

Meltdown

“An RBMK reactor uses Uranium-235 as fuel. Every atom of U-235 is like a bullet traveling at nearly the speed of light, penetrating everything in its path: woods, metal, concrete, flesh. Every gram of U-235 holds over a billion trillion of these bullets. That's in one gram. Now, Chernobyl holds over three million grams, and right now, it is on fire. Winds will carry radioactive particles across the entire continent, rain will bring them down on us. That's three million billion trillion bullets in the.. in the air we breathe, the water we drink, the food we eat. Most of these bullets will not stop firing for 100 years. Some of them, not for 50,000 years.”

- Professor Valery Legasov (Jared Harris) in the HBO mini-series [Chernobyl](#).

“In 1961, at the height of the Cold War, a B-52 bomber carrying two Mark 39 thermonuclear bombs accidentally crashed in rural North Carolina. A low technology voltage switch was the only thing that prevented a 4-megaton nuclear bomb with 250 times the yield of the bomb dropped on Hiroshima from detonating on American soil. In addition to killing everyone within the vicinity of the blast, the winds would have carried radioactive fallout over Washington D.C., Baltimore, Philadelphia, and New York City. It is not inconceivable to imagine that, at the height of cold war, a weapon of that magnitude exploding randomly on the eastern seaboard would have triggered immediate accidental retaliation against the Soviets resulting in full scale Armageddon and the end of humankind as we know it. This is just one of many nuclear accidents during the cold war. Peace has a dark side.”

- From *Volatility and the Allegory of the Prisoner's Dilemma* by Chris Cole of Artemis Capital Management, October 2015.

The North Carolina 1961 nuclear accident is not so well known. The date was 24 January 1961. The plane was a United States B-52 Stratofortress carrying two nuclear bombs, which lost altitude over Goldsboro, in rural North Carolina. With the plane having sustained a fuel leak in its right wing, the crew were advised to maintain a holding pattern along the coast

while they burnt off as much fuel as possible. On reaching their assigned position it transpired that the leak had worsened and they were now running out of fuel. The crew were advised to return immediately to Seymour Johnson Air Force Base.

They never made it. They lost control of the plane at 10,000 feet as they began their descent. Five of the crew ejected and landed safely. One crew member ejected but was killed on landing. Two crew members died in the crash.

As the aircraft spun out of control, between 1,000 and 2,000 feet it parted company with its two 4-Megaton nuclear bombs. Arming mechanisms on one of the bombs activated, including charging its firing capacitors and deployment of a 100-foot-diameter parachute.

In all, of six of the bomb's arming mechanisms, five of them triggered. Only a low technology voltage switch prevented a 4-Megaton bomb accidentally detonating on US soil.

Lt. Jack Reville, the bomb disposal expert sent in to disarm the bomb, commented in 2011,

“As far as I'm concerned we came damn close to having a Bay of North Carolina. The nuclear explosion would have completely changed the Eastern seaboard if it had gone off.”

The bomb would have destroyed everything within a 17-mile radius. A declassified document written by Parker F. Jones of Sandia National Laboratories somewhat understatedly concluded that “The MK 39 Mod 2 bomb did not possess adequate safety for the airborne alert role in the B-52.”

The author Michael Lewis, referring to the Goldsboro incident in his 2018 book *The Fifth Risk*, is glass half full about the role played by Big Government:

“The reason it's worth thinking about this.. is the reason that bomb didn't go off was because of all the safety devices on the bombs, designed by what is now [the Department of Energy].”

Put aside the fact that Big Government built the bomb in the first place; we are still left with the uncomfortable fact that five of its six arming mechanisms failed.

What are some of the lessons we can draw from Craig Mazin's gripping HBO mini-series *Chernobyl* ?

- It all comes down to money.

The primary reason why the explosion on 26th April 1986 at Reactor Number 4 of the Vladimir Ilyich Lenin Nuclear Power Plant in Chernobyl became the world's worst nuclear accident was because the Soviets backed the cheapest technology – the RBMK High Power Channel-Type Reactor, and with no containment vessel – over more expensive but safer alternatives.

- The dangers of Groupthink.

Groupthink and unwarranted deference to authority meant, firstly, that workers at the Reactor were overruled by local managers eager for advancement and willing to cut corners. The stifling Soviet command and control system then ensured – with any bureaucracy’s instincts for self-preservation – that news of the disaster was carefully “managed” so as to minimise the political fallout. Of course, that meant that the **actual** fallout was far worse than it might have been, and that lives were either horribly worsened or lost outright during the long period of botched crisis management.

- An ounce of prevention is sometimes better than a ton of cure.

Roughly 100 tons of highly radioactive debris had to be cleared from the roof of the plant before it could be entombed within a concrete sarcophagus. Although the Soviets used remote-controlled robots for part of the task, many of them failed as the radioactivity fried their circuitry. 90% of the debris would end up being removed by “bio-robots” – i.e. men.

Over 1 million acres of agricultural land and nearly 2 million acres of forest were removed from production.

By 2005, the accumulated cost to Belarus alone was estimated at \$235 billion.

A 30 km exclusion zone around the site remains largely uninhabited.

The official death toll remains at 31 human lives. A 2007 Russian publication estimates, on the other hand, 985,000 premature deaths arising from the radioactivity released. The true human cost will never be known.

Nuclear fission is perfectly suited to high drama. It is invisible, scary and, under strictly controlled circumstances, perfectly safe. But, like socialism, for example, when it gets out of control, it has the potential to destroy everything and leave a devastating aftermath.

From [The Daily Telegraph](#), 24th June 2019:

John McDonnell has confirmed Labour plans to delist from the London Stock Exchange any company that “fails” to address the climate change crisis.

In a speech to City leaders and hosted by lobbying group UK Finance, the shadow chancellor said that regulation was necessary to “divert investment away from fossil fuels”.

This effort required legislation to ensure that companies could be stripped of their London listings if necessary, he added.

“This means that when we delist companies that fail to meet environmental criteria from the London Stock Exchange, investors can be confident that their money is not going on making the world uninhabitable for their children,” Mr McDonnell said.

We have no strong view in the Climate Change debate, such as there can be one with Greta’s green SJW hordes jangling the keys to the kingdom and goading naïve politicians into ruinously expensive virtue-signalling at taxpayers’ expense. Suffice to say that, in the aftermath of

Chernobyl, the need for honest and objective science, and scientists, has never been greater. Cometh the hour..

In the context of any debate about energy, two current tweets are also relevant and worthy of attention. From the BBC's Chris Mason:

MPs have approved - without a vote - a change in the law so that the UK is committed to net zero carbon emissions by 2050. At the end of a short debate in the Commons, MPs backed a statutory instrument which amends the Climate Change Act 2008.

And in response, from Christopher Snowdon of the IEA:

They haven't managed to get us out of the EU after three years because some of them think it might damage the economy, but they nod this trillion pound pig in a poke through on a Monday afternoon.

They say you get the politicians you deserve. So what on earth did we all do to justify this unprincipled rabble ?

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