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Dialogues with the Media

A few personal reflections after Fukushima

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A starting point

Based on my experience especially of the UK broadcast media at the time of Fukushima and afterwards, many (probably most) serious journalists want to get the story right and are grateful for help in doing so. Only a few seek to sensationalise – of these at least as many sensationallly underplay the effects as sensationallly overplay them.

A starting point

But like the public, the media is rational (which is of course very different from saying it is always correct) – it needs to be able to make sense of the story. In doing so it uses commonsense, as a far more reliable guide to understanding and action than abstruse science.

(Which is more use in the everyday world – Newton or Heisenberg?)

A puzzle

Why is the safest large-scale energy source regarded as the most dangerous by significant numbers of people?

Radiation in perspective

Certainly a potential risk but to be judged against other risks, both of radiation and e.g. of city air – some 2.5 million early deaths per year globally.

Yet some foreign nationals were evacuated from Tokyo, thereby getting a much greater dose of radiation from the air flight than they would have done by staying put.

Better case to evacuate Tokyo into the southern regions of the Fukushima zone than visa versa?

First possible explanation

The traditional nuclear family response goes along the lines of:

“There is an irrational fear of radiation. Someone (probably in the media) is going round misinforming people about radiation and thereby causing fears. All we need to do, in dialogues with the media and indeed the public, is to tell them what’s what and they’ll cheer up and support nuclear power.”

(Oddly this may be right but not in the traditional sense.)

So is it just a fear of radiation?

Country	Year	Number exposed	Number exposed to high doses	Number of deaths
Mexico (Mexico City)	1962	?	5	4
China (Anhui Province)	1963	?	6	2
Algeria (Setif)	1978	22	5	1
Mexico (Juarez)	1983	≈ 4,000	5	0
Morocco (Casablanca)	1984	?	11	8
Brazil (Goiania)	1987	249	50	4
Ukraine (Krematorsk)	1980s	?	17	6
China (Xinhou)	1992	≈ 90	12	3
USA (Indiana)	1992	≈ 90	1	1
Thailand (Bangkok)	2000	?	10	3
UK (London)	2006	?	1	1
India (Mayapuri)	2010	?	8	1

Some non-power incidents involving radiation but no long-term panic

Reflections on nuclear communications

In speaking so much about safety, and by evacuating Fukushima and preventing people going home for more than three years, the nuclear industry seems to be saying ...

‘Radiation and nuclear materials are uniquely hazardous – not just as a matter of degree, but indeed as a matter of essence. No other industry drops packages from a great height onto a steel plate set in concrete or talks about burying its waste in mountains or several hundred metres underground. What’s more, the regulators which you thought were there to protect you can’t be trusted – even we recognise the regulations we work to are too slack and we have to go beyond them. So we’re telling you that a single serious accident would be an extremely damaging event, a real catastrophe. Fortunately we are really really clever – cleverer than anyone else – and can prevent major accid ... Sorry, I need to go now.’

Reflections on nuclear communications

... and how does the public respond?

‘These folk don’t seem to think the way I do, they don’t seem to understand how much I care for the people around me and for my community and environment. I know that however much is done, safety can’t be guaranteed. What about human error, for instance? And how can they be sure they have thought of everything? If a big accident would be as serious as they seem to think it would be, and there is no very good reason for using nuclear rather than something else, then hey, I’m getting really quite scared.’

Trust

Churchill said that when confronted by someone with a point of view, first he looked at who was saying it, then how they were saying it, and only then what they were saying. People largely go on impressions not content – does the messenger seem to understand our concerns, is she or he ‘one of us’, or are they some rather distant clever dick who just talks about machines and statistics?

Who is the more rational?

It is often the 'public' (including the media) who are rational and the industry irrational in communication issues. Some examples of where it can be argued that the industry has 'got it wrong':

Who is the more rational?

‘Radioactive waste is not very dangerous but we are going to bury it 800 metres underground.’

Industry’s irrational belief – people will be reassured by this.

Public’s rational response – this is the most dangerous stuff mankind has ever produced (we don’t bury anything else 800 metres underground), so we should be scared. And what’s more these jokers must think we are idiots if they expect us to believe it is not very dangerous at all, so we won’t believe them ever again.
Help!

Who is the more rational?

‘Safety is the top priority.’

Industry’s irrational belief – people will be reassured by this.

Public’s rational response – if safety really is more important than generating electricity or cost, for example, then why not just stop doing it? This is incomprehensible – what do these people really think?
Help!

Who is the more rational?

‘We have spent a fortune on a monitoring system that can pick up radioactivity many thousands of times below danger levels.’

Industry’s irrational belief – people will be reassured by this.

Public’s rational response – this simply cannot be true. Either they have wilfully wasted a vast amount of my money, so shouldn’t be trusted, or they are lying about the dangers involved. **NOBODY** would spend a fortune on detecting something that can do no harm. Help!

Who is the more rational?

Great care must be taken to ensure that those designing communication are aware of the commonsense interpretation of what they are saying and that it helps not hinders!

MORAL – human or psychological rationality is different but not inferior to ‘technical’ rationality. All communication should put psychological rationality first.

A case study

JAIF Conference 2014 – one speaker bemoaned how the Japanese public did not realise that man-made radiation was the same as the natural radiation all around us. A huge effort was needed to correct this misimpression, so making nuclear power more acceptable, including educating the media to understand this.

A case study (2)

What does the well-informed Japanese member of the public know (or at least what unarguable facts are in the public domain)?

First and foremost, almost 100,000 people have been banned from living in their homes in a 20 km radius zone around Fukushima Dai-ichi for over three years, causing untold misery. In much of the zone doses from radiation (from all sources) are below 5 mSv per year, with fallout doses below 1 mSv per year.

Secondly, there are areas like Ramsar in Iran (average 130 mSv per year) and Guarapari in Brazil (peak levels on the beach of 40 μ Sv per hour, equivalent to 350 mSv per year) which are not evacuated. Indeed, there are almost certainly areas of Japan (e.g. Kyushu island) where natural doses are above the total dose in some part of the exclusion zone.

A case study (3)

What could the well-informed Japanese member of the public make of this?

Three options:

1. The authorities have either gone stark staring mad (or are deeply wicked) by blighting so many lives and incurring such vast costs for no very good reason
2. The authorities are simply lying about the levels of contamination in the exclusion zone in an attempt to cover up the seriousness of the accident.
3. Man-made radiation must be significantly more dangerous than the 'same amount' of natural radiation, so comparisons are meaningless.

A case study (4)

Assume that the Japanese nuclear family is successful in persuading the media and the people that their perfectly understandable rationalisation of the undisputed facts in front of them (option 3) is incorrect.

The facts don't change, so a new rationalisation is needed. It is not immediately obvious that a switch to believing 1 or 2 would improve people's faith in the industry or in the concept of nuclear power.

So – far from people being misinformed by malign influences, including the media, into believing man-made radiation is more dangerous than it actually is, people may actually come to this view in an attempt to rationalise what they see in front of them, i.e. the entirely irrational behaviour of the authorities.

Ironically, one suspects that the irrational behaviour was adopted in an attempt to reassure people!

Implications

So pumping the media full of 'facts' about how safe nuclear power is may be more likely to cause fear than allay it, especially if it stresses the mammoth efforts and costs directed towards nuclear safety.

The core irrationality is believing that if you announce that you have made something a bit safer people will be a bit more comfortable – they may well decide you have discovered it is a bit more dangerous and so get more worried.

The message on nuclear safety is simply not credible.

The media has a responsibility to reflect this.

The dialogue in an emergency (1)

Two objectives:

- to provide information in real time to guide decision-making;
- to build and embed a relationship of trust with the public which will last for many years.

Requires an open and proactive stance – not just what has already happened but what might be expected to happen. One of the real lessons of Fukushima?

The dialogue in an emergency (2)

- Communicating in circumstances of extreme stress and also very limited knowledge.
- Even so, tended to be rather backward looking, not predictive.
- Almost like an academic exercise – wait for as much ‘certainty’ as is available before communicating.
- Would have been beneficial to be more forward-looking, e.g. suggesting that radiation would/might be detectable in the Tokyo water supply before it happened.

The dialogue in an emergency (3)

The International Nuclear Events Scale (INES)



INES

Established 1989 (after Chernobyl).

Described as ‘a tool for promptly communicating to the public in consistent terms the safety significance of reported nuclear and radiological incidents and accidents, excluding naturally occurring phenomena, such as radon. The scale can be applied to any event associated with nuclear facilities, as well as the transport, storage and use of radioactive material and radiation sources.’

‘The primary purpose of the INES Scale is to facilitate communication and understanding between the technical community, the media and the public on the safety significance of events. The aim is to keep the public, as well as nuclear authorities, accurately informed on the occurrence and potential consequences of reported events.’

INES

LEVEL 5: Limited release of radioactive material likely to require implementation of some planned countermeasures; several deaths from radiation; severe damage to the reactor core; release of large quantities of radioactive material within an installation with a high probability of significant public exposure.

LEVEL 6: Significant release of radioactive material likely to require implementation of planned countermeasures.

LEVEL 7: Major releases of radioactive material with widespread health and environmental effects requiring implementation of planned and extended countermeasures.

INES

Chernobyl clearly Level 7 on all counts – exclusion zone still in place, food restrictions, 6,000 cases of thyroid cancer including about 10 deaths.

Can make case at Fukushima for below Level 5 (no deaths from radiation – indeed Level 4 definition includes ‘at least one death from radiation’); Level 5; Level 6; Level 7 (except no widespread health effects expected).

Query – was the use of INES ‘prompt’ and did it ‘facilitate communication and understanding between the technical community, the media and the public on the safety significance of events’?

INES

March 18: severity raised from Level 4 to Level 5.

April 12: severity raised from Level 5 to Level 7.

March 18: first day without a major new problem.

April 12: two weeks of things going about as well as could be hoped for (after two weeks when things had gone about as badly as could be feared).

Technically decisions justified – indeed, on March 22 both the French and Austrian authorities were arguing things well beyond a Level 5.

But in practice waited until firm evidence in before making decision – treated it almost as an academic treatise?

The dialogue in an emergency (4)

Trust lies at the heart of matters, ahead of factual 'accuracy' – people may accept a lack of knowledge more than a lack of openness.

Media know you'll not get everything right but will also know if you are trying to spin things.

Proactive – both before an accident (public interest stories about radioactivity rather than claims about how safe things are) and, more importantly, during an emergency – be predictive.

Be careful about imagining that telling people how safe radiation is will put their minds at rest – look at things through the eyes of psychological rationality not technical rationality!

The dialogue in an emergency (5)

Quality of information from Japan was disappointing – seemed to be waiting until they could be sure of any statement rather than offering timely caveated speculation.

Tension between speculation and surety – getting this balance wrong in either direction damages credibility.

Role of third party spokespeople (TPS) is (and can be) more that of ‘sports commentator’ than ‘expert’ – we are there to offer a view as to what the incomplete and contradictory information we are getting *might* mean (and what to look out for), not to say what *is* happening. Sports commentators are not expected to say ‘we are now going to watch Brazil beat Germany 4-2, with Pele’s first goal coming in 17 minutes from now’. UK media very comfortable with this.

The dialogue in an emergency (6)

Main role of industry is probably to provide as much digestible information as possible to the TPS. Media like people who can take an overview (physical science, biological science, politics, history, ethics, policy, wider energy picture) and express it non-technically. Inevitably anyone capable of taking that overview is unlikely also to be a cutting edge expert in all those fields.

Industry can also put media on to relevant TPS but then stand back. Media will pick up on people in circulation.

The dialogue in an emergency (7)

TPS tend perhaps to have greater credibility and get a different type of question (less aggressive).

The 'conversion' of key antinuclear activists to the nuclear cause (notably George Monbiot) an important factor especially with the print media (Monbiot is a journalist with the left-leaning *Guardian* and has a long record of environmental activism).

Don't spin – being overly pessimistic (when viewed retrospectively) at times serves to increase credibility far more than it causes long-term fear.

Conclusions

UK experience of Fukushima rather different from e.g. Germany's.

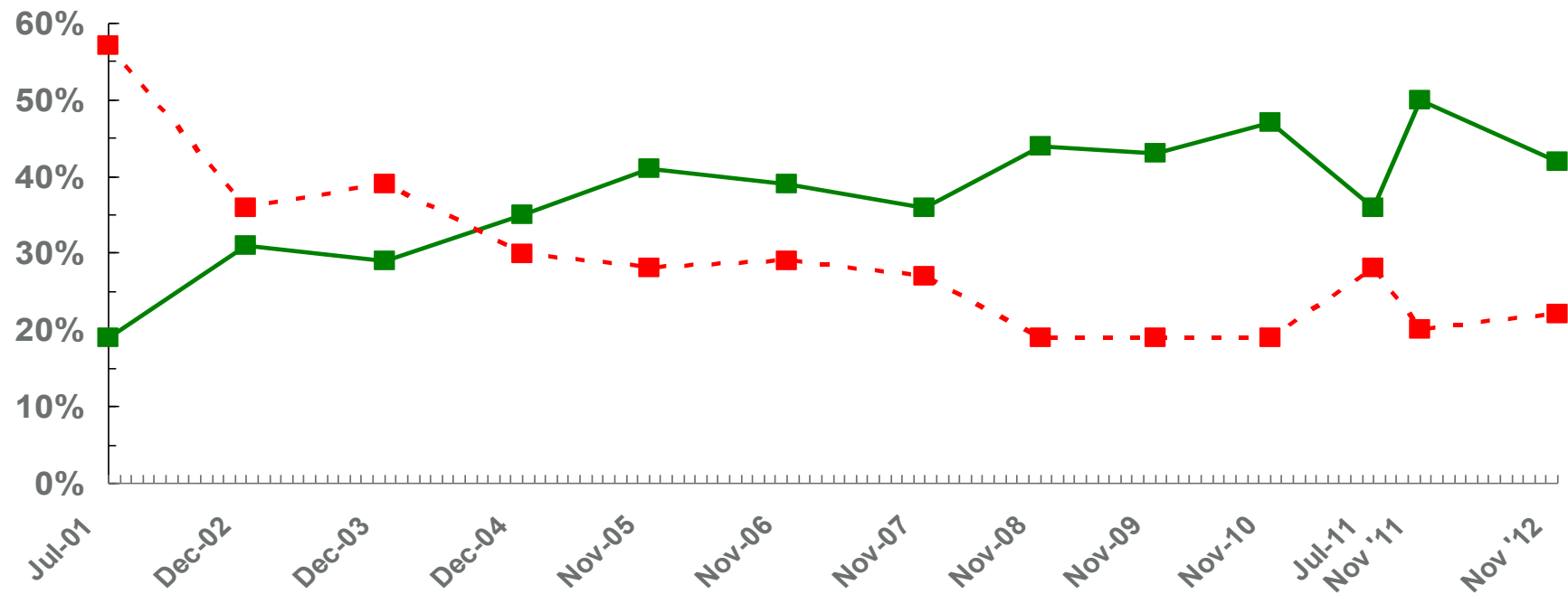
Strong political lead.

Media in general very responsible, not scaremongering, prepared to give air time to reasonable voices at the expense of the extremes.

UK nuclear industry has by and large stopped trying to 'educate the public' on nuclear power.

Attitude to nuclear new build in the UK

To what extent would you support or oppose the building of new nuclear power stations in Britain TO REPLACE those which are being phased out over the next few years? This would ensure the same proportion of nuclear energy is retained.



Source: MORI results 2012 – green support, red oppose