



## Supporters of Nuclear Energy

# Newsletter

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### For the information of SONE Members

The website for the Moltex Molten Salt Reactor <https://www.moltenergy.com/> is offering an investment opportunity open during May and June. I understand that this offer is well subscribed and any SONE member who is interested may have to act quickly to avoid disappointment. (This is not a recommendation, but SONE will alert members whenever such a new opportunity to support nuclear energy initiatives in the UK comes to our attention.)

### A thoughtful perspective

Here is an article by Meredith Angwin on nature and the impact of “renewable” energy that members might consider discussing with children and grandchildren <https://medium.com/generation-atomic/do-we-get-energy-from-nuclear-or-take-energy-from-forest-and-stream-2ad7ee8492e8>

### A meeting

A discussion meeting is planned in Oxford on 22 June at 2pm. The subject “Nuclear Energy should replace carbon fuels: How we should spread this message”. Further draft details are posted here <http://www.radiationandreason.com/download/ippkqq>

Please come! The occasion is open to members of SONE, members of Atomic Advocates UK, their friends and well wishers, including teenagers and up.

### Fact, Fiction or a Blend

Eighty years on from the revolutionary discovery of neutron-induced nuclear fission by Lise Meitner its image is dulled by confusions of fact and fiction. Nobody has reason to doubt the magnitude of the energy source that it made available, especially today when new sources of energy are needed if civilisation is to replace carbon fuels. However many people are in two minds about its downsides, especially on account of the effect of nuclear radiation on life although a century of established science and the historical record of human experience should have been sufficient to lay to rest these concerns with clear factual answers.

But people make their own choices. When facts are dull and reassuring, they often prefer the extra excitement that is added when reading a fictional account. And the huge power of nuclear energy adds an extra *frisson* to such fiction, even without the evidence for actual danger.

One such story began just 40 years ago with a partial meltdown of the nuclear fuel in Reactor Number 2 at the Three Mile Island plant in Pennsylvania. In fact this accident exposed a genuine failure of the team and the instrumentation that controlled the reactor but there was no significant release of radioactivity and no health consequences. Unfortunately, at about the same time a much more exciting story was told in the film “The China Syndrome”. It described a nuclear disaster involving a fuel meltdown with dramatic consequences that were invented for excitement - then there was a secret cover-up. This fictitious story had no possible basis in science, but it stimulated people’s fear none the less. The film was a considerable success, but the public image of nuclear energy was badly damaged.

The evolution of humans like other creatures has ensured that we all experience fear when faced with obvious danger. This simple protection mechanism might discourage us from taking any initiative at all, but for excitement. This irrational sense encourages us when we face a real challenge or, if none is available, an imagined or fictitious one. An individual lacking a taste for initiative and courage is liable to get left behind or succumb to fear. In the traditions of society those who dare to engage with danger in this way are admired and honoured for their bravery.

Human decision making based on factual study and thought meshes uneasily with these basic reactions of fear and courage. We should not be surprised that murder mysteries sell better than textbooks of science and history. Similarly exciting fiction is preferred to reassuring facts about nuclear incidents, not only for Three Mile Island, but for Chernobyl and Fukushima, too. After all, even the plays of Shakespeare weave excitement onto historical frames often with less regard for fact. They are stimulating stories of human nature, and that is what people want.

Every year close to the anniversary of the Chernobyl accident in April 1986, new fictitious accounts of it appear. Typical this year was Kate Brown’s “Manual for Survival”. Having read it I published a review on Amazon.co.uk:

“The 400 pages of this book record the conflicting experiences and opinions of many who were close to the accident at Chernobyl and its social and political aftermath. However it leaves the reader with no clue as to how the medical and psychological effect of a release of radioactivity and its radiation should best be handled to shield the affected population. Evidently, when mishandled

as at Chernobyl, they cause intense suffering, panic and distrust throughout society. Psychological confidence is essential to physical health and the two can become genuinely confused, as in a curse delivered by witchcraft. Evidence from Chernobyl cannot resolve them. The effects of radiation are properly understood from evidence for subjects who are unaware. Data from hidden accidents, natural background exposures and animal experiments combined with an understanding of modern biology show that Ms Brown is mistaken. Radiation at low and moderate dose rates is harmless, although many have not understood the evidence and are in the dark, like Ms Brown.

The language used in the book is one of contrasting moods, straying from objectively historical to anger loaded journalese, unworthy of a manual. It may be that as a historian the author is bewildered by science and medicine. However by relying exclusively on the views and experiences of those who were frightened by Chernobyl she spreads fear. A manual supported by informed education and discussion is the way to face accidents. In March 2011 the Japanese people knew what they should do when the tsunami arrived: 20,000 died but society recovered. When the Fukushima accident occurred, they knew nothing and there was panic although nobody died of radiation. They lacked the guidance they were given for the tsunami. At Chernobyl many sought a manual to help them – as the author says in a number of places. But this book is not that manual. Following it would have only added to the confusion. It would be better not to read it.”

The fiction of Chernobyl has persuaded many that nuclear power is dangerous. And the media have been ready to extend that impression to their eight year long account of Fukushima. Reassurance, though completely justified based on facts available within ten days, quickly dropped out of the headlines <https://www.bbc.co.uk/news/world-12860842>

But such a cavalier popular attitude to reality prevents decision making in the best interest. We teach that lesson to children by reading them Aesop’s Fairy Tale, “The Boy Who Cried Wolf”, said to date from 600 BC. Raising the alarm by shouting “Wolf” when there is none, dulls any public response in the event of a real emergency.

The Fake News in this case is the local health impact of a radiological accident. It was not very significant, even at Chernobyl, and the low risk from radiation generally is confirmed by the other accidents, Windscale, Three Mile Island, Goiania and Fukushima. The part of the wolf who attacks the unprotected sheep at the end of the fairy tale is taken today by climate change, and we ourselves are the sheep

whose survival is threatened.

But this fairy story itself illustrates what we might do to rehabilitate nuclear power. If we cannot suppress the influence of fiction on the public perception of radiation, we should engage it. The powerful story of nuclear fear was confirmed for many by Neville Shute's 1957 post-apocalyptic novel "On the Beach". That was what frightened the evidently gullible Helen Caldicott, as she recalls. Today we need new novels, plays, operas and poems that speak to the wonderful gift that is nuclear power, seen in contrast to the likely global threats posed by climate change and the desecration of nature by the mis-named "renewables".

So we should press on with implementing the nuclear power that we need as soon as possible. For, hark, is that the wolf that I hear at the door?

Wade Allison, Honorary Secretary  
Oxford, 22 May 2019

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