CHAPTER ONE

Introduction

The Quandary

Why have some states sought nuclear weapons whereas others have shunned them? Why has the Middle East largely evolved toward nuclearization whereas East Asia has moved in the opposite direction since the 1970s?[1] How have international power distribution, globalization, international institutions, or democracy affected those choices? Will these regional trends remain? This book seeks to answer these central questions in international politics by improving our understanding of "nuclear aspirants" or states that have considered, developed, abandoned, or acquired nuclear weapons programs since the conclusion of the Nonproliferation Treaty (NPT) in 1968, a period sometimes labeled the "second nuclear age."[2]

Beyond their immediate policy relevance, the contrasting nuclear trajectories of East Asia and the Middle East offer an important analytical puzzle worthy of systematic analysis. In the Middle East, for example, Iraq, Libya, Israel, and Egypt until 1971 have allegedly pursued nuclear weapons relentlessly, and Iran has been widely suspected of similar intentions on the basis of its violations of NPT commitments. Iraq was precluded from acquiring a nuclear device (1981, 1991) by military force. Some sources even include Saudi Arabia, Algeria, and Syria as plausible long-standing aspirants.[3] Since 1971 Egypt—a leader in the Arab world—became an important exception to the region's nuclearizing trajectory. Recent concerns with a defiant Iranian nuclear program have arguably led Turkey, Algeria, Egypt, Morocco, Saudi Arabia, Tunisia, and the United Arab Emirates (UAE henceforth) to embark on nuclear power programs that could constitute potential precursors of nuclear weapons (Campbell, Einhorn, and Reiss 2004). Saudi Foreign Minister Prince Saud al-Faisal declared, "We are urging Iran to accept the position that we have taken to make the Gulf, as part of the Middle East, nuclear-free and free of weapons of mass destruction. We hope they will join us in this policy and assure that no new threat or arms race happens in this region."[4] By contrast, ever since China acquired nuclear weapons in 1964, Japan, Taiwan, and South Korea renounced nuclear weapons and joined the NPT, while Southeast Asia established a nuclear weapon–free zone (NWFZ). North Korea has been the exception, testing a nuclear weapon

in 2006, the first East Asian state to do so in forty-two years, since China's 1964 test. Even prior to its test, North Korea's nuclear defiance raised fears that it could galvanize support for reactive proliferation in South Korea, Japan, and Taiwan, thus ending East Asia's progression away from proliferation.[5] Yet the puzzle of contrasting historical trajectories across these two regions remains. Whereas the norm in East Asia has been an apparent evolution toward denuclearization, North Korea has been the anomaly. Conversely, the norm among core Middle East powers has been toward nuclearization, except for Egypt and, more recently, Libya. Egypt's Ambassador to the United States Nabil Fahmy described the Middle East as

> a poster boy for the failure of global and regional nonproliferation efforts. . . . Like most regions, the majority of its member states are card-carrying and committed members of this salient international nonproliferation regime and regulations. . . . Yet very significant questions remain outstanding regarding the present state of play of nuclear nonproliferation in that region. More than a decade ago, Iraq was caught violating its safeguard in NPT obligations. . . . Today, its neighbor Iran, also NPT member, has questions raised about its nuclear program and the degree of its respect of its safeguard obligations. (CEW)

Both traditional and novel theories of nuclear behavior can be applied to explain these diverging trajectories. Neorealist literature in international relations has often traced nuclearization to international structure, relative power, balance of power, and self-help. It is crucial to distinguish between neorealist theory in international relations scholarship, pivoted in the concepts of structural or relative power, international anarchy, and self-help on the one hand, and the common use of the word "realism" in American politics on the other. The latter is frequently applied to visions or policies that are "realistic" or "feasible." Yet, a policy that some may consider "realistic" in the more colloquial sense can be diametrically opposed to structural or neorealist understandings of international politics. Throughout this book the term neorealism refers to its use in international relations scholarship as a structural theory of politics (and in particular to offensive neorealism), not as a policy that seems "realistic." While some rely on neorealism as the theory that explains nuclear policy, concerns with existential security are never perfunctory reflections of structural considerations invariably leading to aggression or power maximization, but rather the product of domestic filters that convert such considerations into different policies. The extent to which *state*—rather than *regime* security—is invariably the dominant source of nuclear behavior may have been overestimated, precluding alternative—and perhaps more incisive—understandings of what drives the acquisition or renunciation of

nuclear weapons.[6] One such alternative forces greater attention to domestic political considerations of nuclear aspirants. In particular, systematic differences in nuclear behavior can be observed between states whose leaders or ruling coalitions advocate integration in the global economy, and those whose leaders reject it. The former have incentives to avoid the political, economic, reputational, and opportunity costs of acquiring nuclear weapons because such costs impair a domestic agenda favoring internationalization.[7] Conversely, leaders and ruling coalitions rejecting internationalization incur fewer such costs and have greater incentives to exploit nuclear weapons as tools in nationalist platforms of political competition and for staying in power. This insight may be extended to explain differences between nuclear aspirants in East Asia and the Middle East over nearly four decades. East Asian leaders pivoted their domestic political control on economic performance and integration into the global economy. Middle East leaders relied on inward-looking self-sufficiency and an emphasis on domestic markets and nationalist values for their political survival.[8] These respective platforms created different incentives and constraints that influenced leaders' preferences for or against nuclear weapons.

Nuclear behavior should provide an *easy* arena for testing a theory uniquely pivoted on relative power and state security in an anarchic world, such as neorealism. Lying at the very heart of a state's security dilemma, nuclear policy loads the dice in favor of this approach. In other words, nuclear behavior provides the "most likely case" or most favorable domain for corroborating neorealist tenets. For that very reason nuclear behavior is perhaps *not* a crucial arena for validating those canons from a methodological standpoint. A good or crucial test of a theory is one that forces it to survive conditions that are *not* favorable to confirm it.[9] On this basis, too many deviations from neorealist predictions regarding nuclear policy constitute potentially significant challenges to the theory. Conversely, nuclear behavior provides an extremely *difficult* arena for testing theories of domestic political survival as the one offered here. Political leaders can only portray their decisions for or against nuclear weapons as dictated by "reasons of state" rather than by domestic political expediency. Precisely because decisions regarding nuclear weapons are "least likely" to validate the role of domestic politics, they provide a crucial and tough arena for investigating such effects. Thus, even partial substantiation uncovering an important role for domestic considerations in this "unfriendly" terrain, where evidence is much harder to garner, gains particular significance.

From a methodological standpoint, the ability to corroborate that domestic approaches to political survival are more relevant to nuclear behavior than often suspected might be akin to a "Sinatra inference" (Levy 2002): if the theory can make it here, it can make it anywhere. One should

certainly not be carried away with this prospect, however. The empirical chapters certainly provide sufficient reason to pay far more attention to this rather understudied source of nuclear behavior. At the same time, each case is explored through a much broader theoretical repertoire to assess the relative advantages and limitations of each approach for improving our understanding of nuclear outcomes. This is not a strict effort to test theories (in no less than nine cases!) but rather to illustrate theory-driven analysis of nuclear decisions in a defined empirical domain. To reiterate, balance-of-power considerations are certainly important but a better understanding of nuclear behavior and outcomes requires theoretical recalibration and a closer examination of competing and complementary perspectives to avoid overestimation of some theories and underestimation of others. As an early study by Meyer (1984) suggested, it is quite likely that some assumptions from different perspectives are valid; the task is identifying when and why. Furthermore, in his view, all motives of nuclear behavior are, in the end, filtered through the domestic politics within which decisions are made. A systematic understanding of these effects makes this approach analytically indispensable in the study of nuclear aspirants.

Nonproliferation: Past Predictions and Present Conundrum

Nuclear choices have wide-ranging implications for international security. The potential proliferation of nuclear weapons served as partial justification for the 2003 war in Iraq and continues to rank high in the foreign policy agenda of major powers and international institutions. The United States, the European Union, Japan, the G-8, and former U.N. Secretary General Kofi Annan have defined the problem as the preeminent threat to international security, with attending consequences for budgetary allocations and the need for collective action.[10] Although Iran and North Korea are now focal cases, many regard this as a much broader problem, regardless of political persuasions. The Bulletin of Atomic Scientists moved the minute hand of its "Doomsday Clock" from seven to five minutes, warning that "we stand at the brink of a second nuclear age." President George W. Bush has repeatedly asserted that more nations have nuclear weapons, and still more have nuclear aspirations.[11] Campbell et al. (2004) suggested that we may be approaching a "tipping point" that will unleash a proliferation epidemic, and that we now stand on the verge of a new nuclear age with potentially more nuclear-weapons-states (NWS) and a much greater chance that these weapons will be used. Others regard the nonproliferation regime (NPR) as poised for collapse and fear that the "domino theory" of the twenty-first century may well be nuclear.[12] Former director general of the International Atomic Energy Agency (IAEA)

and chief U.N. weapons inspector Hans Blix declared that "certainly if Iran were to develop further in the wrong direction, there is a risk for other countries considering going for nuclear weapons. And if the North Koreans move on, well the risks are very, very great. If the North Koreans were to test a weapon, yes, it would be very, very serious" (ASAW). IAEA director general Mohammed El-Baradei declared that "we are reaching a point today where I think Kennedy's prediction is very much alive. Either we are going to . . . move to nuclear disarmament or we are going to have 20 or 30 countries with nuclear weapons, and if we do have that, to me, this is the beginning of the end of our civilization" (CNSW). In 2006 these concerns appeared even more real as North Korea tested a nuclear weapon and fear of a defiant Iran arguably led to declarations by six Middle East countries that they would pursue nuclear energy programs.[13]

Not all agree with this vision, and assessments of past progression vary with different benchmarks. President Kennedy's 1963 prediction of fifteen to twenty-five NWS by 1973 did not come about.[14] The past three decades reflected declining nuclear aspirations even by technically capable states. As Rosecrance (1964:300) correctly predicted, nuclear weapons did not spread "as ineluctably as the instruments of modern industrialism." Most states (189) joined the NPT, the most widely subscribed international treaty in existence, including some that had rejected it for decades, as did Argentina and Brazil. Some gave up nuclear weapons, including Ukraine, Belarus, Kazakhstan, and South Africa. Libya surrendered its program to U.S. and IAEA scrutiny in 2003. More states abandoned than acquired nuclear weapons programs during the past fifteen years (Roberts 1995; Wolfsthal 2005). Yet the number of NWS increased. India and Pakistan conducted tests in 1998 and, like Israel, remained outside the NPT. Israel's capabilities have been widely asserted although its formal policy of "not being the first to introduce nuclear weapons into the region" remains in place.[15] North Korea proclaimed possession of nuclear weapons in 2003 and tested one in 2006; Iran's record in acquiring weapons-suitable technologies has not been matched by dutiful reporting to the IAEA. Both North Korea and Iran are deemed to have breached their NPT commitments. The tally of NWS has thus risen from the five recognized by the NPT in 1968 (the United States, Britain, Russia, China, and France) to nine states in 2006.

What explains this variability in behavior, with some states renouncing nuclear weapons altogether, others reversing previous efforts in that direction, and yet others developing them in violation of international commitments? Three decades ago Economics Nobel laureate Thomas Schelling (1976:80) advised that "the emphasis has to shift from physical denial and technology secrecy to the things that determine incentives and expectations." Nearly three decades later Hans Blix recognized that the task of

uncovering the sources of incentives for proliferation still constitutes a fundamental problem (CEW). As Brad Glosserman (2004) puts it, a key obstacle to efforts to counter nuclear proliferation is that "we still don't know why governments proliferate nuclear weapons. Several explanations have been offered . . . but no single explanation convinces. Until we know why governments acquire nuclear weapons, it will be difficult to stop them from doing so." The theoretical literature in international relations on this issue is much less copious than the studies on nuclear deterrence, tends to advance mono-causal explanations (a single factor explains it all), and frequently involves case studies by country experts.[16] This book's objective is to advance our understanding of nuclear behavior and revisit the way we study it. A controlled comparison between East Asia and the Middle East offers several advantages for achieving those objectives.

The Research Design

There are at least nine reasons why a focused comparison (George and McKeown 1985) between the two regions that is sensitive to methodological issues in comparative analysis, case selection, and research design, offers important benefits for improving our understanding of denuclearization:[17]

First, the two regions are at the forefront of policy debates as potential nuclear dominoes. The North Korean and Iranian crises will continue to shape—and perhaps shake—the foundations of regional and international security. *Both the Middle East and East Asia find themselves in the midst of a historical period with potentially profound transformational effects, providing a unique vantage point from which to evaluate the past and explore the future of nuclear proliferation.*

Second, the NPT's inception was a watershed that affected the balance of incentives and constraints regarding nuclear weapons, offering analysts the opportunity to gauge variability in outcomes against a common international institutional order represented by the NPR. Since 1968 about fourteen industrializing countries have been suspected of exploring or considering nuclear weapons, taking concrete steps in that direction, or outright producing them.[18] Nearly two-thirds of the cases were in the Middle East (five) and East Asia (four).[19] The concentration on East Asia and the Middle East therefore *(a) helps understand nuclear decisions while holding an important causal variable—international regime—constant;*[20] *and (b) enables a focused comparison of the two main regional concentrations of nuclear aspirants since 1968.*

Third, four decades ago these two regions experienced authoritarian rule, limited economic interdependence, regional security dilemmas, and

state-building challenges. The contrasting subsequent evolution of their respective political-economy models offers an opportunity to examine background conditions leading to distinct nuclear policies. This evolution entailed wide variance in another causal variable (integration in the global economy), potentially explaining divergent nuclear policies.[21] This variance provides excellent conditions for a natural experiment: the two regions differed both on the causal and the dependent variable—nuclear outcomes (King, Keohane, and Verba 1994; George and McKeown 1985). Both regions are also subject to ongoing pressures that may alter those outcomes in the future, offering propitious conditions for assessing competing perspectives on the dynamics of proliferation. Hence, comparative process-tracing of nuclear behavior in the two regions generates additional methodological advantages:[22] *(a) the presence of similar initial background conditions across regions (approximating a "most similar case" design);*[23] *(b) subsequent wide variation in a specific causal variable of interest (particularly across regions but also within them); and (c) wide variation in the dependent variable.*

Fourth, both regions had hierarchic and multipolar power distributions, helping to control for a presumed prime causal variable. According to neorealist canons, comparable power distributions should lead to similar outcomes and clearly cannot account for differential outcomes (George and Bennett 2005:156). Furthermore, multipolarity itself has been hypothesized to enhance the likelihood of nuclearization (Mearsheimer 1990). Hence, not only should we have observed *similar* outcomes in both regions but also *nuclearization* in both cases. This has not happened yet and, as discussed in chapter 2, neorealist explanations habitually invoke auxiliary theories that are often rooted in domestic politics (Legro and Moravcsik 1999). Nonetheless, comparing these two regions *offers an opportunity to examine the effects of balance-of-power theories on different states, across regions as well as within them.*

Fifth, an early theory advanced that high preexisting industrial and technological infrastructures were a prerequisite for acquiring nuclear weapons (Meyer 1984). The post-1968 trajectories of these two regions, however, arguably call into question these expectations. East Asia developed dynamic industrial and technological infrastructures but refrained from applying them to nuclear weapons' development. The least industrially dynamic—North Korea—was the exception and was driven by political will rather than technological thrust. In the Middle East, Israel might suggest a better fit with technological determinism, but in the 1970s, states with much weaker industrial infrastructures (Libya, Iraq, and Iran) embarked on nuclear weapons programs, sometimes circumventing low indigenous capabilities by purchasing critical technologies "off the shelf" from the A. Q. Khan network. With perhaps better technical chances

than these three, Egypt discontinued its quest for nuclear weapons. These comparisons between and within the two regions *help dismiss technological determinism by pointing to "most likely cases" in East Asia that abstained from acquiring nuclear weapons and "least likely cases" in the Middle East (from the standpoint of this argument) that sought them.*

Sixth, the two regions differed on the relationship between natural energy resources and nuclear technological capabilities, civilian and military. Japan, South Korea, and Taiwan were highly dependent on foreign natural resources and developed robust and sophisticated nuclear industries without converting them into weapons. The region's anomaly, North Korea, was also energy-poor but lagged in civilian nuclear energy while seeking nuclear weapons. Oil-rich Middle East powers such as Iraq, Libya, and Iran had dramatically lower incentives to develop nuclear industries at the outset, yet they allocated gargantuan resources to nuclear programs that had weapons applications, without ever achieving viable nuclear industries after decades of investment. Egypt had moderate oil endowments and a faltering nuclear industry, and it discontinued its nuclear weapons program. Israel lacked energy resources altogether and its non-NPT status burdened its ability to develop a nuclear industry but not a weapons program. These observations point to additional analytical benefits from comparing two regions that best exemplify special forms of capital accumulation related to natural endowments—Middle East rentier states versus East Asian developmental states: *(a) in the post-1968 era, oil wealth may be more of an enabling antecedent* (Van Evera 1997)*—albeit not a necessary condition—for nuclear weapons than wealth amassed from industrialization; and (b) an inverse relationship may be hypothesized between robust civilian nuclear industries and the pursuit of nuclear weapons.*[24]

Seventh, the scholarly literature on both regions tends to stress unique features, particularly evident in cultural understandings of each one. "Contextualized comparisons" of cases *within* each region enable tests of distinctive regional properties. At the same time, the inclusion of cases from both regions precludes excessive concentration on specificity that sometimes obscures useful cross-regional comparisons. A *focused comparison between the two regions advances the broader comparative politics agenda while circumventing fallacies of regional "exceptionalism."*

Eighth, most of the cases under study provide, in and of themselves, important tests of alternative theories. From one neorealist standpoint, Japan and Egypt are arguably "most likely" cases for acquiring nuclear weapons as major regional powers facing nuclear-armed neighbors, and Libya a "least likely" case. Yet the former two renounced nuclear weapons and the latter pursued them. Different identity-based arguments place different cases on the "most likely" and "least likely" lists for nuclearization.

Hypotheses linking relative closure to the global economy to nuclearization place North Korea, Libya, Iraq, and Iran in the "most likely" category and Japan, Taiwan, and South Korea in the "least likely." Both identity and political-economy arguments sometimes compete with alternative explanations. *The two regions thus provide useful cases that enable "crucial" or tough tests for corroborating or rejecting different theories.*[25]

Finally, despite these analytical and methodological advantages and policy relevance *there has been no systematic effort to explain divergent nuclear behavior in the two regions*. Where does one start?

Conceptual Perspectives

In an early study of nuclear proliferation, Rosecrance (1964:299) argued that although predictions regarding prospective nuclear aspirants are chimerical, "there are some guideposts on this otherwise perilous route." This book extracts potential guideposts from various schools of thought that might shed light on the complex phenomenon of denuclearization. No major school provides a satisfactory response to these differential paths. Nor have they ever been applied to controlled, systematic comparisons between our two regions of interest. This section introduces their essential premises and applicability to these cases leaving for chapter 2 a more thorough discussion of theoretical issues and specific applications to the Middle East and East Asia.

Structural Power (Neorealism)

An established school of thought in international relations advances that state insecurity drives the search for nuclear weapons. In its structural form, commonly referred to as neorealism, this view traces nuclear decisions to the balance of power and security dilemmas (Waltz 1981; Mearsheimer 1990).[26] The nuclearization (or potential nuclearization) of a state is thus expected to induce similar responses by its neighbors. In this view, the domestic nature of states, regimes, groups, or individuals is irrelevant to nuclear decisions and outcomes. Uniquely concerned with national security, neorealism has been granted pride of place in explaining nuclear behavior. As argued, were alternative theories to be found equally (or more) persuasive on nuclear issues, neorealism would be questioned in its home court, where it enjoys highest advantage for substantiating its tenets. The empirical studies indeed suggest that neorealism—although useful in some general sense—fails to explain some of the cases examined, is incomplete in explaining others, competes with alternative explanations in what should be its best arena of argumentation, suffers from underdetermination

(leads to multiple possible outcomes), and may be unfalsifiable given that so many options can be made to fit vague notions of security maximization a posteriori. Beyond these generic deficiencies, discussed in chapter 2, neorealism suffers from several shortcomings in explaining nuclear trajectories in our two regions.

First, both regions had *hierarchic* and multipolar power distributions. Multipolarity should have encouraged nuclearization in both cases but led instead to nuclearization in much of the Middle East but not East Asia since 1964. Second, both regions lacked *robust and symmetric* distributions of nuclear capabilities, yet they led to different outcomes. Third, states presumably afflicted with intense security dilemmas abstained from acquiring nuclear weapons (Egypt, Japan, South Korea, Taiwan) whereas states with much lower existential threats (Libya, Iraq in the early 1970s) did not. U.S. commitments to East Asian allies were extremely important in addressing those dilemmas, but these were not absolute, inclusive, unlimited, or unconditional commitments that put security dilemmas entirely to rest under the anarchical conditions stipulated by neorealism. Fourth, U.S. commitments in the Middle East (or South Asia)—to Iran's shah, for instance (or Pakistan)—have mysteriously not had the same effect. Nor have Chinese and Soviet commitments to North Korea led to its denuclearization. As Waltz (2003:38) has persuasively argued, "in the past half-century, no country has been able to prevent other countries from going nuclear if they were determined to do so." Fifth, Egypt abandoned nuclear weapons designs in 1971 *without* the backing of an effective U.S. alliance even as its main adversary (Israel) was presumed to have them. Unsurprisingly, given all these anomalies, Levite (2002/03:83) finds that "there is no evidence to suggest . . . that the U.S. influence has ever been a sufficient factor for inducing reversal." Indeed, U.S. security guarantees do not account for most cases of nuclear reversal. Sixth, whereas changes in structural power would have predicted changes in nuclear policies, the rise of China, the collapse of the Soviet Union, the relative decline of Japan, and enhanced competition between China and the United States have not altered East Asia's nuclear trajectory thus far. Japan, Taiwan, and South Korea remained non-nuclear weapons states while North Korea continued on its nuclearizing path. Finally, is East Asia traversing a bipolar, hegemonic, or multipolar transition at the dawn of the twenty-first century?[27] Disagreements within neorealism over the actual nature and specific effects of power distribution on nuclear incentives provide uncertain grounds for explaining past, let alone predicting future, trajectories.

That security predicaments are important sources of nuclear behavior bears repetition. At the same time, reducing nuclear tendencies to this rubric, as is often done, leads to analytic overestimations of *state* security as the exclusive source of nuclearization. As Betts (2000) argues, insecurity is

not a sufficient condition for acquiring nuclear weapons; many insecure states have not, from Vietnam to Singapore, Jordan, and many others. The earlier dominance of neorealism on this issue stemmed partially from inherent problems of epistemology and evidence collection, afflicting nonproliferation studies perhaps most severely.[28] Leaders and state officials have incentives to justify nuclear decisions in terms of "reasons of state," which both domestic and international audiences consider more legitimate than parochial internal reasons. Analysts thus find more "evidence" for the role of security concerns in leaders' statements and justifications along those lines, and the secondary literature reinforces that focus.[29] In-depth analyses of North Korea, Iraq, Libya, and arguably Iran after 1991 including those in this book clearly suggest that nuclear weapons programs were driven more by *regime* than by state insecurity. Yet the latter, not the former, is the staple of neorealist accounts of nuclearization. The analytic and policy implications of this distinction are only beginning to permeate academic and policy-oriented thinking on nuclear proliferation.[30] The most important frontier for understanding nuclear choices and outcomes is the relationship between regime and state, or internal and external political survival.

As will be clear throughout the chapters that follow, this book does not assert that U.S. alliances with Japan and South Korea and commitments to Taiwan are irrelevant. Indeed, such commitments provide an important explanatory layer for these countries' nuclear abstention. Yet understanding their relative receptivity to persuasive and coercive aspects of the U.S. alliance requires us to delve into their domestic politics. Nuclear weapons would have seriously undermined favored strategies of economic growth and regional and global access. The choice for alliance *itself* was the product of domestic models that favored it over other options, trumping internal demands for nuclear weapons and generating receptivity to hegemonic inducements. This argument thus qualifies the tendency to focus exclusively on alliances in three ways. First, the domestic argument provides a deeper understanding of nuclear preferences insofar as it can also explain why alliance was chosen to begin with. Second, alliances provide a more robust explanation *if* one can show that the net outcome of domestic political debates were forceful demands for nuclear weapons that were trounced by the United States. There is little evidence of such forceful demands, particularly in Japan but perhaps even in South Korea and Taiwan, despite some domestic proponents of nuclear weapons in all three countries. The net outcome of the domestic debate was in line with East Asia's favored domestic model of political survival, which nuclearization would have derailed. Third, other hegemonic defense pacts involving the United States and the Soviet Union did not induce abstention from nuclear weapons in too many other cases (Iran's shah, Israel, Pakistan,

North Korea, and Iraq among others). Indeed, if alliances told the tale, Britain (and arguably France) should never have gone nuclear. The role of alliances in the second nuclear age is mediated by the relative receptivity of domestic models to alliance and denuclearization. Absent such receptivity, alliances have played far less determining roles; in its presence, alliances have provided stronger incentives to abstain from nuclear weapons.

Neoliberal Institutionalism (Neoliberalism)

Neoliberal perspectives focus on the role of international institutions in mitigating security dilemmas by enhancing information about others' intentions and capabilities, and by monitoring and enforcing compliance (Keohane 1984; Gourevitch 1999; Kahler 2000; Inoguchi 1997). The emphasis is on *states*' rational incentives to choose particular institutional arrangements that leave all states better off (Pareto optimal). Some consider the network of institutions known as the NPR, including regional NWFZs, as serving that purpose. Accordingly, the NPT established a two-tier system: a small tier of five nuclear-weapons-states (NWS) and a large tier of states that renounced nuclear weapons in exchange for civilian nuclear technology. Although there has been no systematic collection of evidence corroborating that the NPT indeed accounts for nuclear choices made since 1968, this perspective has widespread appeal and strong intuitive plausibility. However, as Betts (2000:69) argued, "If the NPT or CTBT [Comprehensive Nuclear Test Ban Treaty] themselves prevented proliferation, one should be able to name at least one specific country that would have sought nuclear weapons or tested them, but refrained from doing so, or was stopped, because of either treaty. None comes to mind." Another prominent expert on the NPT, Egypt's ambassador to the United States, Nabil Fahmy, expressed that "in the spirit of candid and clear-sighted analysis, one must be obliged to acknowledge that very few non-nuclear weapons states—parties—actually joined the treaty because it responded to their immediate security concerns. Most of the parties that joined NPT did so for political or economic reasons or circumstances, or because they had no reason to pursue nuclear weapons or nuclear programs from the beginning" (CEW).

How does a neoliberal perspective fare in explaining differential trajectories in our two regions? First, state-centric rational-institutionalist perspectives prove compatible with a few cases but inadequate, incomplete, or unnecessary for explaining nuclear choices and outcomes in several others. Persuasive institutionalist accounts would have had to establish that—had the NPR not existed at the time—alternative decisions to develop nuclear weapons in Japan or South Korea would have obtained (Taiwan ceased to be an NPT party due to China's opposition). The historical record does

not provide strong evidence for such a counterfactual. Second, the NPT clearly did not prevent Middle East nuclearization, as several parties defected from their commitments. East Asia exhibited far higher levels of compliance with the NPR (except North Korea) than the Middle East, which begs the question of what explains this disparate compliance. Third, East Asia lacked a regionally based nuclear regime that could account for its denuclearizing trajectory (Southeast Asia's NWFZ is rather recent, hence clearly not the cause of denuclearization in that region). Fourth, although the Middle East was home to the oldest regional institution, the Arab League played no effective role in nuclear policies. Israel and Iran provided convenient justification for the League's inaction on nuclear weapons programs in Iraq or Libya, but inter-Arab rivalries were no less crucial in paralyzing the League as an effective regional institution. Notwithstanding these points, the empirical chapters suggest that the NPR can be credited with some success in raising the costs of acquiring sensitive technologies and equipment, tightening inspection regimes in post-1991 Iraq, changing the context against which states formulated decisions regarding nuclear weapons, and offering new focal points such as the Additional Protocol. These achievements must be assessed against the fact that the NPR operated in the most thorny domain of national security, where the emergence and functioning of international institutions are most difficult. From this standpoint, rational institutionalist perspectives face vast disadvantages relative to neorealism as a theory that explains nuclear choices and outcomes.

Norms and Constructivism

The constructivist approach draws attention to how international norms emerge and converge around institutions, emphasizing socialization and normative pressure (Checkel 1997; Finnemore and Sikkink 1998; Barnett and Finnemore 1999; Johnston 2001). The NPR can be traced to anti-nuclear norms that developed after Hiroshima and Nagasaki. Despite the presumed rise of non-nuclear *use* norms (Schelling 1976; Tannenwald 2005), insufficient systematic evidence is available to ascertain whether a strong norm against nuclear acquisition developed as well. Furthermore, in the framework of deterrence theory, acquisition *circumvents* use and can conform to a "conditional morality" (Nye 1988). How can norms-based arguments be applied to explain differences in nuclear trajectories between the two regions? First, only East Asia since the 1970s may imply the possible operation of anti-acquisition norms, given nuclear restraint (except for North Korea). There is only limited evidence, however, for the impact of such norms even there, suggesting that they may have provided neither necessary nor sufficient conditions for denuclearization. Rational disincentives

(including external coercion, alliances, or domestic politics) could have led to compliance with the NPT. Japan's unique experience makes it a "most likely case" to support normative accounts of non-acquisition, but its "nuclear embeddedness" under the U.S. umbrella and other considerations reveal a possible overstatement of the nuclear allergy. There is no evidence of norms-based constraints for Taiwan or South Korea (or for other cases of denuclearization including South Africa, Argentina, Brazil, Egypt, Ukraine, Belarus, and Kazakhstan, among others). Second, the Middle East's poor record of NPT-compliance (and actual *use* of chemical weapons) questions the possibility that such norms developed deep roots in this region. Indeed, alternative norms stemming from nationalist, religious, and other identities invested nuclear weapons with redemptive value as tools of modernization and defiance of the international order.

Constructivist accounts would be particularly valuable if they could isolate the effects of socialization from those of hegemonic coercion or rational nuclear learning. They could explore clustered behavior toward or away from nuclearization in different regions and why such differences obtain under the shadow of a presumably shared anti-nuclear-weapons-acquisition norm. A systematic application of norms-based approaches to explain these two regions must be complemented with a theory of domestic politics capable of explaining whose meanings are relevant to leaders' decisions to pursue or eschew nuclear weapons, who are the norm entrepreneurs promoting one set of values or the other and why, and, most importantly, what explains the relative receptivity to each path in different regions. As with security-related "reasons of state," leaders are arguably more likely to explain nuclear decisions by appealing to norms than by wielding parochial political considerations. In that sense, norms-based considerations should surface more easily in the effort to reconstruct such decisions.

Democracy and Nuclear Weapons

The perspective that democracies and non-democracies differ in their international behavior has blossomed in the study of international relations. The democratic peace hypothesis, for instance, seeks to explain why democracies do not wage wars against each other (Elman 1997; Russett and Oneal 2001; Lipson 2003) but has not been applied systematically to explain regional nuclear trajectories. Some may argue that since 1968, democracies have not acquired nuclear weapons as a means to cope with conflict with other democracies except for India. The non-democratic nature of states, however, cannot explain differences between East Asia and the Middle East. First, Taiwan, South Korea, and several Southeast Asian states were not democratic when they renounced nuclear weapons; most were dictatorships. Second, most autocracies in both regions did not embark on nuclear

weapons programs. Third, while *most* nuclearizing states in the Middle East have been autocracies (Iraq, Libya, Iran, and Egypt under Nasser), some autocracies also reversed course and abandoned nuclear weapons programs (Egypt first, and most recently Libya) and others never pursued it (Jordan). Autocracies thus did not exhibit uniform nuclear behavior in the Middle East. Fourth, the only sustained democracy—Israel within 1967 borders—is attributed with robust nuclear capabilities. Regime-type theories might be extended to suggest that isolated democracies surrounded by adversarial autocracies have greater incentives to acquire nuclear weapons than democracies surrounded by democratic neighbors. This remains an untested theory that may be arguably supported by the Indian case but not by Japan (or South Korea and Taiwan since they became democracies).

In sum, given the historically mixed nature of regimes in both regions, the democratic peace would not be expected to apply to either case. Furthermore, the tendency between interactive democracies to dampen conflict may not necessarily be equivalent to the tendency to denuclearize, as France and Britain suggest (Lipson 2003).

Domestic Models: Orientations to the Global Economy and Nuclear Behavior

Domestic models of political survival and their orientations to the global political-economy have implications for nuclear trajectories. Leaders or ruling coalitions advocating economic growth through integration in the global economy have incentives to avoid the costs of nuclearization, which impair domestic reforms favoring internationalization. By contrast, nuclearization implies fewer costs for inward-looking leaders and for constituencies less dependent on international markets, investment, technology, and institutions, who can rely on nuclear weapons programs to reinforce nationalist platforms of political survival. *Hence, nuclearization has been much less attractive and far more costly for most East Asian leaders for domestic, regional, and international reasons,* which will be detailed further in the next chapter. Furthermore, the heavy regional concentration of internationalizing strategies in East Asia reinforced each state's incentives to avoid nuclearization. *Conversely, Middle East leaders faced lower domestic barriers to, and responded to stronger domestic incentives for, nuclearization than East Asian ones.* In addition, the heavy regional concentration of inward-looking strategies throughout the Middle East exacerbated mutual incentives to develop nuclear weapons.

Despite preliminary support for systematic differences in nuclear behavior traceable to domestic political survival, this hypothesis remains an understudied source of nuclear behavior.[31] This omission has important implications. A "missing" or "omitted" variable may lead to an overestimation

of other causal variables, granting them too large an effect on the outcome while rendering at least some of their effects spurious (Brady and Collier 2004). Without taking into account domestic political survival models, one may not properly understand nuclear behavior or estimate the actual effects of balance of power, international norms and institutions, or democracy. Introducing a previously omitted variable does not imply that other variables are rendered irrelevant, but rather that we are better able to understand their relative impact on nuclear choices. Domestic political arguments help explain why security dilemmas are sometimes seen as more (or less) intractable, why some states rank alliance higher than self-reliance but not others, why nuclear weapons programs surfaced where there was little need for them, and why such programs were obviated where one might have expected them. Balance of power as well as norms and institutions may be more relevant than political survival in some cases and not others, but, in the aggregate, complete explanations of nuclear behavior must include all relevant variables for particular cases, a consideration that guides the empirical chapters in this book.

Political survival models provide valuable insights on the evolution of nuclear trajectories in East Asia and the Middle East. First, only staunch opponents of internationalization pursued nuclear weapons in East Asia: China (1950s–1960s) and North Korea. Second, all nuclear programs in the Middle East were launched by leaders steering import-substitution and relatively closed political economies (Iran, Iraq, Egypt until 1971, Israel, and Libya). Third, Japan, Taiwan, and South Korea, although afflicted with intense security dilemmas, support the hypothesis that internationalizing models create propitious conditions for denuclearization as do some Southeast Asian cases, notably Singapore (never considered a nuclear aspirant).

The proposition that domestic orientations to the global economy and nuclear policy may be linked is probabilistic, bounded, and refutable. It is probabilistic because it does not suggest an inevitable or deterministic outcome; very few social science theories can do that. It is bounded in three ways: conditions of necessity and sufficiency for nuclear weapons development, contingency on regional effects, and temporal sequences in the acquisition of such weapons. First, resistance to the global economy may provide only near-necessary but not sufficient conditions for the development of nuclear weapons programs.[32] Not all Middle East leaders who were wary of internationalization also developed nuclear weapons (Sudan and Syria did not, but acquired alternative weapons of mass destruction—WMD). Technical or other barriers could explain such abstention, but the absence of security dilemmas certainly could not. Internationalizing models may not be necessary but are likely to be sufficient for denuclearization, except in the next two circumstances.

Second, the proposition is bounded by the relative incidence of alternative models in neighboring states. The extent to which regions share congruent orientations toward internationalization (either positive or negative) modifies domestic preferences on nuclear issues. The collective evolution of East Asia toward internationalization reinforced *individual* incentives of leaders to avoid nuclearization to preserve regional stability, foreign investment, and domestic growth, despite China's 1964 tests. North Korea's closure made it more impermeable to these positive regional synergies. Most Middle East rulers retained relatively closed political economies, facing fewer domestic and international disincentives for nuclearization.[33] Leaders that might have otherwise favored internationalization faced an unwieldy neighborhood that actively discouraged it. Thus, inward-looking regimes seeking nuclear (or other WMD) weapons in the neighborhood constrain potential incentives for internationalizing leaders to denuclearize.

Third, the proposition may be bounded by temporal sequences in the acquisition of nuclear weapons. Disincentives related to internationalization may operate more forcefully in countries where nuclear programs have not yet yielded weapons (as in Japan, South Korea, Taiwan, Argentina, Brazil, Spain, and various pre-1968 cases not explored here). The impact of such disincentives may be lower—but not nonexistent—once nuclear thresholds have been crossed.[34] China developed nuclear weapons during the "first nuclear age" dominated by U.S.-Soviet rivalry, decades prior to its decision to integrate within the global economy. Israel's nuclear efforts were launched in an era of import-substituting and centralizing policies (1950s). Beyond their respective security concerns, both cases suggest that it may be far more costly politically to eliminate existing weapons than to abandon steps in that direction. As suggested by prospect theory, leaders value more what they already have ("endowment effect") than what they might get; hence they are more averse to losing what they possess than potential future gains (McDermott 1998; Levy 2000; Mercer 2005). If prospect theory holds, under otherwise similar circumstances leaders can be assumed to accept higher risks to retain existing nuclear weapons than to retain programs leading to their potential acquisition. Furthermore, the disincentives stemming from an internationalizing model may be stronger at deliberative or incipient stages of nuclear weapons consideration than after they have been acquired. When nuclearization precedes the inception of internationalizing models, subsequent denuclearization may arguably be less likely.

A final methodological point must be stressed. Leaders prefer to use "reasons of state" as justifications for favoring or renouncing nuclear weapons and are unlikely to expose narrow considerations of individual, political party, or regime survival. Such ulterior purposes may sometimes underlie intentions more accurately but are less legitimate, less likely to be

formulated in public (and even private), and are consequently hard to substantiate. A dictator's acknowledgment that he needs nuclear weapons to sustain his regime, although genuine, is unimaginable.[35] So are admissions by democratic leaders that nuclear decisions (in either direction) may be driven by the need to fashion supportive coalitions favoring economic choices or to maximize electoral support from special constituencies. Such reluctance to portray nuclear decisions in purely self-serving political terms applies both to those favoring or renouncing nuclear weapons. Consider the difficulty in suggesting that "we should avoid nuclear weapons because they would undermine our corporations' ability to access world markets," or certain constituencies' ability "to attract foreign investment," or "our party's model of economic growth." Such parochial calculations would be regarded with cynicism and disregard for "national security," and they would alienate even supporters of the favored nuclear policy (such as an anti-nuclear constituency that might otherwise reject the hidden agenda). The political sensitivity of nuclear choices precludes candor to a greater extent than most other issues, yet domestic political considerations can weigh heavily on such decisions. Despite generic concerns with secrecy regarding nuclear decisions, democratic contexts provide better windows into such internal considerations than closed polities.

A Road Map

Chapter 2 provides an extensive analysis of different theoretical perspectives that can be marshaled to explain the nuclear evolution of the two regions, including more classical traditions focused on balance of power as well as more recent scholarship on international norms, institutions, democracy, and globalization. This overview analyzes both the logic of neorealist explanations as well as possible overestimations of their utility in our various cases. The analysis then turns to the merits and disadvantages of neoliberal institutionalism for advancing our understanding of nuclear choices and differential NPT-compliance patterns in the two regions. Next I discuss the potential role of anti-nuclear acquisition norms and alternative constructivist frameworks that could explain cross-regional differences. I subsequently explore the extent to which the democracy variable provides a useful foundation for understanding the cases under study. Last I examine the relationship between competing patterns of domestic political survival and divergent regional trajectories. The chapter ends with suggestions for a research agenda in the scholarly study of denuclearization.

The empirical chapters in parts 2 and 3 involve cases that differ in their nuclear behavior, ranging from those that only entertained theoretical possibilities for developing nuclear weapons to those that took concrete

steps to develop them, those that acquired them (with or without testing), to those that renounced them after some consideration and those that reversed earlier decisions to acquire them. The chapters thus point to wide variability in the dependent variable—nuclear decisions for and against nuclear weapons—and relate the historical record to different theoretical expectations outlined in chapter 2. Each chapter explores how leaders sought to resolve balance-of-power dilemmas while addressing disincentives stemming from regional and international institutions, norms, the global political economy, and the challenges of autocracy and democracy. Given space limitations, each historical case should be read more as a search for theoretical progress than as a theory-testing exercise. What are the important things we can learn, as we move kaleidoscopically from one approach to the other, that might have remained hidden by conventional wisdom? The long period under review allows for within-case comparisons across changing conditions in power balances, regime type, evolving norms, and models of political survival. It also increases the number of observations (nuclear decisions) over time. The cases are grouped by region in a way that enables us to distill some commonalities but also understand potential within-region anomalies.

Part 2 analyzes the experience of Japan, South Korea, and Taiwan pointing to denuclearization as the norm since the 1970s and to North Korea as the regional anomaly. Insofar as all three cases were subject to significant external threats from their regional environment that required power balancing, their eventual decision against developing nuclear weapons (particularly Japan's) may constitute an anomaly for undiluted neorealist perspectives, although less so for neoclassical variants sensitive to domestic politics and the advantages of alliances. I explore how decision-makers in each country sought to resolve security predicaments over time, the role of the NPR in their nuclear choices, the relative importance of anti-nuclear acquisition norms in each case, the relationship between internationalizing models of regime survival and nuclear choices, and the effects of an eventual evolution from autocracy to democracy in Taiwan and South Korea. The commonalities across these cases contrast dramatically with the North Korean anomaly, rooted in an autarkic model of regime survival with implications for the effect of alliances, norms, and international institutions.

Part 3 examines the contrasting pattern of nuclearizing tendencies in Iraq, Israel, Iran, Libya, and Egypt until 1971, and Egypt's subsequent departure from that trend. By 2003, Libya too announced its exit from the nuclear path. The comprehensive overview of each case explores balance-of-power considerations, approaches to norms and international institutions, and the relationship between domestic political survival models and nuclear outcomes. The connection between inward-looking

models and decisions to pursue nuclear weapons is particularly evident in this region. Autocratic states with entrenched *mukhabarat* mechanisms of repression, military-industrial complexes, and import-substituting priorities had a freer hand in steering nuclear programs in violation of NPT commitments. An entropic regional institution—the Arab League—reflected the character of its constituent units and was unable to prevent nuclearization throughout the region. The Multilateral Middle East Peace Process, underpinned by internationalizing leaders in selected Arab countries and Israel, became the most important effort to bring about a WMD-free-zone. Although stillborn and burdened with inward-looking pressures on all parties, as well as with continued threats from non-parties to the peace process, like Iran and Iraq, this process may have foreshadowed what the future may still deliver. For now, the Middle East remains the region with the highest barriers to denuclearization.

Part 4 distills lessons from both regions for analysis and policy, offering recommendations for improving the formulation of hypotheses in each conceptual tradition, and for outlining potential scenarios for the future. The first section evaluates the relative merits and applicability of conceptual approaches to nuclear choices examined in chapter 2 in light of the empirical cases in parts 2 and 3. It also explores the extent to which causal factors that may have persuasively explained the past are also likely to exert their influence on the future. Will past regional trajectories persist in light of evolving power balances, normative, institutional, and domestic circumstances? What processes or events might trigger possible discontinuities in nuclear courses? Will a failure to sway North Korea into a new path galvanize support for nuclearization among its neighbors (particularly Japan), ending East Asia's progression away from proliferation? Chapter 12 explores such scenarios by revisiting the power, institutional, and domestic considerations at play in the early twenty-first century. I end with some practical policy implications, including a call for particular sensitivity to domestic considerations, which, in the final analysis, define the paths of nuclear aspirants.