Asinus Muses

How I learned to stop worrying and love ~~the bomb~~ nuclear power

Nuclear crises are not a favourite topic of satire (the classic *Dr Strangelove* being the clear exception). The disaster in Fukushima became even less humorous when it was upgraded in severity to the same level as Chernobyl. Fortunately for Japan and the world, this appears to have been an over-reaction, with the power plant having released only 10 percent of the amount of radiation as the Soviet disaster. Fortunately for Asinus, the follies of humanity remain diverting even as the reality of our predicament becomes gloomier: to wit, observe the ongoing conflict between George Monbiot, the green who converted to nuclear a couple of years ago, and his former comrades in arms, including the eponymous president of the Helen Caldicott Foundation for a Nuclear-Free Planet. Monbiot has accused the anti camp of making claims 'ungrounded in science, unsupportable when challenged, and wildly wrong,' and of using the same tactics as climate change deniers: 'Failing to provide sources, refuting data with anecdote, cherry-picking studies, scorning the scientific consensus, invoking a cover-up to explain it.'

Caldicott archly responded that 'Mr Monbiot... is a journalist not a scientist,' and that 'Monbiot and others at best misinform, and at worst misrepresent or distort, the scientific evidence of the harmful effects of radiation exposure.' Her ace card is that 'the US National Academy of Sciences BEIR VII report has concluded [that] no dose of radiation is safe.' Asinus, also not a scientist, but blessed with an internet connection, decided to take a look at this document. It finds that 'in a lifetime, approximately 42 of 100 people will be diagnosed with cancer. Calculations in this report suggest that approximately one [additional] cancer per 100 people could result from a single exposure to 0.1 Sv of low-LET radiation above background.' Residents have been evacuated within 20 km of the Fukushima power plant; for those between 20 km and 30 km away, it would take about a year of standing outside, or 11 years of staying indoors, to receive 0.1Sv of radiation.

Asinus would not choose to relocate to the region, but observes that the report's figures imply that this dose increases your (relative) risk of cancer by 2.4 percent; for comparison, being obese increases a woman's risk of breast cancer by 30 percent, and anyone's risk of bowel cancer by 11–14 percent, while one study found that women who had lost 20 pounds or more had 11 percent lower risk of cancer than women who had not. The World Cancer Research Fund finds that about a third of cancers in the UK could be prevented by healthier lifestyles (where leading a healthier lifestyle is not intended to include avoiding nuclear power plants). At the risk of poor taste, Asinus notes that if 0.1Sv of radiation were to reduce the appetite for a couple of months, as a treatment it would substantially reduce the risk of cancer.

Asinus further notes that Caldicott's interpretation that 'no dose of radiation is safe' lines up oddly with the report's statement that 'Lower doses would produce proportionally lower risks', where one-tenth of the above dose would lead to one-tenth the extra risk of cancer, i.e. one extra person getting cancer per 1000 people, as opposed to one per 100 people. Caldicott's claim is not exactly false, but it is exactly equivalent to the proposition that 'no amount of getting out of bed is safe.'

Every (mushroom) cloud has a silver lining

On the other hand, Caldicott points out that consuming radioactive elements is rather more risky than external exposure, and Asinus is inclined to avoid eating Japanese imports for a while (no more chewing on my digital radio). But since economists have long worried that Japan's current account surplus is dangerously large, this could even be a silver lining for the global economy.

Perhaps more surprisingly, economists have noted that it might help even the Japanese economy, whose problem for the last 20 years has been a lack of demand. Nothing stimulates investment quite like the destruction of a region's infrastructure.

(Not) Storing up problems

While Asinus's amateur research into the risks of nuclear power has mostly been reassuring, he remains nervous at the fact that not a single country in the whole world has yet constructed a permanent resting place for radioactive waste from nuclear power plants. Tens of thousands of tonnes are being stored in temporary facilities. (One wonders if planners are awaiting an earthquake to take the problem off their hands.) Sweden may be about to become the first to do so, if plans for such a facility are given the go-ahead. The blogosphere has been recalling past efforts to design a sign that will warn people thousands of years from now that they shouldn't open the big metal doors. The winner of a US competition was Brandon Alms with a picture of two little rabbits looking up at a glowing circular symbol, bathing in its light. The message was not in the symbol itself. It was in the fact that the rabbits' shadows each had three ears.

Oxford Energy Forum. ISSN 0959-7727. Published by Oxford Institute for Energy Studies, 57 Woodstock Road, Oxford OX2 6FA, United Kingdom. Registered Charity 286084. Tel: (0)1865 311377. Fax: (0)1865 310527. E-Mail: forum@oxfordenergy.org EDITOR: Bassam Fattouh CO-EDITOR: Hakim Darbouche. Annual Subscription (four issues) £45/$85/€65.
Indexing/Abstracting: The Oxford Energy Forum is indexed and/or abstracted in PAIS International, ABI/INFORM, Fuel and Energy Abstracts, Environment Abstracts, ETDE and CSA Human Population and the Environment