

Risk Communication in the 21st Century

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In this talk I will:

- Provide a definition of Risk perception and communication and put it in context with examples
- And...if time permits we will also...
- Describe how we in Europe have moved from an old consensus model to a new more transparent deliberative model of regulation
- Summarise some of the teething problems associated with this new model
- Describe what may happen with the new model of regulation over a 5-10 year period
- Finally, offer some possible solutions to the teething problems

Risk perception 1

- Importance of heuristics and biases (Kahneman and Tversky)
- Anchoring effect;
- Simplifying heuristic;
- Availability heuristic;
- Understanding base rates;
- Hindsight bias

Introduction to Risk perception 2:

- Work of Kahneman and Tversky influenced others: Fischhoff, Slovic, Lichtenstein
- People viewed risks differently:
 - Natural – Technological
 - Voluntary – Involuntary
 - Familiar – Non Familiar
 - Control – Non Control
 - High Frequency/Low Consequence Risk VS
Low Frequency/High Consequence Risk
 - Female - Male

Introduction to Risk Communication:

- Based on these findings, regulators and industry took the view that one should develop risk communication programmes
 - Build nuclear power plants
 - Site nuclear waste facilities
 - Build waste incinerators
 - Convince publics that certain foods are safe

Introduction to Risk Communication:

- Three risk communications strategies put forward:
 - Top-down
 - Dialogue
 - Bottom-up

Introduction to Risk Communication:

- Risk communication still difficult to do!
 - Social / Amplifications / Attenuations
 - Narrative
 - Deliberation
 - Optimistic bias
 - Trust / No trust

Introduction to Risk Communication:

Over the years, risk communication efforts have experienced both successes and failures:

■ Failures

- Swedish (2002) acrylamide scare
- Shell – Brent Spar oil storage buoy
- US Dept of Energy – siting nuclear waste storage facility

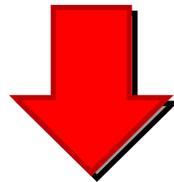
■ Successes

- UK – FSA building trust post-BSE
- Johnson & Johnson – Tylenol scare
- Sweden-EON – Barseback nuclear power plant incident

Policy background:

Europeans have had their fair share of regulatory “scandals”, emanating both from real or perceived health issues:

- Dioxins in Belgian chicken feed
- Tainted blood in France
- Mad Cow disease in UK and elsewhere
- Foot and Mouth Disease
- The UK MMR fiasco



Led to public distrust towards policy makers

Led to a change in the making of regulation from:

* Old “consensus” model:

- **Policymakers and industry** met behind closed doors and made regulatory decisions.
- **Elitist in nature** because meetings involved heads of industry, senior representatives from unions, etc.
- **Scientists** had important role to play outlining the pros and cons of regulatory actions for elites.
- **Citizen and stakeholder groups** rarely consulted.

To a new model based on:

- Greater public and stakeholder **participation**
 - Greater consideration for environmental and social values
- Greater **transparency** in regulatory strategies and decisions
 - More accountability of the regulator
- Greater use of **precaution**
 - The **role of Science** is downplayed, as scientific results are increasingly under scrutiny - scientists seen as just another stakeholder
 - The **role of Media** is enhanced

Distrust of “old” regulators = rise of “new” regulators

A number of teething problems

Greater public and stakeholder participation

- Self selection process
 - GM Nation?
 - North Black Forest (3.5% participated)

■ Involving stakeholders can lead to greater public trust

- Stakeholders are also listened to
- Feel ownership of the outcome

■ YET involving stakeholders can lead to decrease in public trust

- NGOs may have separate agendas
 - Swedish Chemical Inspectorate example

A number of teething problems (cont.)

Open and Transparent Regulatory Practices

■ Seen as a need, as many regulatory scandals are caused by lack of transparency

■ However, transparency can also lead to:

- Outsourcing of risk communication
- Public having to make their own decisions

Transparency leads to policy vacuums (old days there was a consensus)

- **Regulators are slow off their feet** (fire fighting)
- **However**, transparency can also lead to:
 - NGOs issue managers
 - **Transparency leads to scientific pluralism**

New model: use of the **precautionary principle** and growth of risk aversion

- New scandal around the corner - better safe than sorry

- In some cases, over regulation prevails
Commission's decision to ban imports of ground nuts

- Leads to problems associated with risk-risk paradigm

Role of Science

■ Should scientists be just another stakeholder?

- Demotion of science caused by past scandals
e.g. BSE

■ Policy makers in the past have not adequately taken into account lay knowledge; Yet:

- By not focusing on the scientific dimension sufficiently:
 - Manufactured uncertainty
 - MMR scare
 - Ghost ship debate
 - Farmed salmon scare

The “rise” of the new regulators

Aspartame case: Ramazzini Foundation (RF) July 2005 press conference noting that aspartame causes cancer in rats

■ RF refused to share data with EFSA

- Amplified the scare
 - Continued press conferences
 - Press releases
 - Interviews with the media

■ Media Vacuum Occurs

- Secondary amplification
 - Campaign groups
 - Activist journalists

■ EFSA May 06 holds press conference

- Research not peer reviewed
- No dose response relationship aspartame-cancer
- Rats may have been ill to begin with

Aspartame (cont.)

- **Outcome: "un-ethical" amplification of a risk**
 - Negatively impacted perceptions of aspartame among media, stakeholders, and eventually consumers
 - Caused 40% reduction of table top aspartame usage in many countries-e.g. France
 - Deprives the overweight and obese, and more critically so the diabetics, of healthy alternatives for sweet taste
- **Key take-aways:**
 - Media needs to become a more responsible communicator
 - Lack of transparency can lead to communication vacuum
 - There were no credible science organisations able to refute findings early on
 - Showed further problems with the new model of regulation

Role of Media

- As pointed out with the Ramazzini study, it is obvious that the **role of the media is critical in properly communicating health information**, so as not to cause panic and unsubstantiated reaction.
- The following slides provide a **'case study' on their role in "mis-presenting" health information and in creating and amplifying a health scare.**

Sweetener manufacturer disputes validity of new health research

- Study links aspartame with cancers
- Ingredient used in more than 6,000 products

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Felicity Lawrence

The Guardian, Friday 30 September 2005 03.00 BST

[Article history](#)

Aspartame, the artificial sweetener used in more than 6,000 food and drink products around the world, is the subject of renewed controversy this week after the results of the latest research into whether it can cause cancer.

Scientists at the independent European Ramazzini Foundation for cancer research in Bologna presented new results from its long-term, large-scale study of the effect of aspartame on 1,800 rats, at its international conference on cancer and environmental sciences in Italy last week.

The research centre said analysis of its latest results showed aspartame caused cancer of the kidney, and of the peripheral nerves, mainly in the head. Earlier data from the same study published in July linked aspartame to an increased risk of leukaemias and lymphomas in female lab rats "at doses very close to the acceptable daily intake for humans".

Manufacturers of the sweetener have challenged the validity of the study. They say the research is "in total conflict with hundreds of credible studies that have been thoroughly reviewed by the regulatory authorities around the world" and that "the allegations are inconsistent with human epidemiological data". They question the record of the institute and say it is "criminal" for it to present its data publicly before it had made it all available to the regulatory authorities and before it had been fully reviewed.

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See also

15 Dec 2005
Safety of artificial sweetener called into question by MP

15 Dec 2005
MP calls for ban on 'unsafe' sweetener

15 Jul 2005
Fresh fears raised about aspartame

22 Jun 2010
Coffee may protect against head and neck cancers

An article published in The Guardian in 2005, reflects other news articles published at the time into the Ramazzini Foundation Study into Aspartame, which found it caused kidney cancer and was linked to other cancers. The study has since been discredited, but is nonetheless regularly featured in any current coverage on the subject of low-calorie sweeteners.

Page last updated at 16:33 GMT, Friday, 25 September 2009 17:33 UK

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Sensitivity to aspartame probed

Scientists are to assess whether the artificial sweetener aspartame causes health problems in people unusually sensitive to it.

Expert advice is that aspartame - found in more than 4,000 products - is safe to consume.

However, a number of people have reported sensitivity to the product including headaches, dizziness, vomiting, diarrhoea and fatigue.

The University of Hull study is funded by the Food Standards Agency (FSA).

Aspartame, 150 times sweeter than sugar, is found in products such as diet soft drinks, cereal bars, yogurts and chewing gum.

There have long been concerns that the sweetener is linked to a raft of health problems, including a greater risk of cancer, fertility issues, nausea, double vision and an effect on appetite.



Aspartame is widely used in many food products

SEE ALSO

- ▶ Sweetener 'not linked to cancer'
05 May 06 | Science & Environment
- ▶ Q&A: Aspartame
05 May 06 | Science & Environment

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- ▶ Food Standards Agency
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This article, posted on the BBC News website in late 2009 uses the launch of a FSA study into Aspartame to publish an article on concerns over the side effects of consuming the sweetener. Although more balanced in tone, it repeated previous concerns linking Aspartame to cancer, fertility issues etc displaying how easy it is for old claims (and inaccurate) to resurface.



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Amid health fears, sweetener in safety spotlight

By SEAN POULTER

Last updated at 11:24 AM on 27th May 2011

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An artificial sweetener used in Diet Coke is to undergo an urgent EU safety review.

Aspartame is ingested every day by millions of people around the world in more than 6,000 well-known brands of food, drink and medicine.

However, it has been the subject of a number of studies that appear to show harmful effects on human health.

One recent study linked diet drinks containing aspartame to premature births, while another suggested it could cause cancer.

To date, health watchdogs, including the European Food Safety Authority (EFSA) and the UK's Food Standards Agency (FSA), have ruled out any link to ill-health.



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 Posh is smitten by her 'beautiful' daughter

Looking at the safety of low-calorie sweeteners in particular, this story ran in The Daily Mail in May 2011 providing details of a EU review into the safety of Aspartame. The review gave the media a platform to repeat old and disputed claims about the safety of Aspartame with minimal balance.

In the space of just one week, these three health stories ran as cover stories in the Daily Express, illustrating what a confusing, and potentially irresponsible picture even one media outlet can paint around healthy diet and nutrition habits.



So what will happen? Is the new model of regulation here to stay?

Yes, it will.

- Regulators, policy makers and industry will remain distrusted by the public at large
- Although public trust levels will vary between different ministries and different countries.
- Not all negative-trust levels can rebound
- Yet scandals will remain (particularly in food sectors)

The precautionary principle as a regulatory tool will remain

- Many regulators see it as a convenient tool (in replace of more expensive and complicated risk assessments)
- 3 recent decisions
 - The paraquat (Sweden-European Court of First Instance)
 - UK FSA's decision to call for a voluntary ban of azo dyes (April 2008)
 - EU wide ban of deca-BDE-a brominated flame retardant found in electronic appliances

- **Policy makers/regulators will do everything possible to halt dilution of power**
 - Deliberation for many will be a façade
 - Do not want to work with NGOs

- **Some countries more ready for the new model than others**
 - Small member states will have difficult to cope

- **Aggressive media will lead to continued public distrust of policy makers and regulators**
 - Export of the “British model” to the rest of Europe

Going Forward & Conclusions

How can we best sort out the teething problems?

Regulators:

- **Ensure that regulators and policy makers are prepared for the transparency era.** Going forward, we will have more rather than less transparency; presently they are not ready.
- **Develop rigorous models-frameworks for where the precautionary principle should and should not be used** - good example is the European Commission's communication on the topic from 2000
- **Fund more research in how to make deliberation best work** - how can we move away from the self selection process?
- **Ensure that communication director within a regulatory agency is part of the executive function**

Conclusions (cont.)

Science:

- **Promote independent scientific advice** - with the caveat that this will require government to become a larger funder of university departments
- **Promote the establishment of a genuine European academy of sciences** - set up specifically to reduce scientific uncertainty

Media:

- **The establishment of some form of media guidelines to ensure that media does not unnecessarily amplify risks** that in many cases should be attenuated-and communicate numbers accurately