## WORST CASES: TERROR AND CATASTROPHE IN THE POPULAR IMAGINATION

**Lee Clarke**
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Critical Infrastructure Protection (CIP) – activities that enhance the physical and cyber-security of key public and private assets – is the focus of urgent

attention among Western governments in light of recent power failures, natural disasters, epidemics and terrorist attacks, both threatened and realised. Government studies and popular analyses note the complex, interdependent and fragile make-up of these infrastructures; one small failure can have a massive and unpredictable cascading effect. Consider the 2003 North American power outage: overgrown trees in Ohio helped trigger a power failure that affected 50 million people and cost the US economy anywhere from $4 billion to $10 billion (US-Canada Power System Outage Task Force 2004, p. 1). These events not only affect health and economics; they also influence politics. How successful elected officials are at managing crises influences the degree of public support they receive, and therefore, such crises can have an immediate and far-reaching impact on government policies and resources. One critical question for policy-makers is, with such potentially serious consequences and such high public and political expectations, how do governments protect these fragile and interdependent critical infrastructures?

In *Worst Cases* Lee Clarke builds on the debate in Organization Studies that is concerned with safety and reliability of complex technological systems. Broadly speaking, two schools divide the field. Whereas Normal Accidents Theory holds that accidents are inevitable in organizations that have interactive complexity and little slack (*tight coupling*), High Reliability Organizations Theory states that hazardous technologies can be safely controlled by complex organizations if the correct design and management techniques are followed. (For a comparative discussion of the two theories, see Sagan 1993, pp. 11–52.) Clarke tends towards the former. Clarke sees disaster, or at least the potential for disaster, everywhere. He highlights our narrow understanding of complex systems and laments the hubris that allows us to think we can control them. He challenges our present understanding of the critical infrastructure: a list of critical assets often reads like an engineer's inventory, he notes. It neglects equally important *social* systems, for instance (Clarke 2006, p. 165).

Selective understanding of the infrastructure informs failed disaster planning. Clarke argues when policy-makers plan for disasters, they too often think in terms of past experiences and probabilities (*probabilism*). This approach leads to collective imagination breakdown. Thinking in terms of 'worst cases' and that which is possible (*possibilism*) is potentially more enlightening. Possibilism and counterfactuals ('what if' scenarios) offer the promise of thinking 'outside of the box.' They disrupt routine thought patterns, stretch the imagination and potentially produce creative solutions, which can allow people to make systems more resilient and can even promote social betterment. Ultimately, Clarke argues that decentralisation of authority and the transfer of resources to local networks, which are much more flexible and responsive in crises than large bureaucratic institutions, is the most effective way to manage crises (Clarke 2006, pp. 167–168).

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Anticipating countless disasters – worst case thinking – is clearly a precautionary approach to CIP. Clarke notes, 'the precautionary principle is a tool that can sometimes be used to make some of those interests consider worst case possibilities. It can push policy-makers to be explicit about the values they are pursuing, to specify the uncertainties in their decision processes, and to imagine alternatives that they might otherwise ignore' (Clarke 2006, p. 180).

A limitation of Clarke's precautionary approach is that it addresses *only* one side of the policy debate. To start, Clarke skirts the issues of cost-benefit analyses, a significant omission. Relatedly, he contends that probabilism protects the interests of the powerful when others might suggest it protects the majority, which is not impractical in a world of limited resources and unlimited potential for crises. Further, it is not inevitable (or perhaps not even likely) that a precautionary approach would lead to balancing economic and social injustice, as Clarke contends. Powerful interests can just as easily manipulate precautionary approaches to ensure existing power structures are perpetuated, if not reinforced. Finally, as Cass Sunstein argues in *Laws of Fear: Beyond the Precautionary Principle* (2005), if one chooses to invest in mitigating the risks associated with one problem, one almost certainly neglects *other* risks. In the 1970s, for instance, the US government committed considerable resources to prepare for an anticipated outbreak of the Swine Flu. The flu never materialised but millions of dollars were spent in preparing for it and many fell sick from unnecessary inoculations (Neustadt and Fineberg 1983). Clarke is silent on the drawbacks of such overreactions.

Nevertheless, *Worst Cases* is a welcome contribution to the CIP debate and the dialogue in Organization Studies about control and accidents. It is very accessible, and although a little morbid, it is an intriguing read. Clarke is also careful to take a much broader view of disasters than simply 9/11, and in so doing he draws our attention to patterns of psychological and systemic bias that help to characterise and even perpetuate failures. While Clarke concludes by conceding that possibilism should be thought of as complementing probabilism, not competing with it, he nevertheless takes seriously a difficult and somewhat extreme position. Whereas Sunstein alerts us to the trade-offs inherent within precautionary approaches, Clarke alerts us to the landmine of potential low probability/high consequence disasters that precautionary approaches alone are likely to detect.

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## REFERENCES

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