

Editorial

Three Mile Island – lest we forget

Laurent Vogel

ETUI

The events commemorated by a society – and the events passed over with silence – say a lot about that society. The anniversary of the Three Mile Island accident, which occurred 40 years ago in a nuclear power plant in the United States, has received almost no media coverage, even though it was a major incident which, in many ways, sowed the seeds for the later backlash against the ideology of progress. It is hardly surprising that leaders such as Trump, Bolsonaro and Putin should shy away from the topic of past nuclear disasters, but it is downright worrying that the international media and academic circles are also happy to consign them in the past.

The incident at Three Mile Island in Pennsylvania (United States) – the first major accident at a nuclear power plant – occurred on 28 March 1979, when various factors contributed to a chain of events which resulted in the temperature within the reactor core rising rapidly (leading to partial fusion and the associated damage) and radioactive water penetrating into the containment chamber.

There were no serious public health consequences, and the reactor did not explode despite the large amounts of hydrogen produced by the high-temperature chemical reactions, but the incident came within a hair's breadth of becoming a major nuclear disaster. Although each individual link in the chain of events would have been harmless or repairable had it occurred in isolation, their concatenation had consequences of the utmost severity – even though this was precisely what appeared to have been ruled out by all the risk assessments carried out on the basis of probabilistic models. Design errors, disregard of previous incidents, inadequate training of "operators" who were regarded as mere drudges, negligence on the part of the public institutions tasked with acting as regulatory authorities, "wiggler room" built into standards in order to avoid thwarting the progress of the nuclear industry, and on and on – all of these factors played a part in the catalogue of failings which led to the accident.

Back in 1984, the sociologist Charles Perrow published an in-depth analysis of what had really happened on the ground in a book entitled *Normal Accidents*. The technical systems at Three Mile Island had apparently been functioning correctly, and so the incident could be deemed a "normal accident" within a system which was designed for profit and which placed managers and workers in separate silos.

Three Mile Island triggered a shift in the nature of the debate on nuclear power; the topic started to be discussed not only by experts in the field, but also by citizens' associations which brought together students, researchers, trade unionists and people living in the vicinity of nuclear power plants. New initiatives were launched, the various disciplines involved in nuclear research began to talk to each other, campaigners started to employ militant tactics, and public opinion polls confirmed the success of the novel alliances which emerged. The technoscientific doctrine began to attract criticism from socially minded quarters, and one of the most important arguments against nuclear energy was first heard (an argument which is social and political in nature rather than technical or scientific, and which remains relevant today): the concentration of capital and power necessary for a nuclear energy programme cannot be reconciled with a social democratic approach to energy management. The occurrence of further disasters in the future is therefore inevitable, and the only thing that remains unclear is their exact dates and circumstances.

Three Mile Island was followed by Chernobyl (1986) and then Fukushima (2011); their public health consequences were vastly more serious, and aggravated yet further by the social division of labour. In both the former Soviet Union and Japan, the thousands of frontline "liquidators" who were sent in to respond to these incidents – and who were drawn from the most exploited sections of society – were knowingly sacrificed and exposed to immense levels of radiation. Once again, this was a "normal accident"; the radiation to which the "liquidators" were exposed over a number of weeks was the same radiation (albeit on a different order of magnitude) to which countless subcontractors – assigned to the most hazardous tasks in nuclear power plants which are "functioning properly" – are exposed on a daily basis.

The doctrine of never-ending progress and blind trust in technological solutions is

all the rage again today, as though society had failed to learn any lessons at all from the errors of the past. This ideology underlies the narrative of the global warming sceptics (or at least those willing to move beyond simple denial), and has a major influence on institutional action by serving as a pretext for delaying decisions which are as necessary as they are radical. Multinational corporations eager for a recovery in their profit margins are stepping up the pressure to enshrine the "innovation principle", which stands in direct opposition to the precautionary principle; its proponents argue that risk should be accepted as an intrinsic feature of all innovation, and that overly restrictive regulations should not be imposed since, sooner or later, a technological solution will be found to our current problems.

Given that society is staring down the barrel of environmental disaster, and given that the associated risks are distributed extremely unevenly between the social classes, the "innovation principle" is a bitter pill to swallow. It combines both cynicism and naivety: cynicism because its sole purpose is to put more money in the pockets of the privileged few who are already hogging most of the world's wealth, and naivety because the history of the past few decades tells us nothing if not that we would be misguided to believe in the ability of technology and science to come up with miraculous solutions. Rushing headlong into the future will not help us to overcome the immutable material and human limits which exist; instead, we must prioritise the concept of social and human value over the desire of the ruling classes to make everything buyable and sellable. ●

Further reading

Perrow Ch. (1984) *Normal Accidents: Living With High Risk Technologies*, Princeton, NJ, Princeton University Press.
Jobin P. (2011) Retour à Fukushima, *HesaMag*, 11, 38-43.

The concentration of capital and power necessary for a nuclear energy programme cannot be reconciled with a social democratic approach to energy management.
