

Observing Fukushima: A Case Study of Japanese Nuclear Policy through Niklas Luhmann's Social Systems Theory

Summary 要約

The Fukushima disaster was the worst nuclear disaster since Chernobyl and occurred in a country where nobody thought such a thing could happen. Japanese technology and engineering was considered to be the finest in the world, to the point where nuclear planners in Japan did not even plan for an emergency of the scale of Fukushima. Whilst the threat of imminent danger has receded, the Fukushima Daiichi nuclear power plant remains in the centre of a 20km exclusion zone whilst workers try to dismantle it. This process will take decades and cost hundreds of billions of dollars.

Despite the disaster, government policy has returned to a pro-nuclear outlook with an aim of increasing nuclear power to around 22% of Japan's energy needs by 2030. This is in the face of public opinion which remains anti-nuclear and a history of anti-nuclear protests in Japan, especially after Fukushima. This raises various sociological questions such as the way nuclear safety is managed, Japanese government policy towards nuclear power on an archipelago where 20% of the world's major earthquakes strike, and the rise and fall of anti-nuclear protests in Japan and why public opinion could not influence policy.

In this thesis I use the works of Niklas Luhmann and his Social Systems Theory in order to explore the problem of managing nuclear power in a highly complex, functionally-differentiated society. Using Luhmann's theory of risk, I show how nuclear policy in Japan has been shaped by the risks observed by decision-makers and how problems in nuclear safety organisation led to environmental risks not being taken up into decision-making. After Fukushima, the public had their own risk perceptions which were anti-nuclear. The government could ignore these due to a lack of public input into the political system. They were then able to win landslides in subsequent elections, despite their pro-nuclear stance, due to the weakness of the Japanese political opposition.

I conclude that whilst the various function systems have learnt from the Fukushima disaster, the ability to control high technology in modern society, or to steer society in any way, is severely limited. There is always the possibility of dangers in the environment of systems which they have not taken account of. The Fukushima disaster exposed this for the world to see. While nuclear safety organisation should now be better able to deal with the issues in nuclear management that arose, there is no such thing as absolute safety. Political problems also remain. In a country where public concerns are rarely taken into account and where there is not a strong opposition party to bring these concerns to the centre of the political system, there remains the ever present danger that risky decisions will be made which ignore the dangers they create for certain elements within Japan. This could leave Japanese decision-makers in a position where they will once again sleepwalk into disaster.