Chapter V
Planning for the Worst, Bringing Out the Best?
Lessons from Y2K

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ABSTRACT

Organization theorist Lee Clarke (2005) argues when policy makers plan for disasters, they too often think in terms of past experiences and "probabilities." Rather, policy makers, when planning to protect the infrastructure, should open their minds to worst-case scenarios; catastrophes that are possible but highly unlikely. Underpinned by a precautionary principle, such an approach to the infrastructure would be more likely to produce "out of the box" thinking and in so doing, reduce the impact of disasters that occur more frequently than people think. The purpose of this chapter is to consider the utility of Clarke's worst-case planning by examining Y2K preparations at two US government agencies, the Bureau of Labor Statistics (BLS) and the Federal Aviation Administration (FAA). The data concerning Y2K come mostly from official US government sources, interviews, and media analysis. The chapter concludes that the thoroughness of worst-case planning can bring much needed light to the subtlety of critical complex and interdependent systems. But such an approach can also be narrow in its own way, revealing some of the limitations of such a precautionary approach. It potentially rejects reasonable efforts to moderate risk management responses and ignores the opportunity costs of such exhaustive planning.

INTRODUCTION

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, computer viruses, natural disasters, epidemics and terrorist attacks, both threatened and realised (GAO, 2005). Government studies and popular analyses note the complex, interdependent, and fragile make-up of these infrastructures and the technologies that underpin them; 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). One critical question for policy makers is how do governments protect these fragile and interdependent critical infrastructures?

Organization theorist Lee Clarke (2005) argues that when policy makers plan for disasters, they too often think in terms of past experiences and "probabilities," that which is calculable. Problems are often structured by existing bureaucratic interests and routines rather than by the problems themselves. To Clarke, the approach is too limiting since it is the unimagined and the events considered "low probability" that often wreak havoc on society. Policy makers, when planning to protect the infrastructure, should therefore open their minds to worst-case scenarios, catastrophes that are possible but highly unlikely. Clarke argues such an approach, ideally underpinned by a **precautionary principle**[1]**,** is more likely to "stretch the imagination," produce "out of the box" thinking, and in so doing, reduce the likelihood of these all-too-frequent catastrophes.

Clarke champions US reaction to **Y2K** (the Year 2000 computer bug), the date-related computer bug that threatened to bring systems down around the world at the turn of the century, as an instance of successful "**worst-case planning**" (Clarke, 2005, p. 73). He recalls the collective response from across all sectors that anticipated numerous scenarios and then guarded against them. To Clarke, this exhaustive effort averted a potential socioeconomic meltdown.

The purpose of this chapter is to consider the utility of Clarke's worst-case planning by examining Y2K preparations at two US government agencies, the Bureau of Labor Statistics (BLS) and the Federal Aviation Administration (FAA). First, the chapter situates Clarke's book in the relevant Organization Studies literature and summarizes Clarke's main argument for worst-case planning. Second, it recalls the Y2K case. Third, the chapter describes the Y2K directives that the Executive Office issued for government departments and agencies, and then employs the Hood, Rothstein, and Baldwin (2001) framework to compare the size, structure, and style of the BLS's and the FAA's approaches to Y2K. The chapter then considers the extent to which Y2K operations embodied the qualities that Clarke predicts for worst-case planning. The chapter concludes by asking, first, did the US government's response to Y2K constitute worst-case planning and, second, is worst-case planning an effective and desirable risk-management strategy? The data concerning Y2K come mostly from official US government sources, 34 in-depth, semistructured interviews, including 15 interview subjects from the specific agency case studies or their parent departments, and an analysis of media coverage from three leading US newspapers.[2]

Worst-case planning helps to bring to light the fragile, complex, and interdependent nature of critical infrastructure. While it can be expansive in one sense, however, worst-case planning can also be very narrow. Endless counterfactuals risk absorbing considerable resources without acknowledging the opportunity costs of such actions. Heady enthusiasm over eliminating all risk scenarios can also marginalize those who offer alternative, more-sceptical views. In such

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