

EMF Risk Communication Opportunities and Pitfalls

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Programmgruppe

Overview

- Popular Beliefs about EMF Risk Perception and Communication
- Insights from Empirical Research
- Advice for EMF Risk Communication

Popular Beliefs

- The public is lacking scientific knowledge.
 - ➔ **Information and education**
- The public is without any influence on decision making.
 - ➔ **Involvement in decision making**
- The public is hysteric about EMF's.
 - ➔ **Reassurance and guidance**
- Science and Politics is lacking trust.
 - ➔ **Bridge the trust gap.**

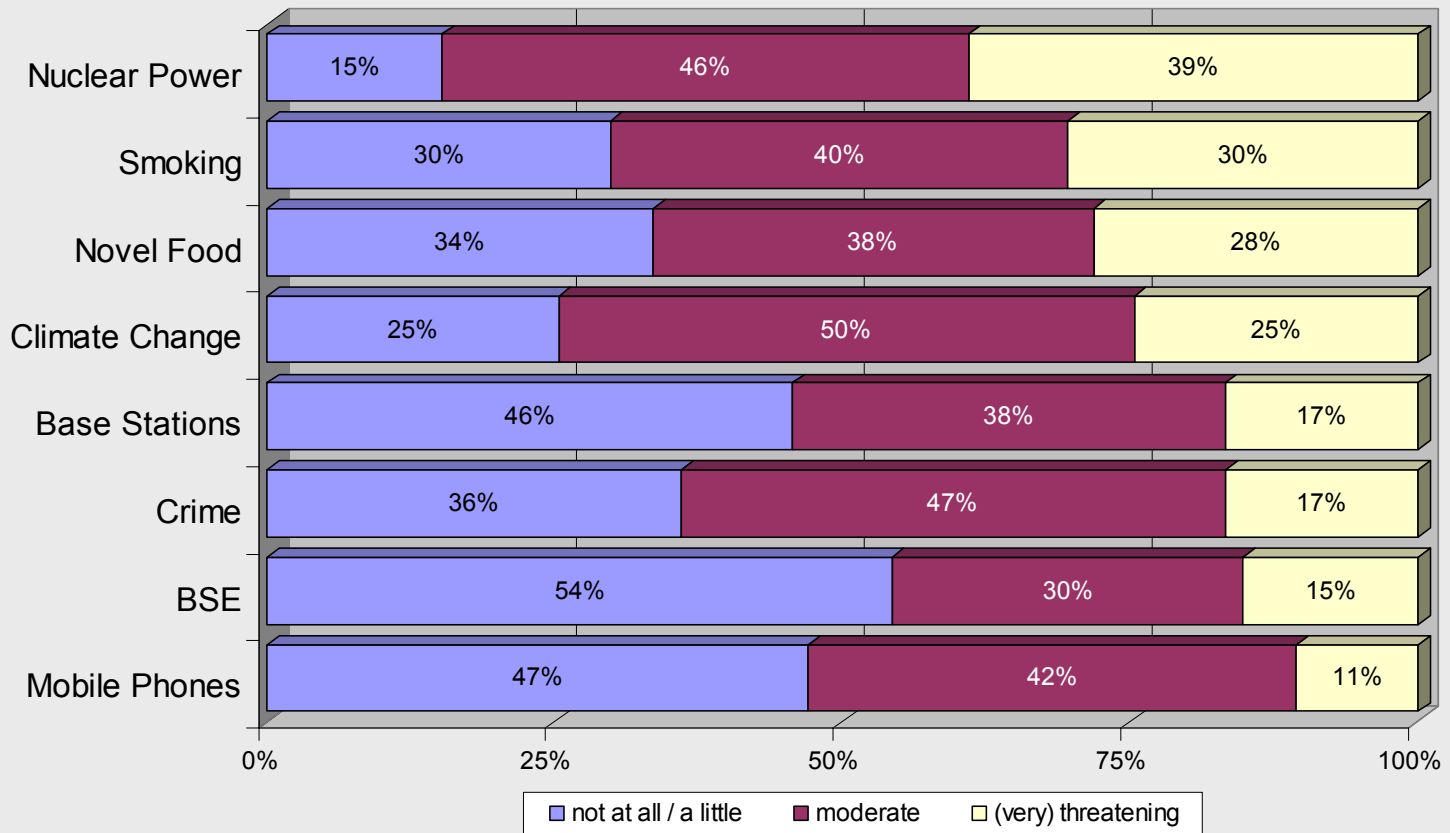
Insights from Empirical Research

- RP-Surveys – comparative risk perceptions
- Effect of
 - A priori beliefs on risk perception
 - Pro- and con-arguments
 - Trust and emotions on risk perception
 - Uncertainty
 - Precautionary measures

Surveys

- How does the general public appraise EMF risks in comparison with other risks?

RP Surveys in Germany



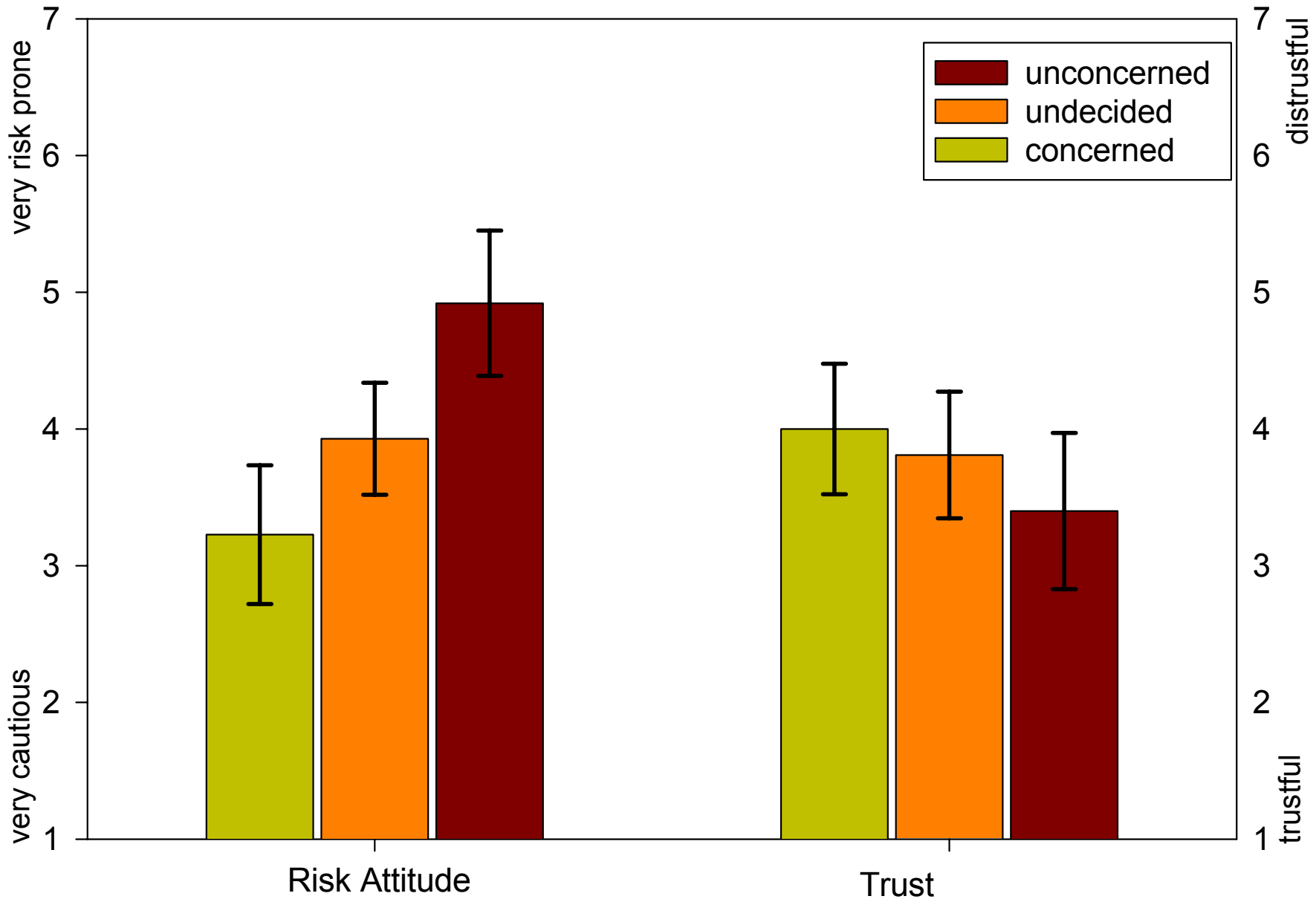
Insight

- EMF Risks do not belong to the “Top Three Risks” in Austria, Germany, Luxembourg and Poland.
- This might be similar (or not) in other EU Countries.
- An EU Barometer study on EMF should be conducted.

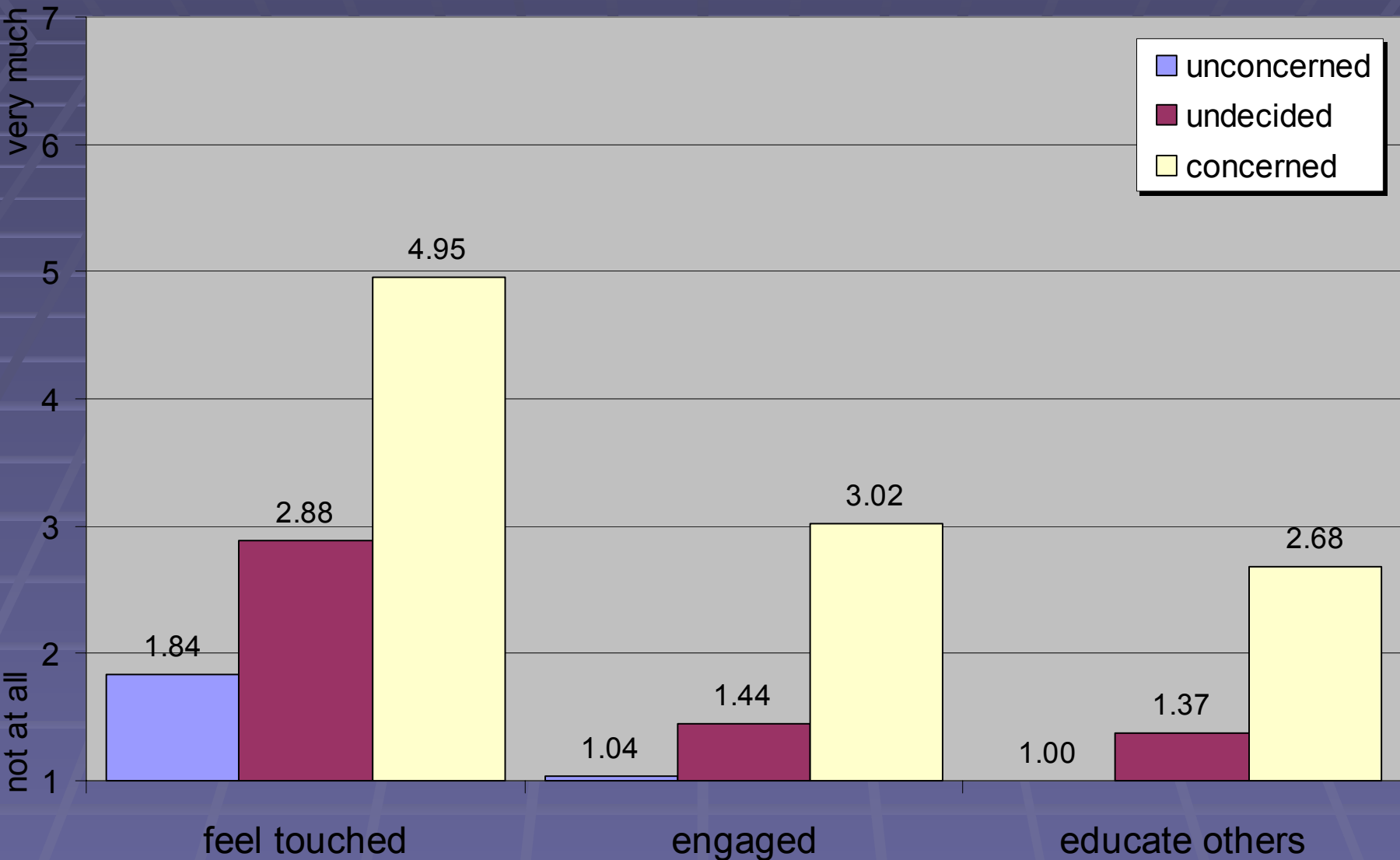
A priori Beliefs

- How strong and rigid are the “A priori Beliefs” on EMF risks?

Self assessment of personal traits



Involvement



Insight

- The concerned people are much more involved in the risk debate on EMF than their counterparts.

Argumentations

- How convincing are the various arguments in the debate on mobile phone technologies?

Persuasiveness of arguments

o long term studies.

ometimes outsider have made proper assessments.

he permanent EMF exposure might cause health risks.

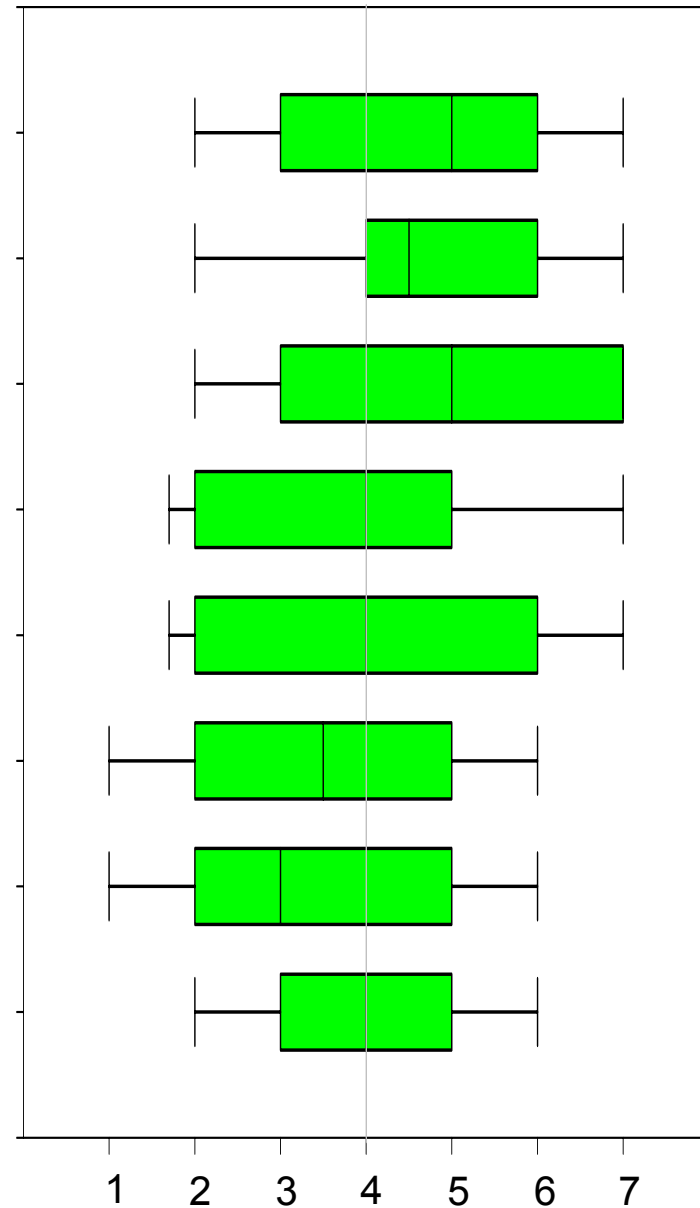
arrel Analogy

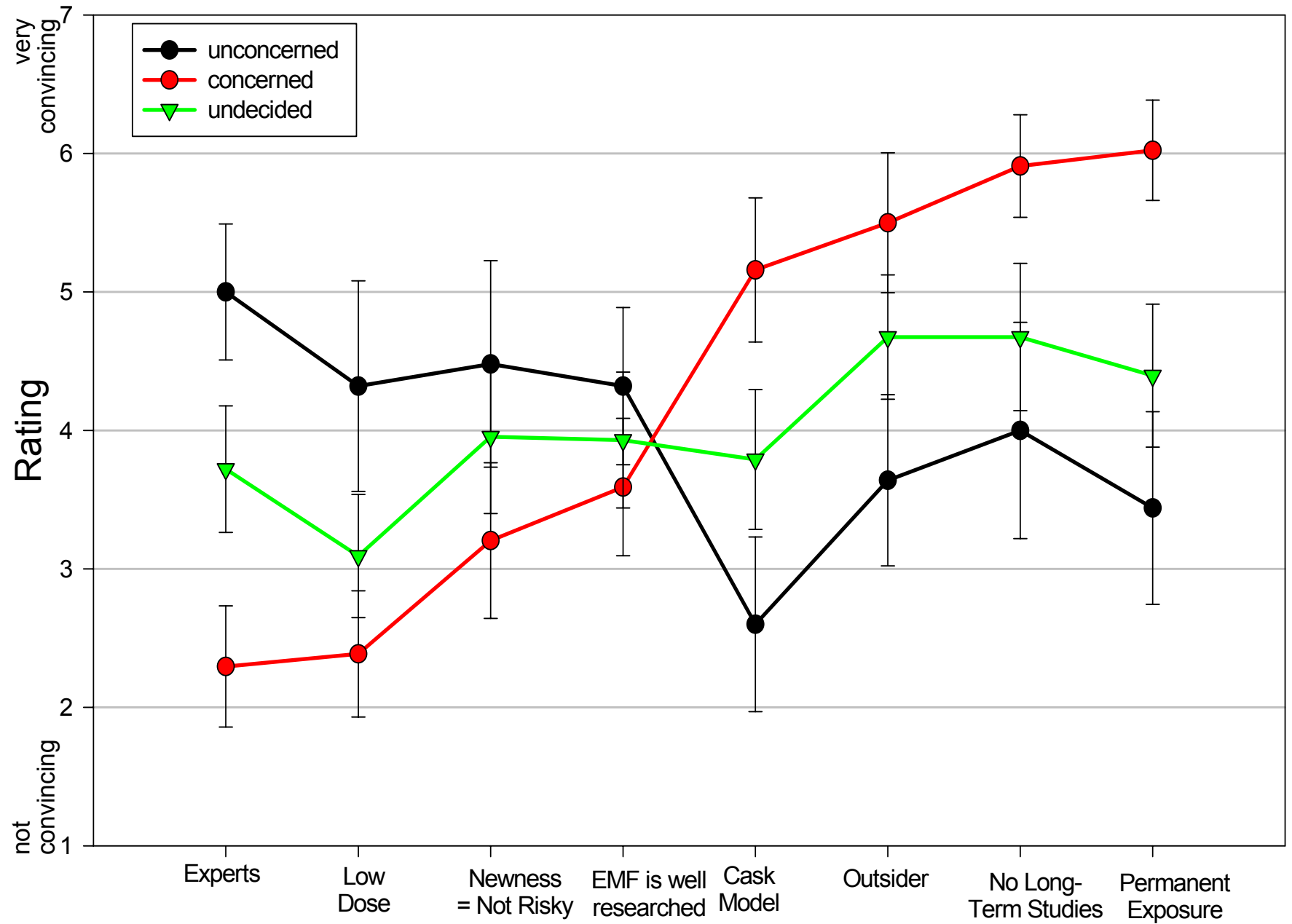
omething new is not automatically a reason for concern.

only internationally recognised experts are able to assess EMF risks.

xpositions from base stations are very low.

MF is well researched.





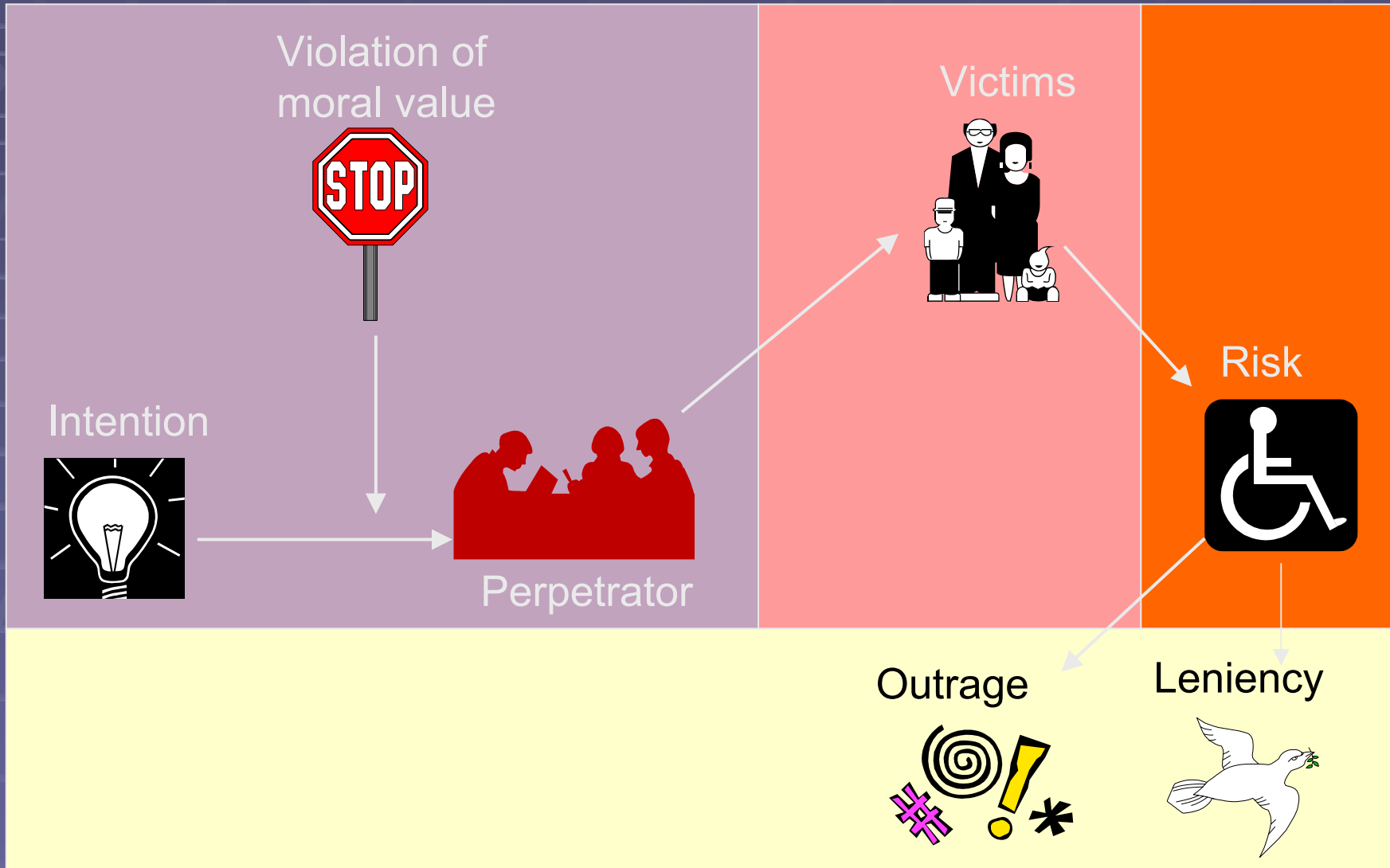
Insight

- In general, risk confirming arguments count more than disconfirming arguments.
- People favor those arguments that are in line with the views they already hold on the issue.
- Both arguments (1) “permanent exposure” and (2) “no long term studies” play a decisive role in risk perception.

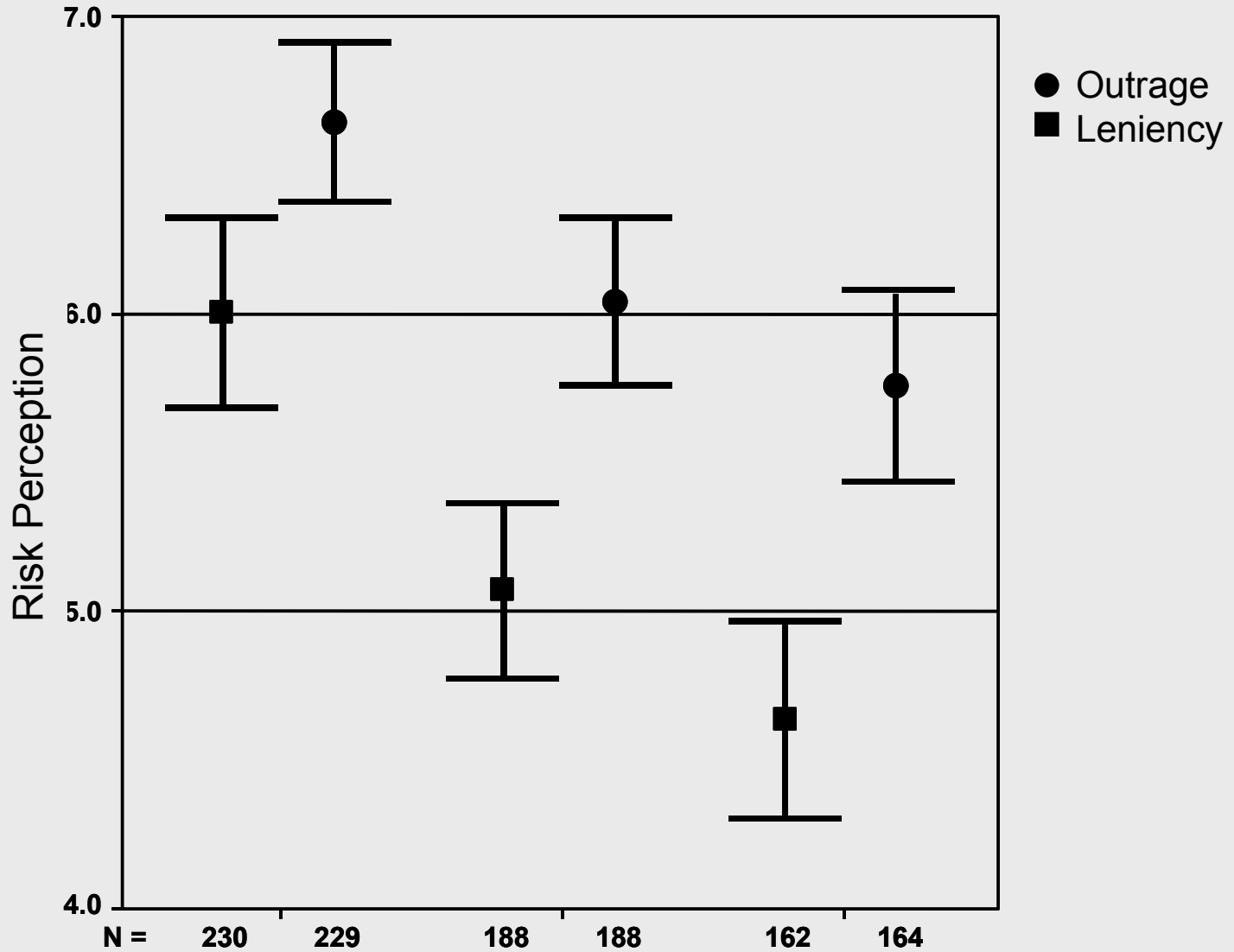
Emotions & Trust

- How does the perceived social context influence EMF-risk perceptions?

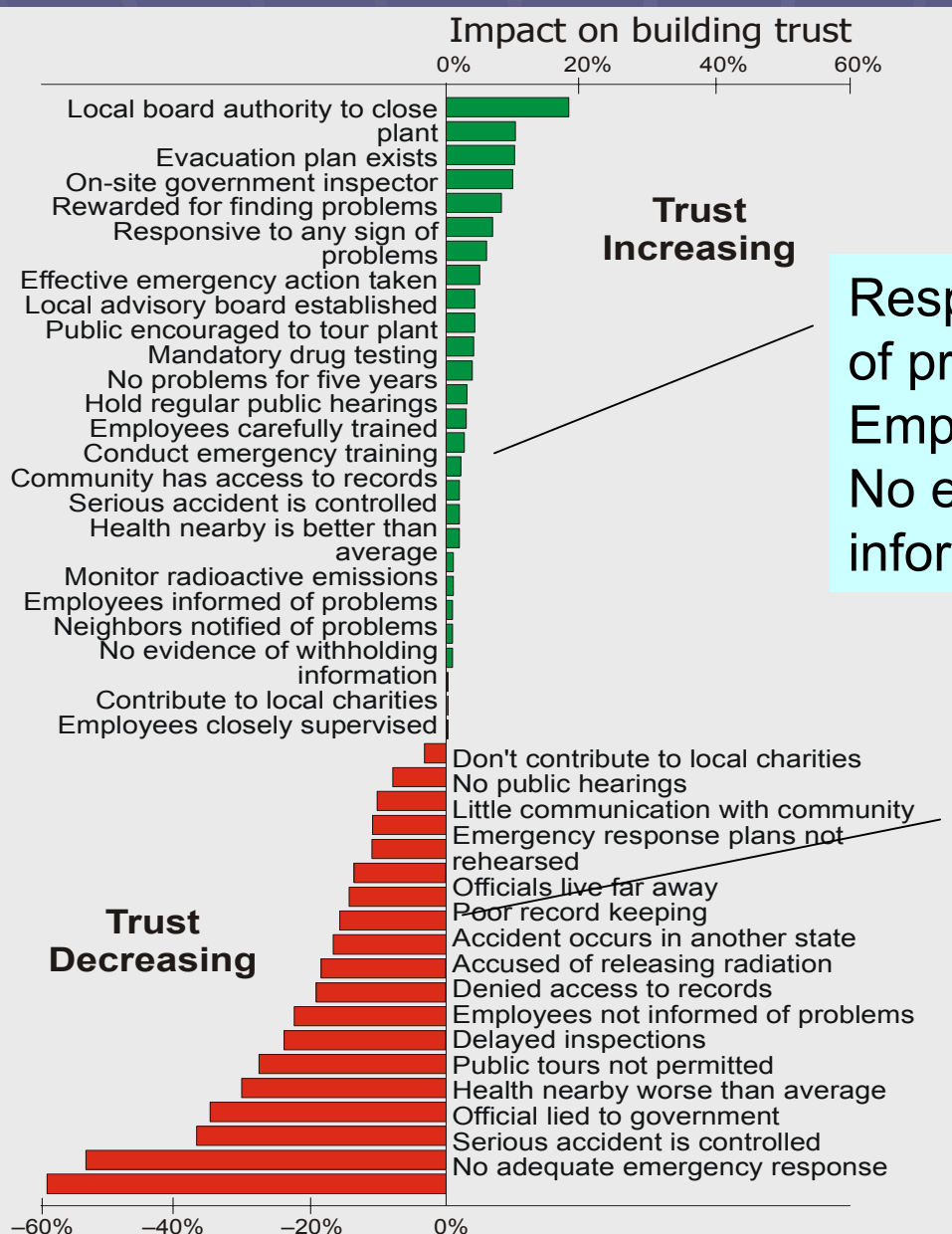
Social Context of a Risk



Emotions and Risk Perception



Trust



Responsive to any sign of problems
 Employees informed
 No evidence of withholding information

No public hearings
 Employees not informed
 Official lied to government

Source: Slovic, P. (1993). Perceived risk, trust, and democracy. Risk Analysis, 13, 675-685.

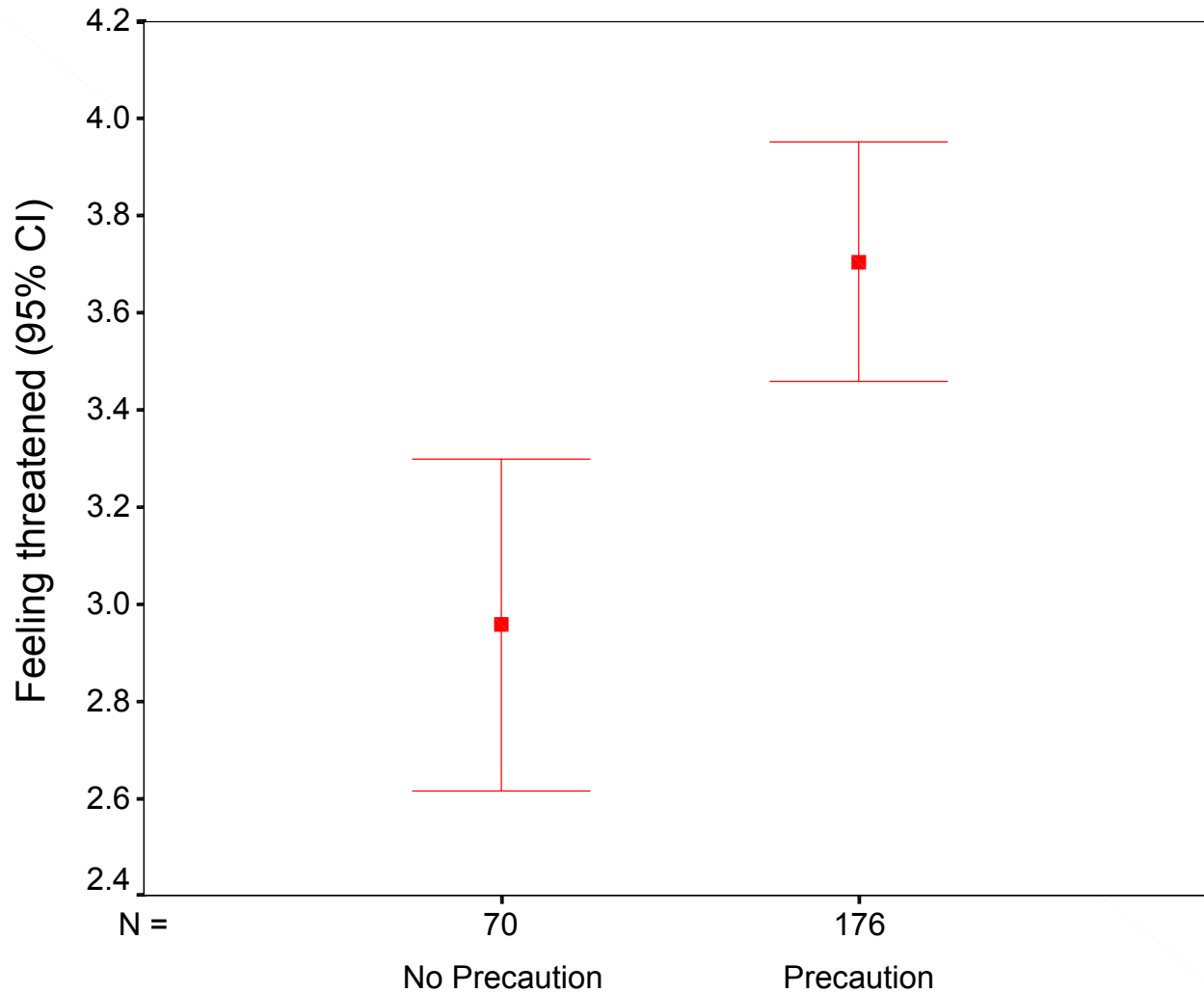
Insight

- The social context – the risk story - is of crucial importance in perceiving risks.
- In the outrage condition, the risk ratings are significant higher than in the leniency condition.
- The features of the risk story that amplify risk perception are related to trust.

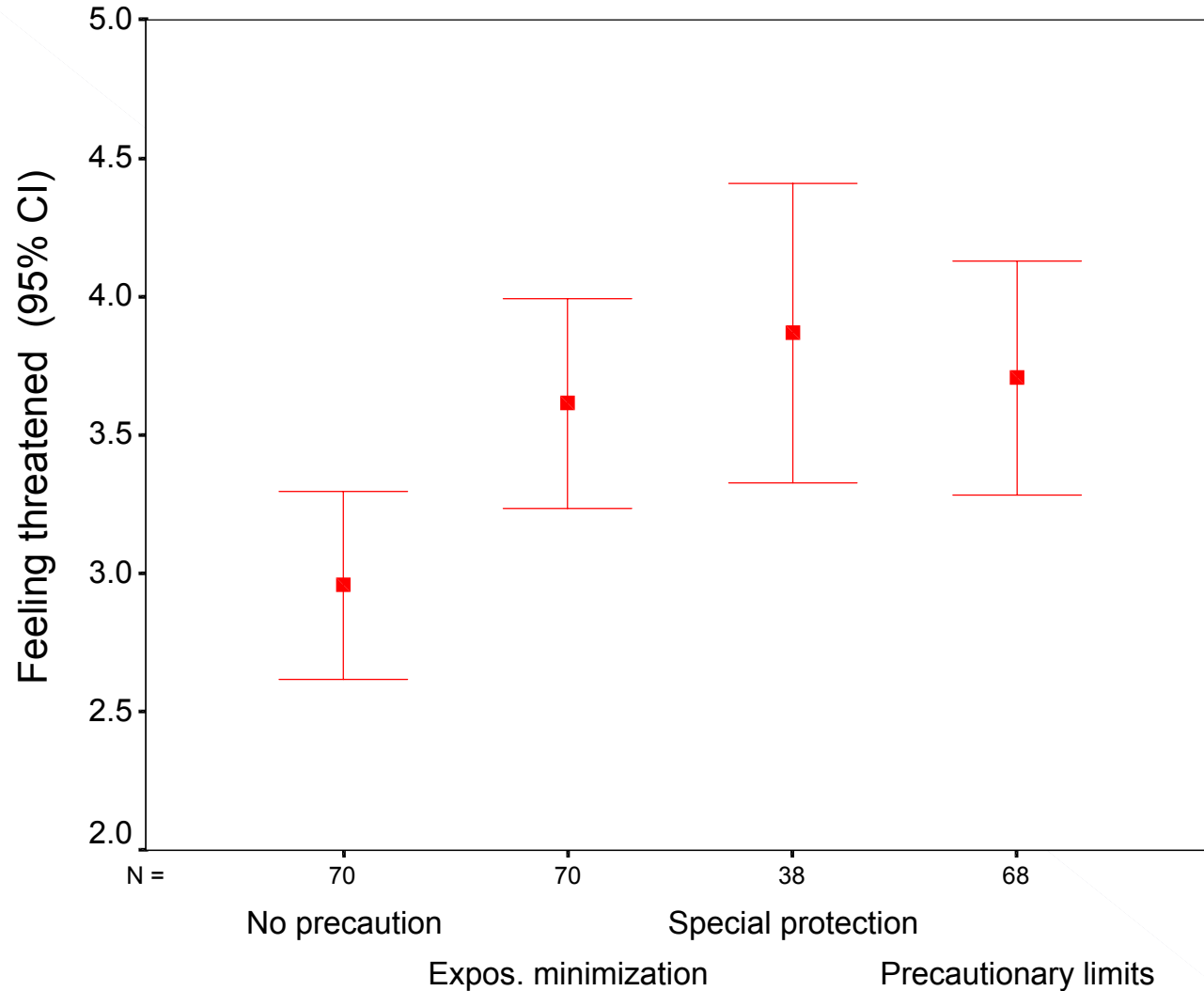
Uncertainty and PP Measures

- What are the effects of uncertainty statements and PP measures on risk perceptions?

Impact of precautionary measures on perceived risk



Impact of precautionary measures on perceived risk



Insights

- Uncertainty has no significant influence of risk perception
- PP measures do amplify risk perception. Especially, the “special protection condition” causes concerns.
- Therefore, precautionary measures need careful communications to avoid such misunderstanding.

Conclusions

Risk Communication

- RC might have different effects on different people.
- Time is crucial. It is difficult to change an existing belief.
- RC should address the social issues of EMF.
- RC should be science based – this is not self evident .
- RC should be grounded in good risk characterization.
- RC should be a open and respectful dialogue.

EMF Risk Communication

- Harmonize units of measurement

Power Density

- Milliwatt
- Microwatt
- Nanowatt

- m^2
- cm^2



EMF Risk Communication

- Put uncertainty in perspective



The weight of evidence now available does not suggest that there are adverse health effects from exposure to RF fields below guide line levels....

The possibility remains that there could be health effects...

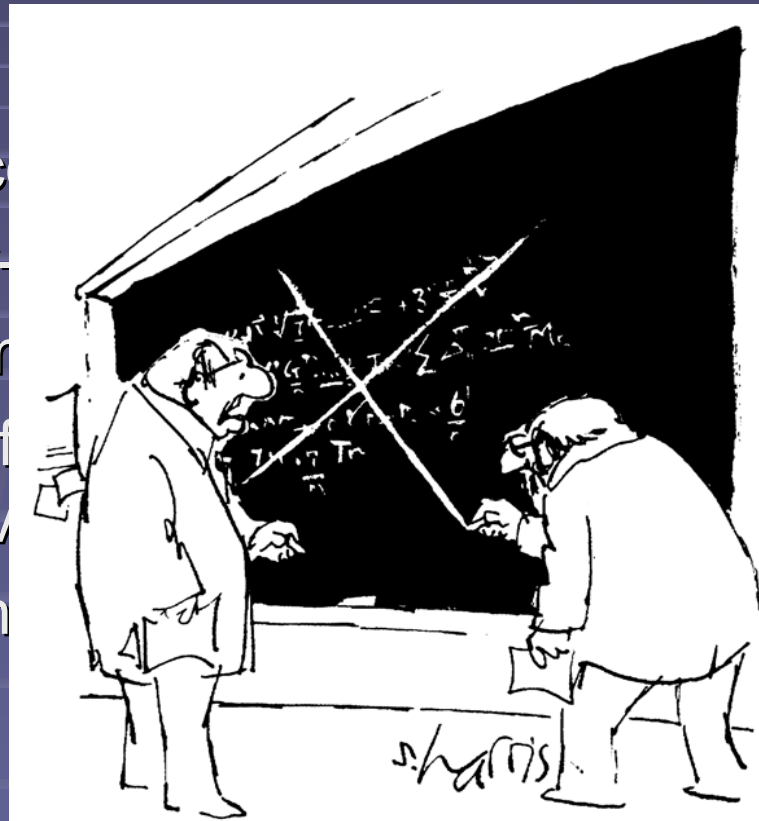
NRPB 2003, p.148

EMF Risk Communication

■ Dealing with conflicting findings and opinions

Findings

- What evidence
- What counter-
- What does it r
- What parts of remain unsolv
- What has to h



“That’s *it*? That’s peer review?”

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ntability

EMF Risk Communication



Keep the channels open. But,
keep science and politics apart.

Thank you very
much for your
attention!

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