

Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation. By Lynn Eden. Ithaca, N.Y.: Cornell University Press, 2004. Pp. xiv + 365. \$32.50.

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Midway through her superb book *Whole World on Fire*, Lynn Eden recounts the many nuclear weapons tests carried out by the U.S. government in the early 1950s. The scale of these explosions was tremendous, up to a thousand times more powerful than the blasts at Hiroshima and Nagasaki. The tests were designed in part to help scientists build models to predict resulting damage, but the methodology seemed curious. In each explosion's aftermath, observed MIT physicist Theodore Postol, "all these fucking things have burned down and these guys are worried about whether a nail came out of a wall or not" (p. 148).

This is the puzzle that Eden sets out to solve: why the government has consistently supported and developed knowledge of *blast* damage caused by nuclear weapons but largely ignored the potentially more devastating effects of *fire* damage. The problem may seem narrow, but in Eden's capable hands, its sweep encompasses the work of hundreds of scientists and policy makers in dozens of agencies across many decades. It is also a problem still without an ending, as our continued failure to account for the impact of "mass fires" has enduring and significant defense-related policy implications.

Equally important, the case of damage prediction provides a vehicle for Eden to develop and employ an analytic framework centered on the social construction of organizational knowledge. Arguing that judgments presented as straightforward products of physical phenomena were in fact historically and socially constructed organizational outcomes, she views the government's problem-solving process as emerging through the enactment of "knowledge-laden organizational routines" shaped by organizationally constructed approaches to problem solving, or "organizational frames."

In so doing, Eden moves beyond conventional interest-based approaches to nicely integrate insights about the constructed nature of knowledge with an emphasis on endogenous negotiations typically stressed in organization theory. Significantly, this harmonization allows her to move from a conception of organizational frames as static products to a focus on the dynamic processes through which those frames emerge and develop over time. The tool kit here is large; Eden's analysis incorporates relational patterns and status structures both within and across agencies, as well as the varied resources allocated by these agencies, the state of knowledge in relevant scientific disciplines at key junctures, and the exogenous events that impact organizational landscapes.

The bulk of this book is devoted to developing the argument historically.

Beginning with precision strategic bombing doctrines developed in the 1930s and moving through the Second World War, subsequent rounds of nuclear weapons tests, the evolution and end of the Cold War, and contemporary policy considerations, Eden is concerned with processes of continuity, change, and—most significantly—contingency. Much of this temporal exploration follows a path-dependent line, with earlier choices and allocations affecting later ones, contributing to an inertial or self-reinforcing dynamic. But she also complicates that straightforward story, challenging more deterministic path-dependent models to demonstrate how organizational discontinuities can result from “internal incubators of innovation” or the efforts of particular resourceful or well-situated individuals, rather than only through external “shocks” (p. 288).

Such conclusions are facilitated by the wide range of data utilized here, including published reports, intra-agency communications, and multiple in-depth interviews with many of the key players. Eden deftly makes use of this evidence, though at times readers might be inclined to wonder if she relies excessively on the accounts of particular central actors. Even this strategy has its benefits, however, as these individuals’ actions often illuminate the messier contingencies and change processes that make the analysis compelling. Such concerns are further allayed by Eden’s ability to skillfully embed these personal histories and perspectives within relevant social and historical contexts.

This rigorous attention to detail promises—and delivers—much to readers seeking insight into the construction of organizational knowledge and also to those primarily interested in the implications of nuclear weapons policy. This balancing act, however, at times results in a not-always-seamless effort to engage these varied audiences. Such tensions emerge within the book’s overall structure, which largely segregates broader theoretical considerations from the more descriptive narrative, blunting our ability to grasp how salient insights about path dependency and the like link to historical evidence. Another tension arises in the opening chapter, an extended description of the impact of a hypothetical nuclear attack on Washington, D.C. Alongside viscerally powerful accounts of collapsing buildings, airborne cars, and evaporating marble memorials, Eden incorporates detailed technical discussion of overpressure, thermal fluence, and VN values. These technical considerations populate most later chapters as well, and while they are unfailingly clear (not a small accomplishment), it is not always apparent how their inclusion contributes to our understanding of theoretically relevant historical and organizational processes.

These, however, are secondary quibbles and should not overshadow Eden’s considerable accomplishment here. *Whole World on Fire* is an engaging, comprehensive account of the counterintuitive evolution of an important policy dilemma. Its argument should hold influence in political circles, as well as provide indispensable reading for organizational and historical sociologists.