

## Introduction: Nuclear Weapons in World Politics

In May 1998, India shook the world with a series of nuclear tests accompanied by a declared strategy of “credible minimum deterrence.” More than half a decade later, the contours of the strategy are not entirely clear. In essence, the Indian conception of minimum deterrence encompasses the understanding that it is not necessary to have large numbers of sophisticated weapons to deter nuclear adversaries; that nuclear “balances” are not meaningful; and that weapons need not be deployed and kept in a high state of readiness in order that deterrence be effective. Beyond this, important questions remain. While the development of capabilities in technology and organization proceeds apace, nobody is quite clear about what minimum deterrence means. How many weapons are adequate, and of what kind? Might deployment become necessary at some point of time, and if so, under what circumstances? Is war still possible, and if so, how? What kind of arms control is feasible? These and many other questions have been the subject of much discussion since the tests. Perhaps the best thing about the tests is that such questions are now being asked, for they scarcely ever were before the 1998 tests, though the weapons had long been built. This book attempts some answers by examining the fundamentals of nuclear weapons and deterrence in the Indian context.

This is neither a history nor a blueprint. Rather, it is a critique of Indian nuclear thinking and practice based on an inquiry into the basic assumptions and principles that underlie an optimal nuclear weapons posture. The book’s central concern is with the hitherto inadequately defined conception of “minimum deterrence” officially adopted by India in 1998, and with the need to clarify its parameters so as to arrive at a cost-effective nuclear strategy. It seeks to comprehend the nature of the world around us, the place of nuclear weapons in it, and the strategic framework that is appropriate to this world.

The character of world politics makes the possession of military nuclear capability a reasonable choice in certain circumstances. Yet the extraordinarily destructive quality of nuclear weapons makes their possession problematic, creating new dimensions of insecurity that can never be eliminated. What minimum deterrence can do is reduce them significantly without sacrificing security. The main objective of this book is to spell out the parameters of minimum deterrence, assess India's nuclear-strategic thinking and practice, and help correct the flaws discovered in the process.

Policy makers choose diverse doctrines because they fail to understand that minimum deterrence is the most cost-effective. A nation's actual choice of posture depends on the historical context in which the decision is made, on its technical and financial prowess, and on its normative preferences about the use of force in general and nuclear weapons in particular. India's adoption of an official doctrine of minimum deterrence is embedded in its historical experience and ethical predisposition, but has tended to lose its moorings because of an inadequate understanding of its fundamental assumptions. This is evident from India's search for a variety of capabilities in nuclear hardware, the recent failed experiment with coercive diplomacy or compellence vis-à-vis Pakistan, and the lack of clarity as to why missile defense is perfectly compatible with minimum deterrence. This book also examines a largely neglected area in the nuclear weapons discourse: the relationship between nuclear terrorism and nuclear strategy. Minimum deterrence, it is argued, is the optimal strategy for a country that faces a significant threat from nonstate actors with an interest in acquiring the capability for mass destruction. Finally, the implications of nuclear weapons for democracy are assessed, and the case is made that minimum deterrence keeps to tolerable proportions the moral and political costs that the possession of these weapons entails.

In the pages that follow, the gray areas between opposite trends and realities that affect India's still evolving nuclear posture are explored. These contradictions encompass the tensions between:

*Anarchy and interdependence in world politics*—between the self-help character of the world of states, in which power and the use of force are still the bases of national survival, and the increasing integration of this same world, succinctly described by the term "globalization." In the uncertain space between them lies the realm of decisions about the extent to which armed force, and nuclear weapons specifically, must be thought of and organized. The fundamental question is how best we can reduce threats and promote cooperation in such a world.

*The possession and non-possession of nuclear weapons*—between the sense of

insecurity that nations experience when, under threat, they do not have the means to exercise deterrence, and the sense of insecurity they feel even after they *do* have them because there is no guarantee that deterrence will always work.

*Nuclear weapons as usable instruments and as unusable instruments of state power*—between the fact of their actually having been used and the possibility of future use, on one hand, and, on the other, the powerful practical and moral constraints on their use for more than half a century. Here, we grapple apprehensively with the dilemma of possessing instruments of mass destruction that we never want to use, and yet threaten to use for the sake of our own survival.

*The defensive character of one's own weapons and the offensive character of those possessed by others*—between the security nations seek when they acquire (or attempt to acquire) nuclear weapons, and the insecurity they experience when others do so while citing the same reasons.

*Democracy and deterrence*—between the decentralizing tendency, openness, and respect for human life that characterizes democracy, and the centralizing tendency, secrecy, and indiscriminate destructiveness that adheres to nuclear weapons.

This is a holistic examination of these areas, encompassing three types of relationship. First, the study investigates the domain of interstate interaction, which is characterized by coexisting patterns of cooperation and conflict. Here, Indian policy must simultaneously optimize threat reduction and promote cooperation—not an easy task, since measures taken to offset threats, such as the acquisition of nuclear weapons, generate new tensions. The problem is to maximize security while at the same time restraining the negative impact of measures taken to do so. In this respect, the fundamental question to ask in organizing nuclear weapons for the purpose of deterrence is not how much is enough, but how *little* is enough.

The second relationship investigated is that between the external and internal realms of the state. Policy decisions as to how to respond to external threats are made in the latter. The ways in which Indians think about nuclear weapons and their preferences about how to organize their responses to nuclear threats are different from the ways in which others, for instance Americans and Russians, think about them. The reasons for this are historical, but also “cultural,” though in a political-strategic rather than a social-anthropological sense. Like everyone else, Indians are not always very clear or consistent in their thinking (not least because of the contradictory nature of the weapons themselves), which opens the door to uncertainty about what is ap-

appropriate, and potentially, to a needless expansion of nuclear capabilities. The book presents a line of reasoning that fortifies the historically restrained character of India's minimum deterrence posture.

The third relationship examined is that between the state and civil society. The centrality of this relationship, marked as it is by the last set of opposites mentioned above, is unquestionable. Ultimately, the security of the citizen is indivisible: protection against internal threats is an integral part of the security needs of the individual. And if, as is evident in the case of nuclear weapons, the search for external security detracts from the citizen's everyday security within the state, that is a serious problem that needs to be acknowledged and dealt with. Here too, minimum deterrence must be understood in the most comprehensive way, not only as a means to augment the security of a democratic society by countering external threats, but as a doctrine that minimizes the erosion of that democratic society by curtailing the inherently anti-democratic character of nuclear weapons.

The book journeys across territory that is intensely contested. It seeks to draw attention to optimal choices, but without laboring under the illusion that these choices are unambiguous. There is no scientific model here, only an attempt to navigate a difficult political course through perilous waters. Above all, this is a work about the fundamental politics of choice. It is about the conditions in which nuclear decisions are made, and about how, in a context in which these decisions inevitably have profound positive *and* negative effects, we might make them in such a way as to maximize the former and minimize the latter. The process of making choices must spring from Indians' own understanding of contemporary world politics. In a sense, this already exists. No other single fact better illustrates the uniqueness of the Indian position than that nearly a quarter-century elapsed between the first nuclear test of 1974 and the series conducted in 1998. India's eminently political conception of nuclear weapons, much derided by critics, has not been adequately explained, has indeed been imperfectly understood, by its own adherents. Hence, the choice of a minimalist nuclear posture lacks a sound conceptual basis in the ongoing discourse. This work is an attempt to fill the spaces between the theory and the practice of India's nuclear stance, an effort to create a stronger strategic discourse that is distinctively Indian in its strategic language and understanding, but within a framework of universal principles.

An important underlying thread running through the book is the understanding that the politics of nuclear weapons is conducted at two levels. At the primary level, there is a direct relationship between the existence of nuclear weapons and state behavior. The weapons, regardless of the strategies woven around them, produce patterns of caution and war-avoidance among

states that possess them. From time to time, states strain at the leash, but inevitably they draw back, sobered by the prospect of mass annihilation. At the secondary level, there is an overlay of symbolic strategic politics in which states engage in moves and countermoves that have no real basis in the politics of the primary level. Nonetheless, this behavior has the potential to subvert the essential stability of the primary level. This is evident, for instance, in the politics of "bean counting," where much emphasis is placed on "balances" between numbers and types of weapons grossly in excess of the requirements of deterrence. This type of politics produces nuclear arms races that spiral upward toward ever higher levels of confrontation, thereby creating the very instability they seek to avoid. The secondary level includes the politics of prestige, which is about the self-image of nations as well as about the image that other nations have of them. This type of politics may motivate states to acquire nuclear weapons, or be unwilling to relinquish them, and hampers arms control. The Cold War embodied both types of nuclear politics, with the secondary level exercising an excessive influence on the policies of its contestants. The persistence of secondary nuclear politics, in part a game played for the benefit of corporate and bureaucratic players, accounts for some of the slowness of post-Cold War arms control. In India's case, the primary level has been dominant, and the secondary one restricted to image consciousness. An important purpose of this book is to contain the secondary level of nuclear politics, which produces no benefit (other than to vested interests) but invariably carries costs. These are not only economic costs—the price of large arsenals—but, more seriously, security costs—the rising levels of risk related to "vertical" proliferation and arms racing.

The question of motivation is not the focus of this work. That has been discussed at length in numerous scholarly works, all of them centering on one or more of Scott Sagan's three causal models: security, bureaucratic politics, and normative concerns.<sup>1</sup> Rather, the purpose, while acknowledging the diverse reasons why states choose to go nuclear, is to provide a sound intellectual basis for minimum deterrence as the optimal nuclear doctrine and posture for the attainment of national security objectives. The central issue today is not whether India's actual decision to go nuclear was for the right reasons or not, but how to think about maximizing stability once the choice has been made. This involves a degree of optimism, since much that goes by the name of doctrine is devoid of substantive intellectual content. Nor is it assumed that doctrine is the necessary progenitor of nuclear posture, for politics often privileges parochial motives and uncontrollable processes.<sup>2</sup> But hope springs eternal. The project is worthwhile because it may bring a modicum of clarity and effectiveness to an enterprise that is inherently hazardous in the extreme.

## Outline of the Book

In this chapter, nuclear weapons are placed in the context of global politics. Any effort to develop a coherent nuclear strategy must begin with a cogent worldview. What is the appropriate conceptual framework for understanding the world around us? To what extent is it a world of cooperation and interdependence, and to what extent a world of conflict? What is the role of force in this world and, more specifically, what is the place of nuclear weapons in it? Such questions call for an assessment of alternative “paradigms” or ways of understanding the world. Within the broad canvas of the worldview that emerges, I discuss the fundamental characteristics of nuclear weapons and their role in the attainment of national security. These characteristics are often contradictory, which makes the formulation of policy difficult. What can nuclear weapons do and what can they not do? What have nuclear weapons done to politics and what is the politics of nuclear weapons? The answers to these questions set the parameters of cost-effective choice.

Chapter 2 focuses on the concept of minimum deterrence. Though Chapter 1 narrows the range within which optimal choices can be made, actual choices may and do vary considerably, from very large arsenals (the United States and Russia) to small ones (India and Pakistan), and beyond to what might be labeled “proto-arsenals” (Japan, Sweden). It is shown why minimum deterrence, which itself encompasses a range of potential postures, is optimal. Its various facets—deployment, delivery vehicles, targeting, and perennially debated questions about escalation, preemption, stability, and damage limitation—are analyzed in terms of the pivotal calculation of potential risk in relation to strategic objectives. Less, it is argued, is invariably better.

Chapter 3 focuses on the evolution of India’s deterrence thinking and practice, and the crystallization of India’s strategic culture of nuclear minimalism. This approach to nuclear weapons is the most conducive to the rational requirements of minimum deterrence as understood through the discussion in Chapter 2. However, strategic culture is not static. It evolves over time and needs to be reinforced if it is not to lose its bearings and carry strategy away from cost-effectiveness. Indian strategic culture has a tendency to drift toward operational conceptions whose implications are not very well understood, and hence toward the expansion of capability without a clear conception of what is sufficient. The critique ends with a call for self-awareness, balance, and consistent observance of the precepts of minimum deterrence.

Chapter 4 underscores the lack of clarity in Indian thinking in a different respect. Though it is often said that nuclear weapons are meant only to deter,

they may also be used—and on numerous occasions have been—more “proactively” to induce specific behaviors in an adversary. The chapter examines at length the shift in Indian strategy from deterrence to compellence vis-à-vis Pakistan. This shift carries intrinsic difficulties, however, because compellence is a difficult objective to achieve, and because the risks of escalation are considerable. The analysis concludes that minimum deterrence overrides compellence, and that the latter is not a viable strategy for India.

Chapter 5 is focused on missile defense. Every nuclear strategist recognizes the possibility that deterrence may fail. While the built-in restraint peculiar to nuclear weapons makes deterrence failure unlikely in a “normal” strategic relationship between states, there is nevertheless a small chance of failure owing to miscalculation, misperception, technical breakdown, or the acquisition of nuclear capability by extreme radicals. In that event, missile defense comes into play. What are the strategic implications of missile defense? The chapter analyzes from the standpoint of minimum deterrence the Indian debate over the strategic implications of the ongoing development of the U.S. missile defense system, and India’s own interest in missile defense. The discussion makes it clear that missile defense is fully in accord with the tenets of minimum deterrence and that, for India, it is both strategically unexceptionable and morally desirable.

The threat of nuclear catastrophe comes not only from adversarial states, but also from nonstate actors. Terrorism has a nuclear dimension that is almost as dangerous as the specter of nuclear war. Chapter 6 examines the ways in which nuclear/radiological terrorism affects security. Nuclear weapons and the infrastructure surrounding them are potential targets for terrorists, specifically those whose objectives are not local, but universalistic. Furthermore, acts of nuclear terrorism have the potential to spark off interstate conflict. Nuclear terrorism brings together the external and internal dimensions of security. Minimum deterrence helps to curtail the threat by reducing risks in both dimensions.

In Chapter 7, the relationship between nuclear deterrence and India’s democratic political system is discussed. Nuclear deterrence is ethically disturbing, since the security of one’s own people is sought by threatening to decimate noncombatants in another society. For a democratic society, which is ultimately founded on the recognition of universal human rights, this imposes a serious moral dilemma. While there is no escaping the responsibility that a democratic system places on the shoulders of ordinary people, the painful nature of this dilemma can be minimized by the successful practice of minimum deterrence. Nuclear weapons also tend to undermine democratic values by placing a premium on centralized power and secrecy, which in turn

erodes citizenship, accountability, and the rule of law. It is argued that, while some loss of freedom is inevitable and necessary in the interest of security, minimum deterrence best constrains these threats to democratic life.

Chapter 8 draws together the main threads of the book and looks at the uncertain future. The possibilities are diverse, for there is a wide array of factors that could turn strategy this way or that. This offers some perspective on the value of minimum deterrence. It ends with a set of pointers based on the concept of “reassurance” that could help shape the future and induce strategic stability. There are no guarantees, but neither are there better alternatives.

### The Nature of World Politics: Competing Paradigms

Notwithstanding the remarkable changes that have occurred around the turn of the century—the accelerated process of globalization, the end of the Cold War—there is an essential continuity in world politics. The conditions which make power a decisive political currency still persist. For at least some countries, particularly those whose adversaries possess nuclear weapons, nuclear deterrence is an attractive option. The end of the Cold War was not as transformative an event as it appeared at first. The demise of one of its principal combatants, the Soviet Union, marked a profound change in global politics, as the United States became the undisputed superpower of the new millennium. What would be the contours of the post-Cold War world? Would there be a dramatically different world order? Was this indeed the end of history in a Hegelian sense, with liberal democracy and capitalism henceforth to reign unchallenged in a fundamentally stable world?<sup>3</sup> Not many were convinced. To some, the new era was already marked by a very different kind of struggle, again conceived, if not quite expressed, in Hegelian terms: the clash of civilizations.<sup>4</sup> Following the dramatic terrorist attacks of September 11, 2001 (hereafter referred to as “September 11”), there emerged a widespread perception that terrorism is the defining feature of the present age.<sup>5</sup>

At a more mundane level, political leaders struggled to cope with the re-drawing of strategic maps, the end of the Soviet Union, the collapse of its vast Eurasian empire, and the troubling question: What next? That question remains inadequately answered today. It is made more challenging not only by the current pervasiveness of terrorism, but by the other great phenomenon that has transformed the world in so many ways: the postindustrial revolution. The changes the latter has engendered in communication, production, and the global flows of information and money have occurred on an unprecedented scale. One might easily argue that this transformative process ushered in the end of the Cold War. After all, the reason Mikhail Gorbachev



set into motion the restructuring (*perestroika*) of the Soviet system, thereby helping to destroy it with surprising rapidity, was that it was in danger of being left behind by technological change. The world was changing, and Gorbachev saw his country unable to keep pace. Globalization had rendered the Soviet system obsolete.<sup>6</sup> Nuclear weapons, the great symbols of Cold War confrontation, were threats to all in an interdependent world. The future lay in cooperation and stability, not in threatening mutual annihilation.

The early post-Cold War period was a time of hope. Many expected nuclear weapons to be relegated to the fringes of interstate politics, if not abolished. There was much rethinking about security, with calls for a shift from the prevailing state-centric, predominantly military-strategic conception to a new emphasis on “human security” in which people would be at the center, and the state came to be widely regarded as a part of the problem rather than as the provider of solutions.<sup>7</sup> But foreseeing the future is difficult: most projections are unreliable, partly because of the complexities of the world and its manifold interrelationships, and partly because the activities of human beings are subject to will, which is never quite predictable.<sup>8</sup> Today, we remain uncertain about the future. Nuclear weapons are still with us in the thousands, and the hope that they would be marginalized in the aftermath of the Cold War’s end has faded. The existing nuclear powers show no inclination to denuclearize. While several states—Belarus, Kazakhstan, South Africa, and the Ukraine—have dismantled their nuclear capabilities, others—Iraq (until recently), Iran, North Korea—have shown a persistent interest in acquiring nuclear weapons. South Asia has two newly declared *de facto* nuclear powers with a constantly troubled relationship. At the same time, the process of globalization continues to integrate the world and make its constituents—states, societies, and individuals—increasingly interdependent. This steadily raises the cost of conflict and makes large-scale organized conflict between states less and less likely. As K. J. Holsti has shown, interstate wars have decreased significantly in frequency in the post-Second World War period.<sup>9</sup> How do we come to terms with these opposing realities? How do we comprehend the simultaneous decline of interstate war and the continuing existence of large stocks of nuclear weapons by countries which really have no one to point them at?

In order to understand the place of nuclear weapons in the world today, it is necessary first to understand the world as it is. For this, the tools of analysis that we select are important. In short, it is essential to have more than a passing acquaintance with the rarefied world of international relations theory. To begin with, we may ask whether it is useful to conceive of the world as a unified one or not. If it is not, we might need different analytical tools to

analyze its diverse segments. Some scholars have argued that the world is bifurcated. The developing world is very different from the developed, and theories devised to study the latter may not be useful in understanding the former. From this standpoint, international relations theory, which claims to explain the world around us, has serious limitations because it is "essentially Eurocentric theory, originating largely in the United States and founded, almost exclusively, on what happens or happened in the West."<sup>10</sup> In K. J. Holsti's view, existing international relations theory is quite inappropriate for an adequate understanding of the politics of developing countries. European history, on which its edifice is constructed, was characterized by a politics of war, power balancing, and alliances among coherent state units. In contrast, Third World politics is one of intrastate rather than interstate conflict, with state units lacking in cohesion and legitimacy and plagued by substantial problems relating to economic, social, and political development. From this perspective, a proper understanding of the Third World requires a different kind of theory than that which currently prevails.<sup>11</sup> A related view is that because the two worlds are distinctive—the industrialized and democratic developed nations constitute a "zone of peace," and the economically and politically unstable and conflict-ridden developing countries a "zone of turmoil"—we should not view the world with unified lenses.<sup>12</sup>

The "different theories for different worlds" argument exaggerates the differences between the developed and the developing countries. Across historically comparable time frames, these differences are in fact not very great. Take nineteenth-century Europe, for instance. After 1815, interstate wars were relatively few, intrastate conflict more plentiful. Much of the conflict that occurred was caused by democratic and nationalist challenges to regime and state legitimacy, the incongruence of state and ethnic identities, and societal tension arising from problems of economic, social, and political "development" generated by the industrial revolution.<sup>13</sup> In short, the European politics of the nineteenth century bears a strong resemblance to the Third World politics of the present. The relatively low incidence (certainly not the absence) of balance-of-power and alliance politics in the latter is explained by the fact that most Third World countries have stronger vertical economic linkages with developed countries, which makes them weak and dependent. In any case, it remains true that while the overall incidence of war among developing countries has not been very high, there have been numerous armed conflicts between them, a fact that would have hardly escaped the notice of Indians and Pakistanis. My own earlier work has shown the utility of "Western" theory in explaining the patterns of India's external relations since Independence (1947).<sup>14</sup>

For all their obvious differences, developed and developing countries have much in common even today. Both struggle to manage the increasingly complex web of ties with other states. The task is often a difficult one even for developed states, as Canadians for instance know, because interdependence among unequal entities involves a substantial degree of dependence. Both developed and developing countries have also to grapple with the increasing penetration of state and society by transnational nonstate forces. They must cope with the economic effects of global flows of money, goods, and services; the cultural and identity-related effects of information flows; the problems created by global and regional environmental deterioration; and the destabilizing effects of cross-border migration. Hardly any nation is free from the threat of terrorism. The need to regulate and institutionalize interstate interdependence and transnational flows applies to both sets of countries. True, developed countries have a much greater capacity to shape outcomes than developing countries, but the difference is one of degree, not of substance.

A unified view of world politics requires an integrated framework that reconciles the main paradigms or schools of thought that seek to interpret global events and processes. How might such a framework, relevant to both developed and developing countries, be constructed? A paradigm may be defined in terms of three criteria: (1) the *problematique*, or essential behavior to be analyzed (e.g., the causes of war and the conditions of peace, or the causes of exploitation and the conditions of human freedom); (2) the essential actors or units of analysis (the state, multiple actors, world capitalism); and (3) the central image of the world (a system of conflict, a society of states, a global and unequal division of labor).<sup>15</sup> There are numerous ways of classifying the paradigms that seek to understand world politics.<sup>16</sup> The literature as a whole centers around four: realism, liberalism, the Marxian approach, and constructivism. In the postcommunist age, it is common to ignore Marxism as *passé*, but a better reason for doing so in the present context is that it is weak in its explanatory capacity with respect to war as a general phenomenon.<sup>17</sup> It certainly cannot tell us much about the India-Pakistan conflict. Hence, it is not particularly useful for the purpose of understanding the place of nuclear weapons in world politics. Constructivism, which stresses the central importance of identities and norms in determining what happens in international relations, has now become a standard "paradigm" in textbooks on international relations theory, but there is good reason to pass it over for present purposes.<sup>18</sup> It has little that is new to offer in terms of the criteria for the paradigms stated above, largely because it is not distinguishable from liberalism in its identification of the dynamics of transformation.<sup>19</sup> The realist-liberal divide, on the other hand, is central to the issue.

Realism has a rich history, its myriad practitioners since the beginning of history matched by erudite writings from the likes of Kautilya, Thucydides, and Machiavelli.<sup>20</sup> These and later thinkers viewed the selfishness of human nature as the source of perpetual conflict among states.<sup>21</sup> Contemporary “structural” realism (or “neorealism”) has a different starting point. It holds that international politics is a system of self-centered states compelled by the lack of a sovereign above them to privilege self-interest over collective interest, which makes cooperation difficult, and to seek power for the sake of security, which periodically results in tensions and war. The anarchic structure of the system creates typical patterns of power balancing, arms racing, alliance formation, and competition for influence. What states do is determined largely by their external structural relationships, not so much by internal factors such as leadership, party politics, interest groups, ideological preferences, and so on. Much of the current literature dwells at length on the merit or otherwise of this structural explanation of international politics, which is widely attributed to the neorealist writing of Kenneth Waltz.<sup>22</sup> In fact, the structural realist perspective goes back at least to Jean Jacques Rousseau, who described the realm of nations as a “state of war” inherent in the condition of states, “the effect of a constant, overt, mutual disposition to destroy the enemy state, or at least to weaken it by all the means one can.”<sup>23</sup> In this view, the lack of a sovereign to constrain them makes states prone to war, particularly because they come into conflict as a result of interdependence and inequality.<sup>24</sup>

Liberal theory, on the other hand, stresses cooperation and a growing sense of community on a global scale.<sup>25</sup> The notion of an essential harmony among states goes back to the eighteenth-century *philosophes*, and to James Mill and Jeremy Bentham.<sup>26</sup> The four main strands of liberal thought are commercial liberalism, which stresses the positive effects of free trade; democratic liberalism, which holds that democracies are essentially peaceable by nature; regulatory liberalism, which highlights the importance of rules and institutions in engendering cooperation; and sociological liberalism, which believes that expanding transnational contacts are changing national attitudes and interests.<sup>27</sup> Since the 1990s, the burgeoning literature on globalization has increasingly questioned the capacity of the state to function as an autonomous unit in a world characterized by rapidly accelerating transnational economic and cultural flows.<sup>28</sup>

The two theoretical traditions are not irreconcilable. Nor do they apply separately to different worlds, liberalism to the developed, realism to the developing. In important ways, states are powerful in both types of country. Individually, they maintain armed forces and sometimes fight, or engage in

economic competition, which they influence through policies relating to taxation, interest rates, support for research, export subsidization, the imposition of nontariff barriers to trade, and so on. Collectively, they develop multilateral institutions to regulate economic life, the environment, and military conflict. To the extent that they enjoy autonomy and power, internally determined choices influence their behavior. Some states (the United States, Russia) choose to possess thousands of nuclear weapons; others (Sweden, Japan), none at all. Most prefer economic openness and integration, but some prefer relative isolation (Myanmar, Bhutan). Yet external constraints limit their options in two ways. The anarchic system often privileges self-interest and power politics and hinders cooperation. This means collective efforts for the common good may be slow to take effect, as with humanitarian intervention in Bosnia, and with the ongoing efforts to curb climate change. Where their autonomy is weakened by interstate interdependence or by the penetration of transnational forces, states are compelled to restrain their competition. Strategic interdependence forced the superpowers to negotiate on arms control; economic interdependence greatly limits the intensity of U.S. competition with Europe and Japan; resource interdependence compels India and Pakistan to jointly manage the Indus River system.

Neither paradigm fully explains the nature of world politics. While realists see conflict as intrinsic to an anarchic world, liberals focus on interdependence, which in their view impels nations toward cooperation. The conflict between the two paradigms is less sharp than we might at first think. As Robert Jervis has observed, realists focus on state power and conflict because they are more interested in military-strategic issues, whereas liberals tend to look more at nonmilitary issues, and hence stress interdependence.<sup>29</sup> In the absence of a high degree of interdependence, the realist argument holds good. The world does consist of relatively autonomous states existing in a condition of anarchy that may be described as a “self-help” system. Globalization notwithstanding, states continue to exercise a significant degree of power, making domestic and international rules and, most relevant for present purposes, wielding and sometimes utilizing to lethal effect diverse instruments of military power.<sup>30</sup> The condition of anarchy has not disappeared. States can never be sure of their security, and moreover, if that security is violated, can never be sure that others will come to their assistance. Consequently, the possession of military power is a necessity, which explains why virtually all states maintain armed forces, even those that have not experienced war for long periods. It may at best be said that states enmeshed in highly interdependent economic relationships are very unlikely to go to war. But the fact is that no state has such a relationship with all other states. Ergo, war remains a possibility for all.

The new focus on terrorism in the aftermath of the attacks on the World Trade Center and the Pentagon has not done away with the perceived need for nuclear weapons. One might argue that this is a new kind of war: neither a hot war nor a cold war, but a "Gray War, a war without fronts, without armies, without rules."<sup>31</sup> Expanding on his insightful work on the "risk society," Ulrich Beck notes, "if the military gaze was previously fixed upon others of its [the state's] kind—that is, upon other nation-state military organizations and their defence—it is now transnational threats of substate perpetrators and networks that challenge the collective world of states."<sup>32</sup> Perhaps, but terrorism has not marginalized nuclear weapons. There have certainly been significant changes in the relationships among major powers in the aftermath of the September 11 attacks. Russia and the United States have attained an unprecedented level of mutual understanding. China too appears to have reformulated its view of the United States.<sup>33</sup> For the first time in history, all the major powers are on the same side. Yet none is about to abandon its nuclear weapons. The reason is simple: the world remains anarchic, and nuclear weapons continue to be valued by states as the ultimate arbiters of their strategic fates.

However, a state's level of military preparedness depends on its perception of threat and its calculation of the cost of maintaining armed forces relative to competing demands on its resources. A state that feels threatened is likely to maintain larger and more active armed forces than one that is not. On the other hand, a state that is lacking in resources is less likely to maintain large forces in the face of threats. The calculus is also determined by related factors such as the availability of security assistance from allies. From this perspective, the possession of nuclear weapons is no different from the possession of non-nuclear forces. States that perceive nuclear threats are likely to desire the benefits of nuclear deterrence and states that do not are likely to forgo them.<sup>34</sup> Of course, the former may not acquire nuclear weapons if they do not have the technology or if they enjoy the protection of allies who do. But those who do have the technical capability tend to keep their options open by "hedging," which permits them to exercise the option should the need arise.<sup>35</sup> Thus, the condition of anarchy is a facilitating factor which provides the basis for the possession of weapons of war, including nuclear weapons. The actual choice of possessing nuclear weapons depends mainly on threat perceptions and the availability of resources.

It is important to recognize that the passing of the Cold War was a historical watershed in only a limited sense. It did not change the fundamentally anarchic character of world politics. It transformed the distribution of power within the anarchic system, but did not change the system itself.<sup>36</sup> The hope

that nuclear weapons could be abolished or at least marginalized was a forlorn one.<sup>37</sup> There are many reasons why states are likely to retain their nuclear weapons for a long time to come.<sup>38</sup> These include the sheer practical difficulty of eliminating them in a time frame of less than several decades; uncertainty over whether old threats may reappear or new ones materialize; the need to deter chemical and biological weapons; and, above all, the knowledge that “there would always be a latent menace, even if nuclear weapons were no longer in existence at all, implicit simply in the fact that they could be rebuilt.”<sup>39</sup> If anything, in the minds of many observers, the post-Cold War era is one of new uncertainties, with new threats around the corner.<sup>40</sup> There may be a nuclear confrontation between the United States and China over Taiwan, or a nuclear attack on the United States by a “rogue” state, and so on. Under the circumstances, it is not surprising that the United States, the sole superpower on whose shoulders many place the onus of taking the initiative to bring about denuclearization, or at least the marginalization of nuclear weapons, has shown great reluctance to do what is expected of it.<sup>41</sup> The *Nuclear Posture Review* of 1994 produced little change; that of 2001 declared a willingness to reduce the active U.S. arsenal significantly, but to retain the option to rearm by storing rather than dismantling nuclear weapons.<sup>42</sup>

Other states face similar problems. They may have to contend with nuclear rivals or adversaries with far superior conventional forces. From the Indian perspective, the existence of nuclear threats in an anarchic world cannot be discounted. So long as India is not enmeshed in highly interdependent economic relationship with other states, the possibility of military conflict remains. Even if highly interdependent economic relationships were to emerge with some states, the possibility of war with those states with which such a relationship does not exist would remain. Military power thus still counts for a great deal. It is often argued that motives other than security—the bureaucratic politics of bomb-producing scientists, the symbolic politics of modernity, and the electoral politics of nationalism—have driven India’s nuclear weapons program.<sup>43</sup> While these factors have no doubt played some role, it is undeniable that the security threat has been a constant factor since the very beginning. From Jawaharlal Nehru onward, there was a constant awareness among prime ministers that the nuclear option could not be closed because there might be a need to exercise it at some point in time. As threat perceptions grew, Indian leaders inched closer to making the bomb, at least from as early as the mid-1960s, following China’s first nuclear test.<sup>44</sup> It is often forgotten that the bomb was not a creature of the Bharatiya Janata Party (BJP), but was ready and in the basement long before the tests of 1998.<sup>45</sup> And the reason why politicians of very different hue, from Rajiv Gandhi of the

left-leaning Congress to Atal Behari Vajpayee of the rightist BJP, felt the need to have it was the perception that India's security required it. The post-Cold War environment had deteriorated in several respects. India felt relatively isolated with the breakup of the Soviet Union and Russia's turn to the West. China, which seemed to be the next superpower in the making, was known to have a close nuclear and missile nexus with Pakistan. Pakistan itself was not only understood to have developed nuclear capabilities, but was active in supporting terrorists in India's Punjab and Kashmir. Finally, the United States was exerting increasing pressure on India to close the nuclear option.

Critics of the tests have decried what they call India's decision to swim against the tide of denuclearization, but the reality is different. In the new millennium, the world has not changed fundamentally. With the end of the Cold War itself a decade-old memory, the perceived need for nuclear weapons has not faded. The United States not only retains large stocks of nuclear weapons, but shows signs of interest in new and "better" weapons.<sup>46</sup> Russia has sought to modernize and streamline its nuclear forces.<sup>47</sup> Nations that are obliged to eschew nuclear ambitions altogether by virtue of their being signatories to the Nuclear Nonproliferation Treaty (NPT)—Iran, Iraq, North Korea—have attempted to develop nuclear capabilities.<sup>48</sup> Even Japan, for all its constitutionally mandated restraint and public opposition to nuclear weapons, has "quietly built up the capacity to make and deploy nuclear weapons, missiles and delivery systems very quickly if and when a new consensus should emerge that such a course was necessary for national security."<sup>49</sup> Most important, India's two adversaries are nuclear-armed, and their intentions cannot be said to be benign.<sup>50</sup> China has been modernizing its nuclear forces for some time.<sup>51</sup> While India-China relations have certainly improved, it is possible that this may change. According to one thoughtful analysis, China's current circumspection arises from its relative weakness. By 2020–2025, it will likely become stronger and more assertive.<sup>52</sup> Recent evidence of Chinese nuclear and missile assistance to Pakistan is evidence of animus on the part of China which India cannot ignore.<sup>53</sup> Pakistan is undoubtedly the most immediate threat, not least because of India's continual confrontation with it over Kashmir.<sup>54</sup>

From within India, objections to going nuclear have been widely expressed. The most common is that there is no strategic rationale to justify nuclear deterrence. The Pakistani nuclear program has always been a reactive one, and India should have taken the lead in nuclear abstinence because the Chinese threat has never been of a magnitude that India could not live with.<sup>55</sup> The Sino-Pakistani nuclear nexus, one argument goes, is no more than a



commercial relationship.<sup>56</sup> These views underplay the historical record of India's conflicts with both countries, the continuing conflicts of interest with both, the political reality that arms transfer relationships are rarely without strategic implications, and the policy maker's fear that, in an anarchic system, the intentions of others can change faster than one's capabilities to counter them. Another argument is that deterrence has regularly broken down in the past, and will likely do so again, with horrendous consequences.<sup>57</sup> Here, the qualitative distinction between the prenuclear and nuclear eras is ignored, and no attempt undertaken to counter the deterrence theorist's obvious case for nuclear deterrence, to wit, that it has never broken down.

An additional criticism is that nuclear deterrence is unaffordable for a country where poverty abounds and resources are relatively scarce.<sup>58</sup> But this is one-sided. It assumes that huge amounts of money must necessarily be spent on a nuclear deterrent, which is not necessarily true if one adheres to a strictly minimalist conception of deterrence of the kind outlined in the next chapter. It is also an inadequate response to a perception of nuclear threat. By this logic, *all* defense expenditure is wasteful, and one need not have armed forces at all. Finally, it is a particularly popular belief that the 1998 tests were driven by an aggressive nationalism that sought to make political capital for the BJP, the leading constituent of the coalition government at the time.<sup>59</sup> This ignores the fact that the BJP crossed the nuclear Rubicon only in a limited sense. The bomb had already been constructed much earlier under Congress leader Rajiv Gandhi in the early 1990s, and related paraphernalia were developed under five subsequent prime ministers belonging to various political parties.

In the West, a spirited debate is still under way about the relative stability of new nuclear weapon powers.<sup>60</sup> Proliferation optimists make the case that deterrence at once brings security and produces caution and war-avoiding policies, while proliferation pessimists highlight the risk of deterrence breakdown owing to misperception, uncontrollable escalation from conventional conflict, and unauthorized launch. In essence, the debate is about *all* nuclear weapons, for the main arguments apply to nuclear weapons in general. There are, of course, some who try to show that there is something particularly problematic about new nuclear powers. They might be willing to accept high levels of damage, be inclined to unleash preemptive strikes, or, worse yet, be "undeterrable."<sup>61</sup> They might even be lacking the rationality required to maintain stability: there is, according to one expert, "a surplus of irrational actors in South Asia who would view the advent of crisis as an opportunity rather than as a problem to be contained."<sup>62</sup> One may be inclined to ignore such sentiment entirely but for the serious attention it is given in many quar-

ters, echoed at times by eminent Indians worrying about dictators and “part-lunatics” in the subcontinent.<sup>63</sup> More meaningful criticisms that the new nuclear states are vulnerable to the problem of geographic proximity, or that their command and control systems are inadequate, fail to acknowledge that the U.S.-Soviet case was not different. Cold War nuclear forces were eyeball-to-eyeball in Europe, and frequently at sea. Their command and control systems remained highly vulnerable to technical failure throughout.<sup>64</sup>

In the end, none of this is helpful for policy makers confronted by threats which impel them to think seriously about acquiring nuclear weapons. Both the optimists and the pessimists have a reasonable case, but neither is or indeed can be fully correct. Peter Feaver makes the crucial point that even if rational deterrence theory can successfully predict peace 99.5 percent of the time, that is not good enough, for the remaining .5 percent is good cause for worry when the stakes are extremely high.<sup>65</sup> The argument is unexceptionable, and applies to all cases of nuclear possession. The problem for policy makers is that this argument may apply just as much to *not* possessing nuclear weapons. Where is the guarantee that a hostile state possessing nuclear weapons will not use it against a nuclear abstainer? The only historical cases in which nuclear weapons have been used have been those in which one side had them and the other did not. Notwithstanding the restraint that has prevailed since 1945, there is no assurance that it can never happen again. A rational decision to go nuclear, then, will not be influenced by the arguments of either proliferation optimists or pessimists, or their more general counterparts. That decision, for better or worse, will be determined by the weighing of factors such as threat perception, costs, and technical capability. The second-order choice that follows is: having made the decision to go or not go nuclear, how does one maximize its potential benefits and minimize its potential costs? Here, the proliferation debate, as a subset of the larger debate over all nuclear weapons, may be of some utility if it helps the policy maker assess the relative benefits and risks of nuclear possession. The argument in this book is that, given the dilemma that policy makers face—that both possession and abstinence carry inherent risks—minimum deterrence offers an optimal position.

The paradoxical reality is that when adversaries do possess nuclear weapons, they face a new and unprecedented difficulty. Nuclear weapons have a unique quality about them which makes their use extraordinarily difficult. Their destructive power is so enormous that it makes the resort to war counterproductive in most circumstances. Clausewitz, it is widely agreed, has been stood on his head: between nuclear weapons powers, war is no longer an instrument of state politics. Hence, Bernard Brodie’s insight early in the

nuclear era: "Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose."<sup>66</sup>

The acquisition of nuclear weapons creates a fresh source of insecurity for the state, leaving it caught in the midst of the "security dilemma."<sup>67</sup> Not arming leaves the state vulnerable to the threats or depredations of others at some unknowable point in time, and hence insecure. Yet, arming causes others to feel threatened and do likewise, which results in the insecurity of arms racing and rising threat perceptions. In short, states threatened by nuclear weapons tend to feel insecure when they do not possess such weapons and insecure when they do. What is the way out? One argument might be that if nuclear weapons have revolutionary effects that preclude rational war between their possessors, the security dilemma has in effect vanished. If two states deter each other, there is no reason to be insecure. But that may not end their insecurity. On the contrary, if they have large arsenals on hair-trigger alert, the chances of something going wrong are sufficiently high to make them both very insecure. And if their political disputes bring them close to armed conflict, the fear of deterrence failure would be very strong indeed.

To return to theory, to the extent that states can no longer see war as an option, the structural effects of systemic anarchy have been superseded. The role of structure is thus a function of the strategic interaction between states.<sup>68</sup> The effect of structure on a strategic relationship varies with the intensity of interaction, i.e., the extent to which one state impacts the interests and activities of another. When intensity of interaction (hereafter, for the sake of brevity, called "intensity") is low, structure has limited effects, and states have a high degree of autonomy. Thus, the distribution of power matters little when two states are not much "connected" by regular interaction. This may appear to be a pointless truism, but it is of significance in a real sense. For instance, weak states have frequently sought to minimize their economic relationships with strong ones in order to avoid dependence. As intensity increases, the effects of structure come into play. Relative power matters, and interests may clash. Strategies are devised to try and ensure security and the protection of interests. Middle-intensity interaction is the stuff of realist politics: power balancing, alliances, wars, and treaties. Structure reigns. When interaction reaches a very high level of intensity, resulting in mutual interdependence and vulnerability, structure recedes in significance. Notwithstanding clashes of interest, a significant degree of cooperation results. Between nuclear-armed states, war-avoidance becomes standard (though other maneuverings may persist). Similarly, in the case of economically interdependent

states, even if there is intense competition, cooperative endeavors ensure that there is no systemic breakdown.

Let me briefly illustrate the dynamic effects of changing levels of intensity. Until the mid-nineteenth century, Russian-American relations were of low intensity. Their relative power did not matter, and their interests did not clash. Thereafter, as both expanded into the Pacific and toward each other, there was a rising intensity in their interaction, and tensions gradually emerged. After the Second World War, U.S.-Soviet relations intensified, and the Cold War represented their structural struggle for preeminence and security. However, the nuclear confrontation between them created the high-intensity interaction (mutual dependence and vulnerability) that mitigated the effects of structure to the extent that they were compelled to negotiate and institutionalize a process of arms control.

The theoretical antecedents for this formulation lie in less-noticed aspects of the writings of Thomas Hobbes and Immanuel Kant. Both admitted the possibility that interstate relations might be transformed by intensifying interactions. Hobbes held that states need not transcend the state of nature (anarchy) because people are relatively secure (as compared to the pre-Leviathan state of nature). But this does not necessarily condemn states to endless conflict, as is widely believed by critics of Hobbes. Rather, the implication is the opposite. As Stanley Hoffmann observes, "should the competition become more intense, should the risk of total destruction, affecting all citizens, become intolerable, we could also surmise that Hobbes's relative complacency would lose its justification; the same arguments he used to justify the Leviathan would have to be applied to establish a world-wide one."<sup>69</sup>

Hobbes, then, would have allowed that high-intensity military interaction is the harbinger of systemic transformation in the limited sense of ruling out war and seeking institutional alternatives to the unfettered states system. Similarly, Kant believed that from the destruction of war, good would ultimately come: "And at last, after many devastations, overthrows, and even complete internal exhaustion of their powers, the nations are driven forward to their goal which Reason might well have impressed upon them, even without so much sad experience. This is none other than the advance out of the lawless state of savages and the entering into a Federation of Nations."<sup>70</sup>

Thus, both Hobbesian realism and Kantian liberalism are compatible with the subsuming of structure as a consequence of high-intensity interaction. Whether a super-Leviathan created by a social contract among states or a peaceable federation will emerge some day, perhaps as a result of nuclear mishap, only time will tell. The fundamental point is that, with the advent of nuclear weapons, systemic transformation as a consequence of exhaustion

from war is not a prospect to be anticipated with optimism. States and their citizens will not merely be “exhausted” by war; they may cease to exist. Nuclear weapons induce fundamental change in the behavior of states *before* they are used. As is evident from actual behavior during confrontations between nuclear-armed states, a kind of systemic transformation—an undiluted preference for war avoidance—is already evident in the strategic politics of the Cold War. The predominant feature of the Cold War was not so much a “balance of terror” as simply terror.

The consequence of this terror, and the need to forestall possible calamity, was the institutionalization of war-avoidance. There are prenuclear precedents approximating Kant’s vision. In modern history, collective efforts to stabilize interstate politics as a result of exhaustion from war include the post-Napoleonic “Congress system” in Europe, the creation of the League of Nations after the First World War, and the establishment of the United Nations in the wake of the Second World War. The last did not prevent unregulated confrontation between nuclear powers in the form of repeated crises, with the Cuban Missile Crisis the high point. There is often a time lag between the advent of new social situations and the devising of institutions to regulate them.<sup>71</sup> The nuclear powers took some time to respond to the unprecedented difficulties posed by these new weapons and institutionalize safeguards to prevent nuclear disaster. This took the form of a combination of a managed system of deterrence (arms control) and a managed system of abstinence (the nonproliferation regime).<sup>72</sup> But this attempt to regulate nuclear power was imperfect at best, and tensions rose as Cold War antagonisms peaked in the 1980s, while nuclear capability spread gradually to more states, notably India and Pakistan. The problem with efforts to manage nuclear weapons is that the very process of management, by mitigating the potential effects of nuclear weapons, lowers the intensity of interaction from a very high to a middling level, thereby facilitating the resurgence of structural behavior which undercuts systemic management. The Congress system was eventually weakened by the wars of German and Italian unification; the League by another world war; the United Nations by the Cold War; and the 1970s *détente* by the high tensions of the 1980s. International politics in each era has been characterized by an undulating graph illustrating the constant tension between structurally driven adversarial behavior and intensity-driven cooperative behavior. There is no getting away from the security dilemma.

It may be possible, though, to minimize the security dilemma. Rousseau offers some guidance. From his pessimistic perspective, the only feasible course is for states to isolate themselves. By reducing their interdependence, they can hope to reduce conflict among themselves.<sup>73</sup> Hoffmann considers

this a "utopian" solution in that Rousseau advocates "a return to an isolation that the march of history had proved impossible long before he wrote."<sup>74</sup> But perhaps what Rousseau suggests is not the reversal of history, only the reduction of interdependence or, to put it another way, a significant reduction in the intensity of interaction. What does this imply for nuclear politics? To recall, where there is low-intensity interaction, the role of structure in shaping interstate politics is limited. If one's weapons are less threatening to the adversary, intensity is in effect diminished, and structural pressures correspondingly reduced. This does not solve the problem of the security dilemma, but it does help lessen its gravity in a nuclear world.

Ironically, by reducing the risk of nuclear war, the end of the Cold War has undercut a vital source of structural pressure for arms control. The underlying reality of anarchy in world politics remains, making it difficult, as we have seen, to conceive of doing away with nuclear weapons altogether. The paradox of nuclear-strategic interdependence is that it tends to be nonlinear in its effects: the caution and stability-oriented policies it generates undermine the sense of mutual vulnerability that created the experience of interdependence in the first place. We are then left with the structure of the anarchic system, which militates against the elimination of nuclear weapons. This is not to say that nuclear arms reduction is ruled out, but it is to say that reduction must then be based on other calculations, such as whether one needs nuclear weapons to counter specific threats, and if so, how many are appropriate. Shifts in perceptions about adequacy may drive the process, but as reduction proceeds, the anarchic structure of the global system will inevitably make it more and more difficult to sustain the momentum.

The only way to lessen this dilemma is if one can feel relatively secure and at the same time minimize the adversary's insecurity. Conceptually, this requires that one adhere to a form of realism that is defensive rather than offensive.<sup>75</sup> Whereas "offensive realism" seeks absolute security through the expansion of power, "defensive realism" tries to maximize relative security without getting caught up in a competitive spiral. Anarchy compels states to pay close attention to their security, but does not tell them how to go about doing it. Offensive realists emphasize the accumulation of power under virtually all circumstances, whereas defensive realists assess threats and weigh costs in relation to competing demands for resources. In choosing specific policies, they frequently resort to cautious strategies that avoid creating insecurity for other states.<sup>76</sup>

In broad terms of military posture, defensive realism leans toward "non-offensive defense," which tries to maintain forces and force postures that are relatively less threatening to an adversary.<sup>77</sup> There are diverse facets to nonof-

fensive defense. One way of practicing it is by deploying troops away from a contested border, which is less threatening than if they are positioned at the border itself. In nuclear strategy, a minimum deterrence posture characterized by a small number of undeployed weapons is far less threatening than one which seeks security from large numbers of sophisticated weapons deployed on alert status. Minimum deterrence keeps the "strategic distance" between states at a safe level. The concept, as originally articulated by Quincy Wright, is "a function of the obstacles to attack by one state upon another," such as "geographic distance, natural barriers, fortifications, and defensive forces."<sup>78</sup> If time is included as a component, then deployment on a nonalert basis and nondeployment of nuclear forces increase strategic distance, keeping the intensity of interaction between nuclear adversaries to a low level. Minimum deterrence, in short, is conducive to stability because it offsets the influence of structure: it is satisfied with a posture that is relatively less threatening to an adversary and therefore does not invite a highly competitive and tense strategic relationship.

From the Indian perspective, the intensity of interaction between India and its adversaries is limited because of its adherence to a nondeployed posture (as is true of Pakistan). On the positive side, this means that the risks of a nuclear conflict or an active, spiraling arms race are kept under check. On the negative side, it does nothing in itself to curb political tensions or to impel India and its adversaries to manage their relationships through arms control. This is clearly not a satisfactory state of affairs, but in a nuclear context it is better than having to manage deterrence owing to the compulsions of high-intensity interaction, which would be the case if India were to adopt a posture of alert, deployed forces. India's current posture, then, by being relatively less threatening to its adversaries, narrows the ambit of the security dilemma, which is the best that a nuclear-armed state confronting nuclear-armed rivals can hope for. However, the present doctrine of "credible minimum deterrence," it appears, does not rest on a clear understanding of this, which leaves open the door to a shift toward a less optimal posture in the future. Hence the need for a carefully articulated exposition of the fundamentals of minimum deterrence.

## Conclusion

The foregoing makes it clear that nuclear weapons have a place in world politics, and that, in general terms, minimum deterrence maximizes deterrence security and minimizes the risks and costs incurred. Notwithstanding the growth of interdependence, the world of states is constituted by anarchy,

which necessitates the resort to arms to counter threats to security. In some instances, the acquisition of nuclear weapons may be seen as necessary, even if they are viewed with some trepidation because of their potential to wreak catastrophe. The nuclear version of the security dilemma allows no escape. The most we can hope for is that we might diminish the acuteness of the dilemma by adopting a strategy of minimum deterrence which is less threatening to an adversary than other strategies. This requires a nuanced and thorough understanding of what minimum deterrence is. Chapter 2 undertakes this task.