Lavoy, Peter R., **Scott D. Sagan** and **James J. Wirtz**. *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*. Ithaca, NY: Cornell University Press, 2000.

The dangers resulting from the proliferation of nuclear, biological and chemical weapons have been central to the study of international security affairs for much of the past two generations. This important volume breaks new ground by moving past a focus on the reasons why international actors acquire unconventional weapons. Its editors and contributors seek to examine the ways in which "new" proliferators actually use and control unconventional weapons for the purposes of attaining their policy objectives. In the introductory chapters, the editors set the agenda for empirical analysis by recasting three familiar theoretical frameworks (organization theory, realism and strategic culture theory) as competing heuristics by which to explain and generate predictions about new proliferators' military doctrines and their unconventional weapons command and control systems. Generally, organization theory predicts that parochial interests will lead groups within states to act to develop doctrines and command and control systems that will benefit their organizations. Realism posits that unitary rational actors deal with external security threats by developing doctrines and control systems that reflect a desire to maximize the likelihood of successfully countering those threats. Different actors perceiving different threats adopt different doctrines and, subsequently, different command systems for their unconventional weapons. Finally, strategic culture theory indicates that domestic factors and cultural constraints, including taboos and moral norms against usage, are more important in shaping the actions of leaders than are the rational pursuit of similar international security ends or organizational goals; thus, observers might expect leaders to develop different doctrines and control systems despite being in similar international situations.

As these theories often predict similar outcomes, the editors recognize the necessity of thoroughly examining the causal factors underlying use and control decisions. They use comprehensive case studies of seven new proliferators - Iraq, Iran, Israel, India, Pakistan, North Korea and the Aum Shinrikyo cult - to comparatively test the applicability of each of the frameworks to their doctrines and command systems. A number of important general conclusions can be drawn from these informative contributions. Overall, the editors posit that classical realism (rather than neorealism, which predicts the development of defensive doctrines in defense of the status quo) appears to fare best among the theories tested. Actors indeed develop doctrines for both offensive and defensive purposes. Further, the labeling of new proliferators as "irrational" is misleading. While the desire to kill numerous people may make terrorist groups such as Aum seem "crazy," and the willingness of some proliferators to withstand military and economic punishment to develop unconventional weapons may make them seem "undeterrable," their behavior evinces rational calculation toward the achievement of their objectives. The empirical evidence also indicates that the nature of the external threats actors face determines the amount of authority leaders are willing to delegate to subordinates in the event of a crisis. According to Timothy McCarthy and Jonathan Tucker, for instance, Saddam Hussein, despite his highly centralized regime, delegated authority to field commanders to use chemical weapons against Israel in case of a

"nuclear decapitation" attack on Baghdad during the Gulf War. Israeli leaders, who have not had to fear such attacks on Tel Aviv, have maintained a firm grasp on Israel's nuclear command and control system.

It is evident, however, that realism does not tell the entire story; both strategic culture and organization theories help to address the anomalies left unexplained by realism. One observation made throughout the study is that the classification of nuclear, biological and chemical weapons as "weapons of mass destruction" obscures important differences among the weapons and the way actors think about them. While both Iraq and North Korea consider chemical weapons to be "force multipliers" for conventional weapons because of their relative inexpensiveness and battlefield usability, nuclear proliferators appear to have treated their arsenals differently. Due to the immense destructive power of nuclear weapons, both materialist concerns and strong normative aversions can result in a reluctance to develop adequate deployment and usage doctrines, and thus constrain use. Indeed, as is evident in Waheguru Pal Singh Sidhu's and Avner Cohen's studies of Indian and Israeli nuclear doctrine and control (respectively), nuclear weapons often are viewed as status symbols signifying power to domestic or international audiences, or as usable only to ensure state survival. As such, adequate doctrines for credible threat or use may remain rudimentary, and this lack of development is due in large part to "non-realist" considerations. Additionally, the role of variously successful organizational attempts to exercise control over doctrine and command, especially in the cases of the Pakistani military and the Islamic Revolutionary Guard Corps in Iran, indicates that realism's unitary actor assumption may not always hold.

This work is a significant contribution to the study of international politics, and is seminal in the analysis of the ways in which the policies of new proliferators reflect their views about their domestic and international situations and how their unconventional weapons can be used to address those situations. The illustration of the diversity in the development of proliferators' doctrines and unconventional weapons control systems is invaluable to all students of international politics. For the statesperson, the volume acts as an admonition to refrain from treating all proliferators alike; for the scholar, it serves as an exceptional example of the analytical robustness that results from a willingness to use multiple theoretical approaches to explain complex phenomena.

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