

IMPLICATIONS OF RISK PERCEPTION FOR MANAGING AND COMMUNICATING FOOD RISKS TO THE PUBLIC

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Structure of Presentation

- The Context: Protecting the public – role of risk communication
- Risk perception: how people perceive risks; how people respond to communications
- Difficulties for traditional communication
- The rise of public engagement
- Difficulties with engagement approaches, particularly in crisis situations...
- Some solutions??

WARNING: *This talk is cautionary - raises issues rather than providing (many) solutions!*

Importance of risk communication for risk management

- Risk Analysis comprises Risk Assessment, Risk Communication, and Risk Management (FAO/WHO, 1995)
- *Knowing* a risk is only part of the issue
- Legislation may reduce risks at source... But can't legislate for consumer behaviour
- Risk communication important to inform people of risks and appropriate behaviours

Traditional Risk Communication

- The ideal?
 1. Risks determined by experts/scientists (e.g. by Assessors)
 2. Information is *communicated* to consumers (e.g. by Communicators)
 3. Consumers accept/believe the information
 4. Consumers respond appropriately – everything is fine! (Managers happy)
- The reality?...
 3. Consumers don't believe/understand/accept/care about the information
 4. Panic, mistrust, boycott (social, economic, political woes)...

Failure of 'traditional' model involving one-way communication?
WHY?

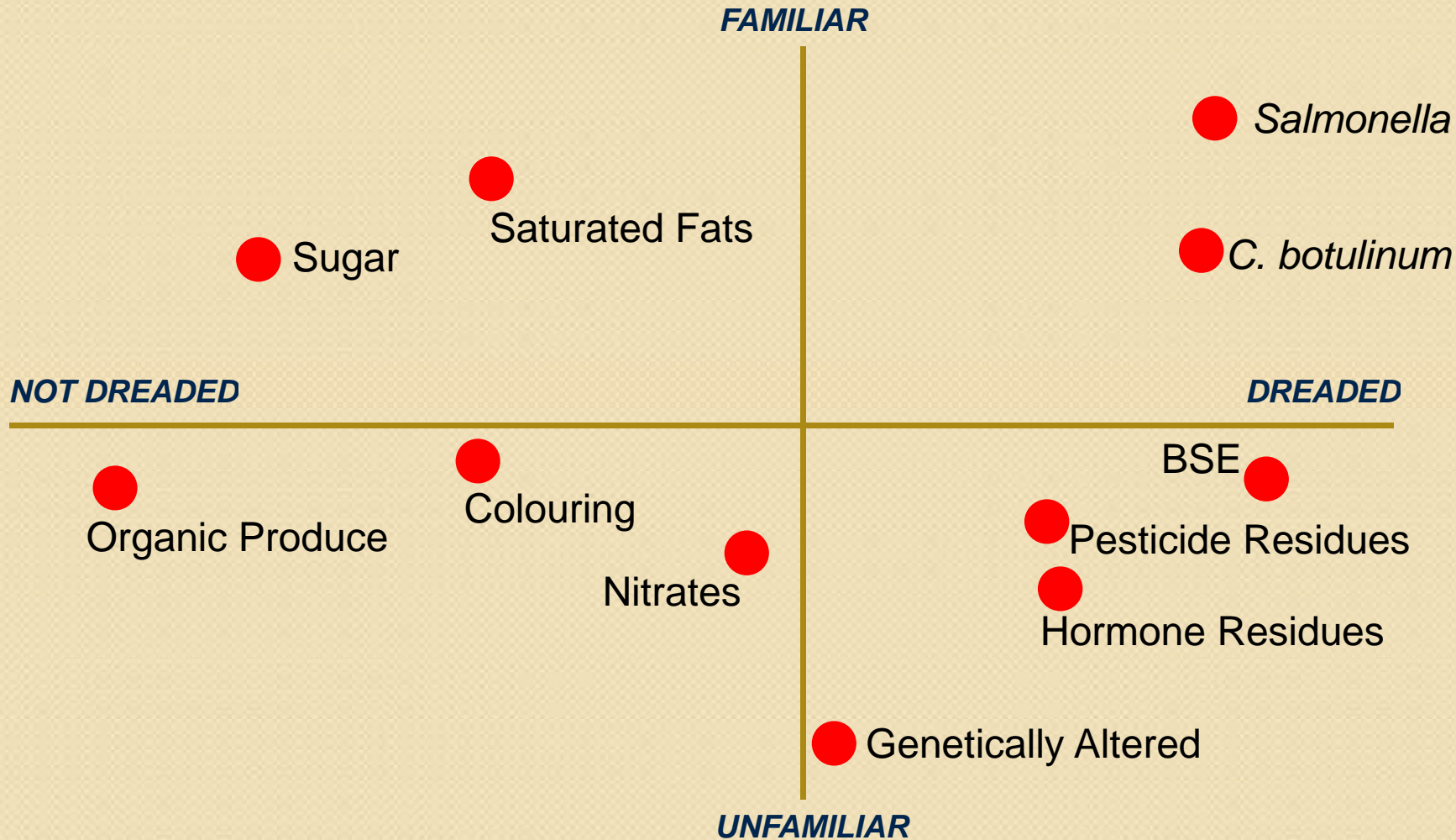
Why failure? (Problem of believability)

Risk is perceived differently by public ('what you're saying doesn't seem right to me!')... SPEAKING DIFFERENT LANGUAGES

- Potential risk of novel technology/potential hazard (etc.) not ONLY perceived in terms of likelihood of human harm (risk analysis metric)...
- Other factors in implicit/explicit risk evaluation include:
 - Does it have any benefits?
 - Can I avoid it (voluntariness)?
 - Is it going to harm the environment?
 - Is it fair (are risks fairly distributed)?
 - How much do we REALLY know about it (uncertainty)?
- Result => Mismatch in risk perceptions between public and official assessments e.g. nuclear power/smoking/GM/MMR



Assessing Perception of Food Hazards



Fife-Schaw and Rowe (2000)

Why failure? (Problem of understandability)

Risk information is often complex, requiring understanding of science method, mathematics, etc.

- People cannot cope with numbers (especially v. high/low), especially probabilities
- People have limited processing capacity (7 plus or minus 2)... Overload easy to achieve!
- People are 'pattern recognition machines' (not natural scientists) – we have biased search/processing strategies (see slide)
- People respond to complex information through use of simplifying heuristics: a) Do I trust the communicator (yes = believe; no = disbelieve); b) Does this pattern match past ones I can recall (BSE? GM?) (yes = treat as similar; no = try another strategy); c) What do people like me think (social comparison)? (default: adopt similar view)

Other typical biases in processing data...

- Optimistic bias ('it won't happen to me')
- Hindsight bias ('well, that was obviously going to happen – they should have known!')
- Base rate fallacy (lack of appreciation of importance of base rates)
- Gambler's fallacy ('it's GOT to happen this time')
- Anchoring and adjustment (subconscious fixation on meaningful number and inadequate adjustment therefrom... 0/1/50% etc.).

NOTE – 'experts' suffer from all these too, though extensive training in precise field *can* lead to appropriate learning... [though surprisingly non-generalisable, e.g. DeGroot studies...]

Example of biased processing

- Fischer et al (submitted) presented subjects with matched information on the risks and benefits of using nanotechnology in food production
- Attitudes towards nanotechnology measured before and after presentation of information
- Results: some people became *more positive* about nanotechnology; many more became *more negative*; while others remained ambivalent
- Cognitive dissonance explanation – people seek to reduce dissonance by focussing on one side of argument and discarding the other...
- So much for providing fair and balanced information!

Why failure? (Problem of acceptability)

Public distrust in communicators ('why should I believe you anyway?') - part of general decline in societal trust?

- Policy makers/scientists/communicators proven wrong in the past e.g. safety assurances about BSE (incompetence?)
- Vested interests? (different values)
- Mixed messages e.g. eat fish/don't eat fish. Which is correct?



"THERE'S NOTHING TO EAT!"

Why failure? (Problem of motivation)

Public understand/believe/accept information – but don't care and are not prepared to change

- Behaviour is addictive (smoking)
- Behaviour, though not addictive, is strongly habitual
- Behaviour has personal/social benefits above risks:
 - defines individual as 'risk taker' or 'rebel' (can be important, especially for young)

Issue of 'persuasion' versus 'informing choice' (might not matter if no change, as long as people aware and make conscious decision)

But... problem of disentangling reasons for lack of change (succeed or fail?)

A solution? The wonders of public (stakeholder) engagement

It is **ASSUMED** that involving stakeholders such as the public (consumers), in policy making (“public engagement” or 2-way communication) will be beneficial as:

- Public less likely to object if it has some ‘ownership’ of the problem
- ‘Better’ decisions will arise because you include wider perspectives and understandings i.e. more information
- Trust in policy makers will increase
- ... and anyway, where there is scientific uncertainty, policy is based on values anyway (involving the public not only feasible but ideologically better/ fairer/ more democratic)

Engagement zeitgeist

- Engagement has caught on in the form of:
 - increased consumer involvement in the workings of appropriate committees (e.g. EFSA Stakeholder Consultative Platform: twice-yearly meetings and annual colloquium, including consumer groups, environmental and animal welfare NGOs)
 - one-off engagement exercises about topics of concern (e.g. In UK, 2003/4 public debate called 'GM Nation?')

Most approaches entail small group processes, with numbers of consumers/public (their representatives) engaging with experts (e.g. In committees or through Q-and-A or from written information) to provide a wider perspective on a particular problem and how to solve it

Unfortunately (1)...

There is little *evidence* of benefits of engagement over traditional policy making methods...

Lack of evaluation due to:

- Engagement seen as 'intrinsically good' ('there's no need to evaluate it')
- Lack of motivation to collect evidence ('why should I open myself up to criticism?')
- Lack of resources ('who's going to pay for this?')
- Lack of know-how ('how do you do it anyway?' 'what do we mean by 'effective' engagement?')

Unfortunately (2)...

There is reason to suspect considerable problems with engagement (on top of individual psychology problems, add others related to social psychology, plus process management problems):

- Assumption that bringing diverse parties together will lead to consensus, but social/group processes may lead to increased distance/ more extremity/ polarisation (i.e. groups tend to increase identity by heightening differences with out-groups (i.e. us-them) – MORE rather than less consensus?)
- Within groups, discussion tends to focus on issues that all know about/agree on, rather than uncertainties... failing to deliver new insights (etc)
- Individual behaviour in groups often driven by social and political motives rather than decision-making ones
- Can only involve a few representatives, who tend not to actually be that representative of wider views...
- Processes often limited in terms of time, resources available, adequate facilitation or problem structuring tools, etc.
- Can be time-consuming and expensive
- Particularly in a crisis, is there time to assemble and consult when quick decisions are needed?

(e.g. Delli Carpini et al, 2004; Sunstein, 2002.)

OK – so what do consumers think about food safety matters?

- SAFEFOODS project (EU) looking at developing a new risk analysis process for food (NB *Food Control* special issue out soon)
- In one workpackage, we conducted a series of studies across *several EU countries* done looking at consumer and food expert perceptions of food risk management (FRM) quality using focus groups, telephone interviews, and surveys with large representative samples (summarised in Cope et al, 2010)
 - Essentially had consumers/experts characterise good/bad FRM
 - Evidence that both largely perceived the same issues as important (but not completely – though often reasons differed)
 - Some factors directly related to communication practices
 - Evidence that there were some cultural differences across countries

Shared themes (van Kleef et al, 2006)

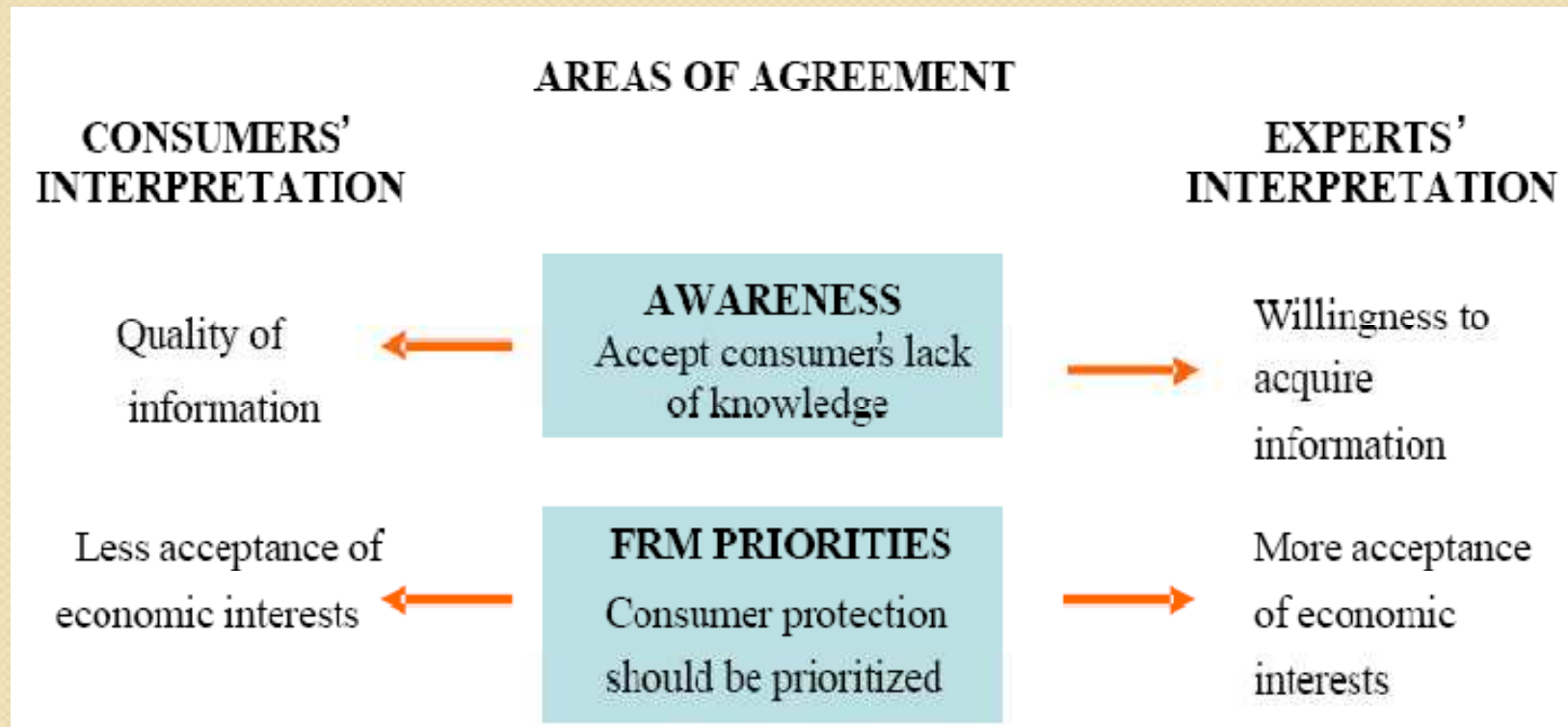
FRM quality depends upon:

- Efforts made by responsible authorities to manage risks (high vs low)
- Systems of control (present vs absent)
- Preventive measures (proactive vs reactive)
- Information and education (too little vs too much information)
- Responsibility (self vs authorities)
- Priority setting (consumers vs economic)
- Scientific progress/uncertainty (solving problems or finding new ones)
- Media attention (scaremongering vs alerting the public)
- Trustworthiness of authorities (shared values, expertise/competence, etc.) (high vs low)

Follow-up study (Krystallis et al, 2007)

- Presented consumers (32) and experts (39) with quotes that characterised their perceptions about the key themes regarding FRM
- Experts were food risk assessors (industry), food risk managers (regulatory bodies), food safety scientists (academia, research institutes)
- Found that sometimes consumers/experts shared their evaluation of a particular theme BUT had different reasons for the similar positions, OR evaluated the themes differently
- Talking different languages?
- One potential fear is that experts may assume FRM is good, and dismiss consumer concerns as due to a) consumer ignorance; b) media mis-representations

Areas of (mostly) agreement between experts and consumers:



Areas of (mostly) disagreement between experts and consumers:

CONSUMERS' INTERPRETATION	AREAS OF DISAGREEMENT	EXPERTS' INTERPRETATION
Continuing problems & areas not covered ←	FRM SATISFACTION Authorities do make efforts	→ FRM adequate & consumers happy
Strong emphasis on selfprotection ←	RESPONSIBILITY Food safety a shared responsibility	→ Strong emphasis on role of state & industry
More positive view of media role ←	MEDIA An important source of information	→ Negative view – media create public anxiety
Not acknowledged by all institutions ←	UNCERTAINTY Cannot be avoided	→ Inherent in science
Experts have professional knowledge & experience ←	FOOD SAFETY Think about it differently	→ Experts have broader scope of activity & responsibility

So... What can we do?

From the SAFEFOODS research (summarised in Cope et al, 2010, Food Policy), and more basic research, there are a number of tentative suggestions:

- Understand how people perceive risks and their cognitive limitations/tendencies... and amend communication accordingly (e.g. avoid use of numbers; avoid information overload; frame information in manner reminiscent of positive scenarios)
- Use trusted communicators
- Speak with one voice (consistency)
- Be open and transparent (helps establish trust)
- Appear proactive rather than reactive where possible (unlikely in crisis)
- Beware cultural differences in emphasis (difficulty of Pan-European approach)
- DON'T assume public engagement is the answer – might be useful in some circumstances, but not others (crisis?)