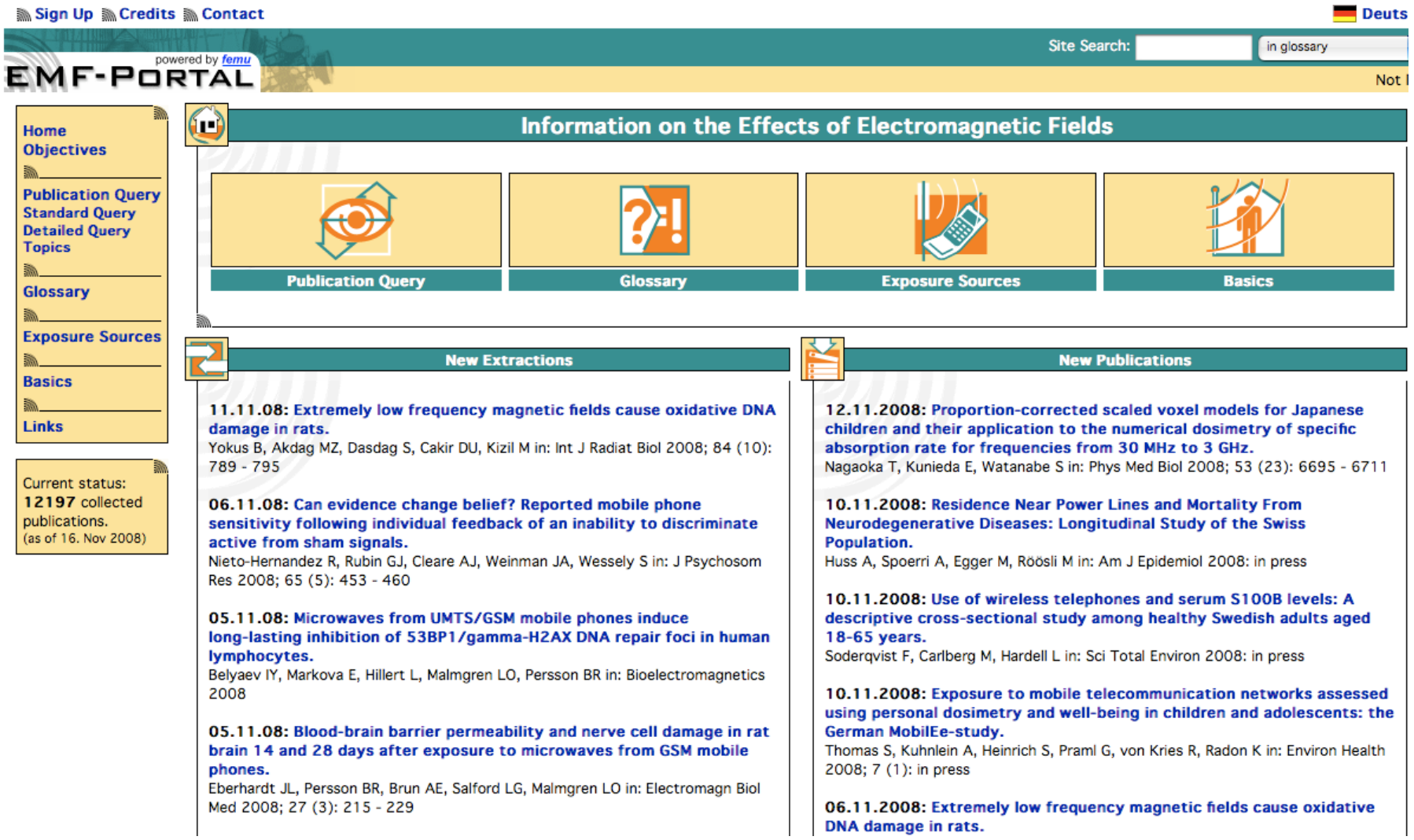
Issue 1: Focus the right problem

Key question: Is there a hazard?

IARC: “The distinction between hazard and risk is important, and the *Monographs* identify cancer hazards even when risks are very low at current exposure levels, because new uses or unforeseen exposures could engender risks that are significantly higher. ”

- *Preamble, Part A, Section 2*

Issue 2: Can't see the wood for the trees



Issue 2: Can't see the wood for the trees

Ten years after the start of mobile phone use the estimated relative risk increased to 1.9 (0.9-4.1)

Lonn S, Ahlbom A, Hall P, Feychting M: Mobile Phone Use and the Risk of Acoustic Neuroma in: Epidemiology 2004; 15 (6): 653 – 659

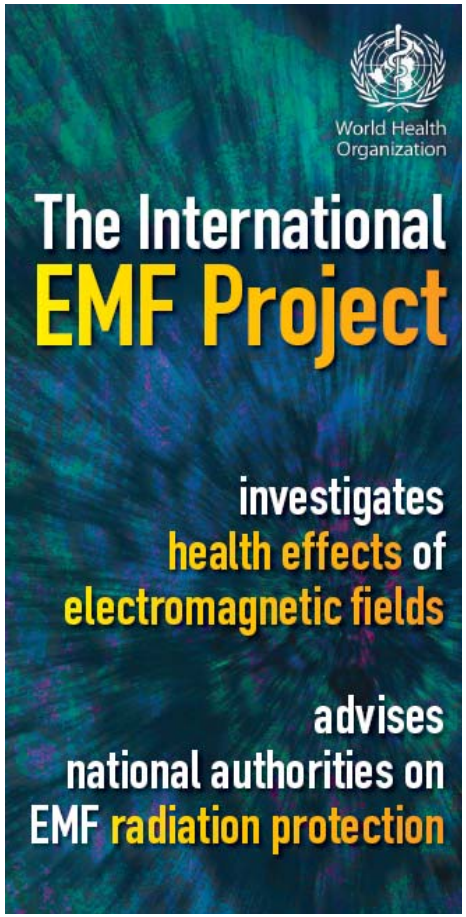
➔Incomplete proposition

- Other epidemiological studies
- Other research fields
- Incidence of Accustic Neuroma: 1- 2 :100 000
- Critical exposure relations

Issue 2: Can't see the wood for the trees

1995 World Health Organisation The International EMF Project (Ongoing)2000 JanuaryZmirou Report French Health General Directorate2000 MayStewart Report UK Independent Expert Group2001 MayBritish Medical Association Mobile Phones and Health, an interim report 2002 January MTHRUK Mobile Telecommunications and Health Research Programme2002 JanuaryDutch ReportHealth Council of the Netherlands, advisory report 2003 December Swedish ReportSwedish Radiation Protection Authority (SSI) First annual report from SSI's Independent Expert Group on Electromagnetic Fields2003 DecemberAGNIR Report NRPB's Independent Advisory Group on Non-Ionising Radiation Report 'Health Effects from Radiofrequency Electromagnetic Fields'2004 JanuaryDutch ReportHealth Council of the Netherlands Electromagnetic Fields Annual Update 20032004 May Swiss ReportSwiss Research Foundation on Mobile Communications Annual Report 20032004 June British Medical AssociationMobile phones & health - an update2004 September View of the Nordic CountriesA common view on Mobile Telephony and Health developed by the competent authorities in Denmark, Finland, Iceland, Norway and Sweden2004 DecemberReview by ICNIRP Standing Committee on Epidemiology A comprehensive review of the epidemiology of health effects of radiofrequency exposure2004 DecemberSwedish ReportSwedish Radiation Protection Authority (SSI) Second annual report from SSI's Independent Expert Group on Electromagnetic Fields2005 JanuaryNRPB Report W65A Summary of Recent reports on Mobile Phones and Health (2000-2004)2005 JanuaryNRPB ReportDocuments of the NRPB - Mobile Phones and Health Volume 15 No.5 20042005 January US Food & Drugs Administration (FDA) .2005 JanuaryBritish Medical AssociationMobile Phones and Health - An update2005 May French Agency for Environmental Health SafetyOpinion on Mobile Telephony2005 November Dutch ReportHealth Council of the Netherlands Electromagnetic Fields Annual Update 2005 2005 December WHO leaflet Electromagnetic Fields and Public Health - Electromagnetic Hypersensitivity2005 DecemberSwedish Report Swedish Radiation Protection Authority (SSI) Third annual report from SSI's Independent Expert Group on Electromagnetic Fields,... , EMF Net 2003-2008

Issue 3: Communicate straightforward



No major public health risks have emerged from several decades of EMF research, but uncertainties remain.

Issue 3: Communicate straightforward

The report concludes the existing standards for public safety are inadequate to protect public health.

Issue 3: Communicate straightforward

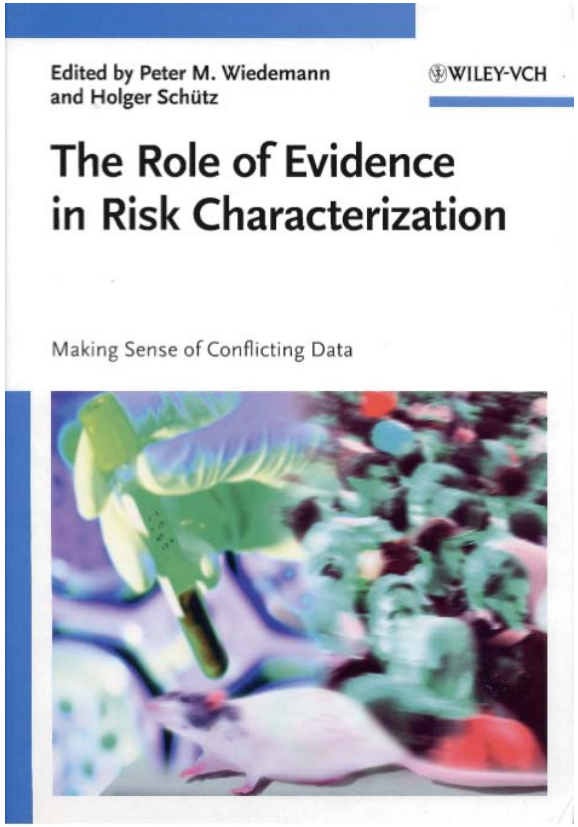
Who is right?

Need for arguments

Issue 3: Communicate straightforward

Level of evidence

- Pro- and con arguments
- Uncertainties
- Conclusions



Issue 4: The limits of science

...further studies are required to identify whether considerably longer-term (well beyond ten years) human exposure to such phones might pose some cancer risk.

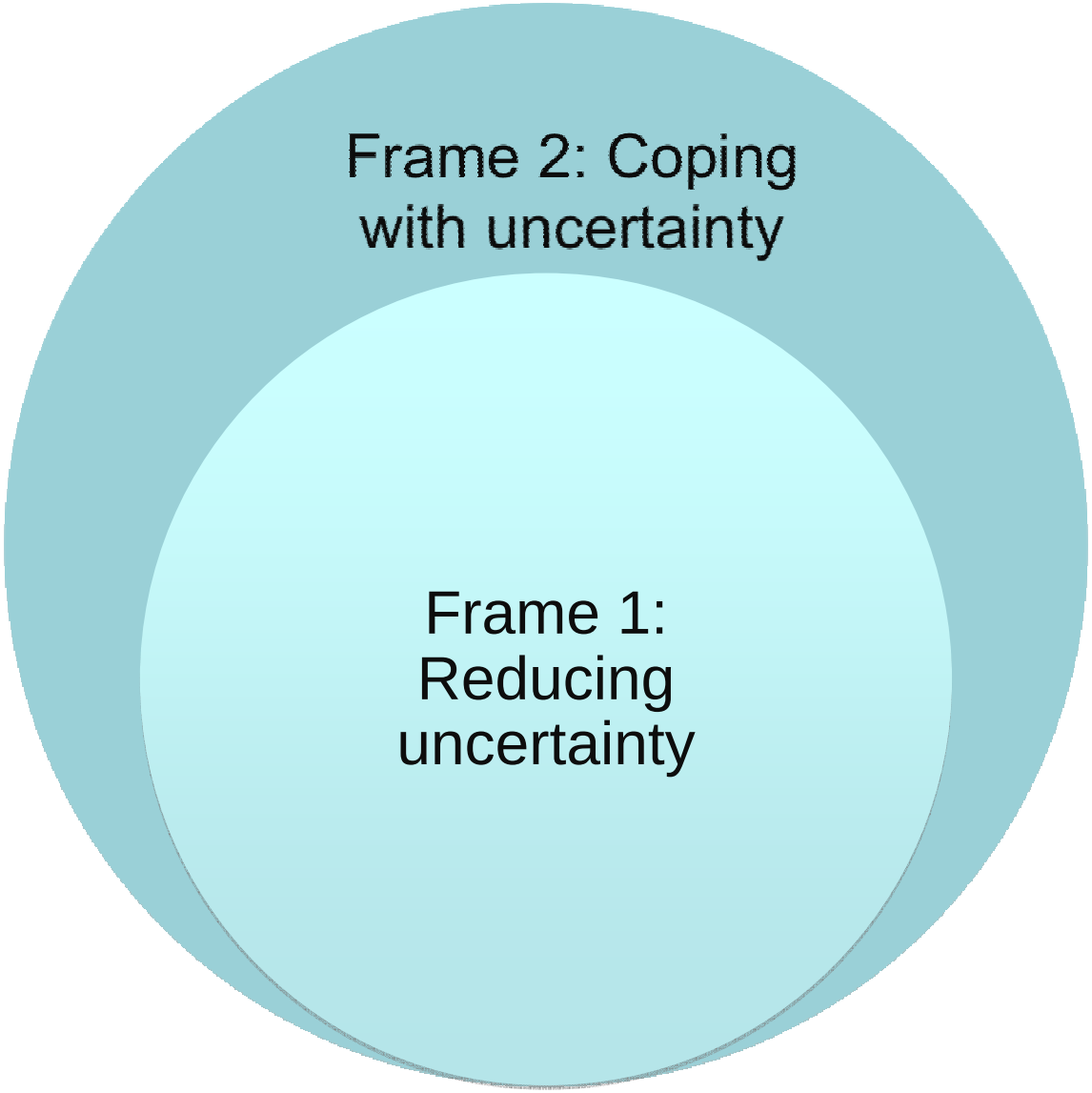
Health Effects of exposure to EMF, SCENIR, 2009

Issue 4: The limits of science

Further studies?

- How feasible is the study?
- What can the study add to the available evidence?
- Does the study contribute to reduce scientific uncertainties and improve risk assessment?

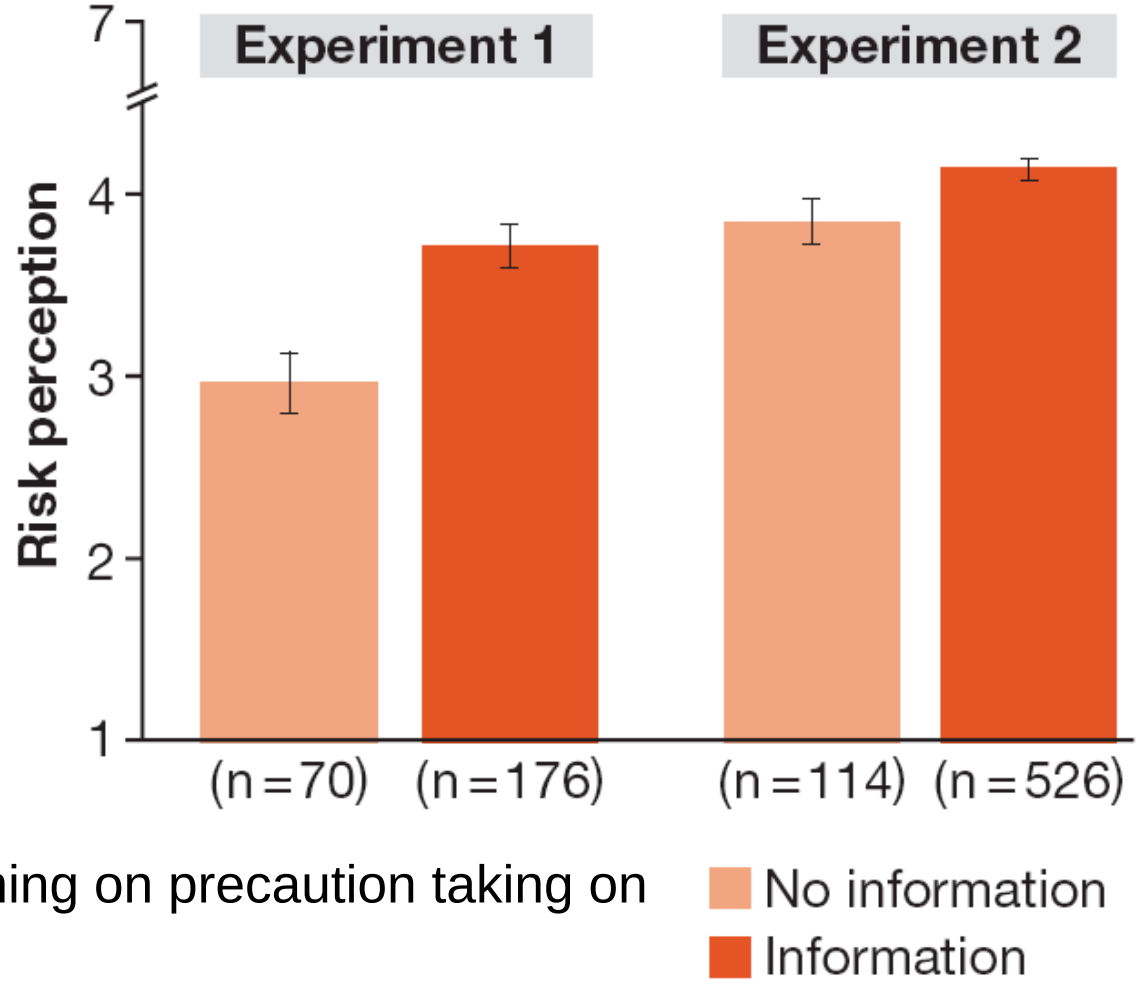
Issue 4: The limits of science



Issue 5: Be aware of side effects of your communication

- Implement precautionary messages?

Issue 5: Be aware of side effects of your communication



Impact of informing on precaution taking on risk perception

Issue 5: Be aware of side effects of your communication

JÜLICH FORSCHUNGSZENTRUM

“ Risk communication is not just a matter of good intentions ... Risk messages must be understood by the recipients, and their impacts and effectiveness must be understood by communicators. To that end, it is not longer appropriate to rely on hunches and intuitions regarding the details of message formulation. ”

Morgan & Lave, 1990, 358

Summary

Risk communication should help to improve EMF risk policy

- Improving transparency of health risk assessment
- Supporting informed decision making
- Avoiding unnecessary public anxieties
- Building trust in EMF regulation
- Helping to develop socially robust risk management strategies

Thank you very much for your attention!

EMF RC research: What is missing?

Research gaps:

- Benefits of measurement campaigns
- Formats for characterizing unclear hazards, risks and exposure levels
- Appropriate information tools and channels
- Evaluation of dialogue and participatory decision making

- Ways to enhance trust and credibility
- Dynamics of risk perceptions

Challenges & needs

- Further development and improvement of EMF data base
- Development of an interactive curriculum for informing about basic principles of EMF risk assessment
- Extension of the WHO risk dialogue book by a list of the 7 cardinal errors and myths in EMF risk communication
- Development of an approach for characterizing and ranking the fairness, social responsibility and competency of scientific advisory groups engaged in EMF risk assessment
- Engagement in stricter evaluation of risk communication