

Transparency: The way to enhance effective risk communication

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Food Safety and Consumer
Behaviour



Consumer perceptions of risk, benefit, uncertainty and cost

Contextualizing consumer attitudes towards food safety issues



Emerging societal issues in the Agri-food sector

- Consumer Health
- Food Safety
- Food Quality
- Sustainability



The key questions that need to be asked

- What is driving consumer perceptions of *risk* and *benefit*?
- Who *trusts* whom to inform and regulate?
- How does this relate to *consumer confidence* in the food chain and associated science base?
- Are there *cross-cultural, inter- and intra-* individual differences in perceptions and information needs?
- How do other consumer attitudes (*ethics, wider value systems*) relate to perceptions of risk and benefit?
- How do the public react to information about *risk/benefit uncertainty*?
- How do we understand *risk/benefit variability* across different population groups

What does this mean for consumer decision-making about health, wellbeing, and choice?



Consumer risk perception

- The **psychology of risk perception** drives public risk attitudes
 - An **involuntary risk** over which people have no control is more threatening than one people choose to take
 - Dioxin contamination of the food chain
 - Potentially **catastrophic risks** concern people most
 - Major food poisoning outbreak
 - **Unnatural (technological) risks** are more threatening than natural ones
 - Gene technology, nanotechnology, convergent technologies versus
Organic production, ecological foods



Consumer risk perception

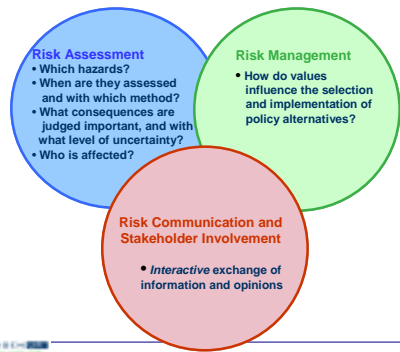
- **Ethical representations, values and concerns** are emerging as an important determinant of societal and consumer decision making
 - animal welfare
 - environmental impact,
 - sustainability
- Perceptions that the **“truth” is being hidden** increases both risk perception and distrust in regulators and communicators
 - increased transparency in risk management



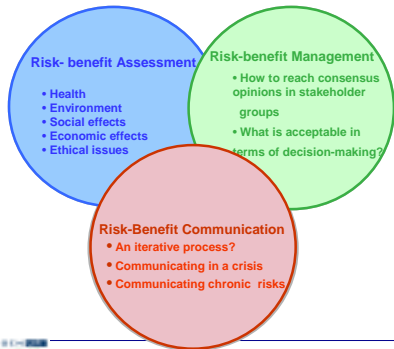
Risk Analysis Framework; improving trust through increased transparency?



Increased transparency raises more communication needs?



A Risk-benefit Analysis Framework; improving trust through increased transparency?



Trust in regulatory institutions and risk-benefit governance

- People may not always have a view regarding different Agri-food technology applications or food safety issues
- Trust in regulatory institutions is important, particularly in the area of potentially controversial applications or food safety issues
- People may react emotionally in response to specific issues (particularly if they do not want to think about relevant issues in depth)

Building societal trust in food risk management:

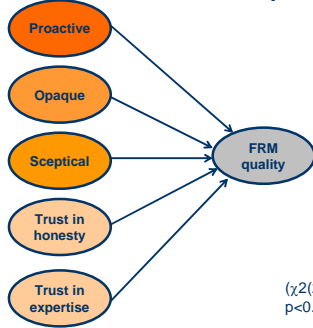
What needs to be communicated?

What determines good food risk management?

The constructs (derived from lay-expert focus groups)

- Proactive consumer protection
- Opaque and reactive risk management
- Scepticism regarding risk assessment and risk communication practices
- Trust in expertise of food risk managers
- Trust in honesty of food risk managers

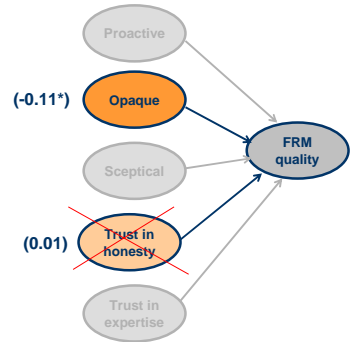
Structural model – FRM quality



($\chi^2(2420)=8429$, $p<0.01$; RMSEA=0.07).

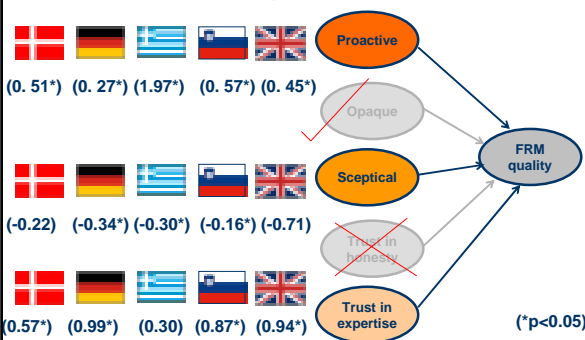
Van Kleef et al., submitted, risk analysis

Quantitative results: no country differences



(* $p<0.05$)

Country differences



(* $p<0.05$)

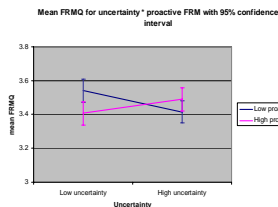
Quantitative results

- Factors of universal importance
 - Pro-active consumer protection
 - Opaque and reactive risk management
 - Trust in the expertise of food risk managers (*except Greece*)
- Factors of local importance related to food risk management quality evaluations:
 - Scepticism in risk assessment and communication practices

Communication example; GM potato with nutrition benefits

- Uncertainty x Proactive management communication

High uncertainty about the risks associated with the food, people prefer **proactive** FRM activities.



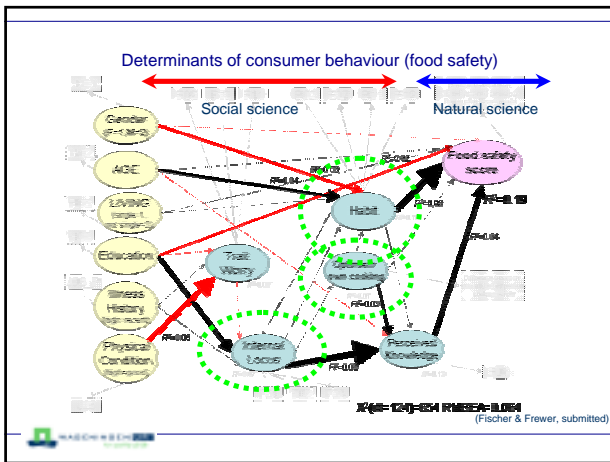
Low uncertainty about the risks associated with the VAP, people are **less concerned** about proactive FRM activities.

$F(1,2) = 9.85$, $p = 0.002$

Van Dijk, H., Van Kleef, E., Frewer, L.J., et al. (in preparation). Consumer responses to communication about food risk management.

Explaining individual differences

Psychological factors determine consumer attitudes, decision-making and impact on self-protective behaviors and food choices

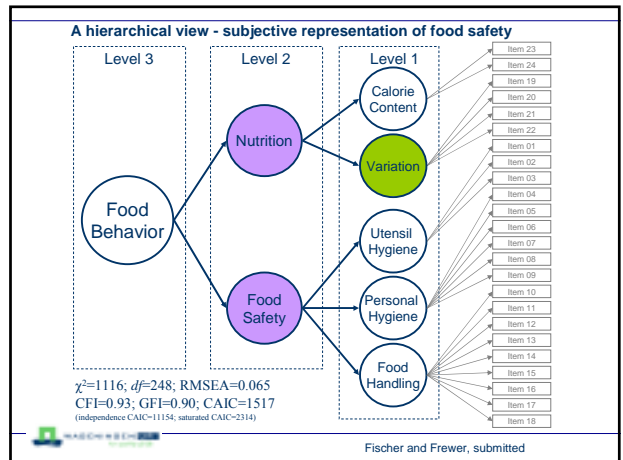


- Psychological factors are important barriers to effective risk communication
 - Locus of control (the extent to which an individual believes they can influence health outcomes)
 - Habitual behaviour
 - Optimism about own risk

Mental models of food –related behaviour.

Results of a hierarchical factor analysis

(Fischer and Frewer submitted)



- What psychological factors influence food choice and technology acceptance?**
- Habitual behaviour**
 - Fischer, A, Frewer, L.J., Nauta, M. Towards improving Food Safety in the Domestic Environment: Assessing individual differences in the safety efficacy of domestic food handling practices (in press, Risk Analysis).
 - Perceived Risk versus perceived benefit**
 - Frewer, L. J., Howard, C., and Shepherd, R. (1997). Public concerns about general and specific applications of genetic engineering: Risk, benefit and ethics. Science, Technology and Human Values, 22, 98-124.
 - Role of affect or emotion** De Jonge, J., van Trijp, H., Renes, R.R. and Frewer, L.J. (submitted)
 - Implicit memory**
 - Spence, A., and Townsend, E. (2006). Implicit attitudes towards genetically modified (G.M.) foods: A comparison of context free and context dependent evaluation. Appetite, 46, 67-74.
 - Attitude activation**
 - Frewer, L. J., Scholderer, J. and Bredahl, L. (2003). Communicating about the risks and benefits of genetically modified foods: Effects of different information strategies. Risk Analysis, 23, 6, 1117-1133
- > Interactions between these....

- Conclusions**
- Emphasis on *risk-benefit* analysis in a transparent environment
 - Assessment
 - Health
 - environment
 - socio-economic
 - ethical impact)
 - Management
 - decision-making
 - stakeholder and citizen priorities
 - Evaluation of consumer perceptions of benefit *and* risk
 - Individual differences in consumer decision-making may determine communication structure
- Bring together to develop best practice in risk-benefit communication in a transparent risk analysis framework

Thank you!

Any Questions?