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Realist Perspectives on Ethical Norms and Weapons of Mass Destruction

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What role do ethics play in statesmen's decisions about the acquisition and use of nuclear, chemical, and biological weapons? Most realists would write an exceedingly short paper – indeed, perhaps a one-word telegram – on this topic: "None." Real statesmen do not follow ethical norms. Power consider- ations and the rules of prudence, not ethical concerns, govern international life. In the modern world, as in the ancient world, the strong do what they can and the weak do what they must.

I have considerable, but by no means complete, sympathy for this posi- tion. This chapter therefore presents an analytic description of the standard realist position, assesses current debates about its accuracy, and provides the beginnings of an alternative realist vision. I argue that some, though by no means all, statesmen do follow ethical norms in their weapons policies and that realists must take this fact into account, while not losing their focus on the highly competitive nature of international politics. In the modern world, the strong may not want to do what they can, for excessively aggres- sive behavior will force the weak to develop their own weapons of mass destruction. This result would be neither in the interest of the great powers, including the United States, nor, I believe, in the broader interests of the global community.

SOURCES AND PRINCIPLES

Realists trace their intellectual roots back to the classical writings of Thucy- dides, Hobbes, and Clausewitz, and these philosophers' views about the "ne- cessities of war" are often mirrored in the writings of modern neorealists.[1] Both Thucydides and Hobbes maintain that war is natural and unavoidable in the state of nature and therefore men must be perpetually aggressive in defending their interests: "It is a general and necessary law of nature to rule wherever one can," the Athenian generals tell the Melians before they con- quer Melos, kill its men, and enslave its women and children.[2] Clausewitz

began his treatise *On War* by similarly noting that competition in war forces all states to use the maximum degree of force available:

Force, to counter opposing force, equips itself with the inventions of art and science. Attached to force are certain self-imposed, imperceptible limitations hardly worth mentioning, known as international law and conventions, but they scarcely weaken it. . . . The maximum use of force is in no way incompatible with the simultaneous use of the intellect. If one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand.[3]

Modern neorealists hold similar views, derived from their two theoretical assumptions: Leaders of states behave in a highly rational manner and the international system is anarchic in nature.[4] Without any world government to enforce agreements, norms, or laws, states must do whatever is necessary to enhance their ability to survive. Ethical concerns can have little influence in this vision of a dog-eat-dog international system. In George Bernard Shaw's *Pygmalion*, when Alfred Doolittle offers his daughter Eliza to Henry Higgins for fifty pounds, he is queried, "Have you no morals, man?" "Can't afford them, Governor," he answers.[5] For modern neorealists, anarchy makes all state leaders as impoverished as Doolittle. "States in anarchy cannot afford to be moral," argue Robert Art and Kenneth Waltz:

The preconditions for morality are absent in international politics. Every state, as a consequence, has to be prepared to do what is necessary for its interests as it defines them. Anarchy is a realm where all can, and many do, play "dirty pool." . . . Strategic interdependence and the absence of morality mean that each state, if it wishes to be effective, must be prepared to play according to the rules set by the "dirtiest" player.[6]

Realists advocate balance of power policies – *realpolitik* – because they see no other means to protect the state in an effective manner. A state's life in the anarchic international system will be nasty and brutish, but it need not be short, if its leaders prepare for war and use military force in a cold and calculating manner to protect themselves from current and potential enemies. There is therefore a long tradition among realists in arguing that amoral *realpolitik* behavior is both strategically wise and morally preferred to its alternatives, because it is necessary to maintain even a modicum of peace and stability in a harsh world of rival states.[7]

The major debates about ethics in the international relations (IR) literature in political science today, however, are less normative than empirical in nature. Modern political scientists have been less concerned about identifying the best norms and principles by which international politics should be governed than they are in determining what role, if any, ethical norms actually do play in statesmen's decisions. The neorealist vision that ethics play little role in decision making concerning the use of force has recently been challenged by "neocultural" scholars, who argue that cultural norms – widely held beliefs within a community about what behavior is legitimate, appropriate, and natural – have a strong impact on international political decisions. These scholars have argued that there is a growing moral norm against developing chemical, biological, and nuclear weapons and that an international taboo against the use of weapons of mass destruction has had a strong impact on state leaders' decisions in crises and war.[8]

This chapter focuses primarily on the empirical question of how much influence, if any, ethical concerns have on statesmen's policies regarding weapons of mass destruction. It also is a first step toward a different and, I think, more realistic realist perspective on the issue of ethics and weapons of mass destruction. I argue that the neoculturalists are correct to argue that ethical norms sometimes do have an important impact on real states and real statesmen. I also argue, however, that a realist perspective is correct in that the impact of such norms cannot be understood outside the context of power relations in the anarchic and competitive international system.

Toward an Alternative Realist Vision

Four arguments are central to this effort to develop a revised realist perspective. The first concerns ethics and selection effects in a highly competitive international system. Statesmen who are strongly influenced by moral considerations are likely to promote policies concerning weapons of mass destruction that are considerably different from those followed by statesmen who are concerned only with cold considerations of their state's parochial and material national security interests. If it is true that some, *but only some*, state leaders are influenced by ethical norms, however, more ruthless states are likely to take advantage of such leaders. States in the international system should therefore be conceived as acting like firms in the market. Some will and some will not behave according to the logic of *realpolitik* and profit maximizing logic, but those that do not will suffer in the competition.[9]

The second argument could be called the "balance of ethics principle." Statesmen who focus only on the balance of power and ignore moral considerations altogether can create great fear and opposition among other statesmen who do place high value on moral principles. They will be seen as the leaders of greedy states, unable to cooperate with allies, too willing to break treaties whenever it suits them, and unable to settle for anything less than hegemony over others. A political leader who sees absolutely no place for ethics and cooperation in international life is therefore going to create a self-fulfilling prophecy. John Mearsheimer has advocated a radical brand of realism, which he labels "offensive realism": "A state's ultimate goal is to be the hegemon in the system. . . . Survival mandates aggressive behavior."[10] But such radical realists forget that the word "offensive" has two meanings – aggressive and obnoxious – and if some statesmen do seek a modicum of moral behavior, then excessive *realpolitik* behavior by others

will encourage these statesmen to fight harder, to develop their own more destructive weaponry, and to create counterbalancing coalitions against the more offensive power. I argue that wise realist statesmen should therefore temper or shape their *realpolitik* behavior to take into account how other leaders view the ethical or unethical nature of their actions.

In short, realist statesmen should keep one eye on the balance of power to protect the state in the immediate term and one eye on the balance of ethics in order to minimize others' hostility over the long run. This perspective would not be entirely surprising to classical realists. After all, Thucydides's description of the Athenians' brutal behavior toward the weak Melian colony was a tragic vision. The stronger Athenians certainly did what they could against the Melians. But Thucydides noted that the Athenians eventually lost the Peloponnesian War as their power and hubris led to imprudent behavior and counterbalancing by other city-states.

Third, realist principles can lead to considerable restraint with respect to weapons of mass destruction. Restrained policies that appear to some scholars to be caused by ethical considerations or taboo-like behavior are often actually the calculated pursuit of long-term national security interests. This is the case when the nonuse of such weapons is due to a fear that an adversary would take your military action as a precedent or excuse to do something that you do not want to see happen in the future. There is an important analytic difference between cases in which you are refraining from an act because you think it is wrong versus refraining from an act because you fear that if you do it, others eventually will do it, too, as a direct or indirect consequence of your action. The first is a strong form of an ethical taboo; the latter is more like a rule of prudence. The distinction is important because taboos are not likely to be overturned by a single violation (indeed, they may be reinforced). But this is not necessarily the case when it comes to precedents. When the restraint is based more on fear of setting precedents, it should be called a tradition of nonuse, but not a taboo. Using nuclear or other weapons of mass destruction under such circumstances could set a new precedent and hence greatly increase the likelihood of future use. In short, traditions may be more fragile than taboos.

The fourth argument concerns the relationship between power and ethics in determining arms control agreements and regimes. Ethical norms may indeed matter in international politics, but the norms that matter most are the ones that are supportive of, and therefore are supported by, the most powerful actors. As is discussed below, the most important international rules and regimes that concern weapons of mass destruction are the ones that have been promulgated by the United States and other great powers. This does not mean that the array of arms control agreements that form the major institutionalized norms concerning weapons of mass destruction are unimportant or unproductive. Realism reminds us, however, that states will behave in a hypocritical manner with respect to arms control regimes

when leaders feel they are not in their state's interests. An alternative realist perspective would add that to be most effective over the long term, even strong powers must craft their policies to take into account the ethical concerns of other actors, including the weak.

UTILIZATION: TABOO OR NOT TABOO?

One of the most important puzzles of both the cold war and post–cold war eras is how to explain the fact that nuclear weapons have not been used in war since the attacks on Hiroshima and Nagasaki in 1945. Is the fifty-year tradition of nonuse of nuclear weapons best explained by the logic of deterrence or the nuclear taboo? How do realists explain the use and nonuse of nuclear weapons?

President Harry Truman's "decision" to drop two atomic bombs on Hiroshima and Nagasaki in August 1945 is not at all puzzling from a realist perspective.[11] States would be expected to use whatever effective weapons they have at their disposal in wars, especially in major conflicts in which restraints imposed by the need to reach potential compromise settlements have been abandoned. By 1945, the government's policy of unconditional surrender as the U.S. war aim in the Pacific was strongly entrenched and enjoyed wide public support. Moreover, given the ongoing incendiary bombing of Japanese cities, U.S. decision makers did not even see themselves as crossing an ethical threshold. They did not anticipate significant public opposition within the United States to the use of the atomic bomb. (And they were right: In a November 1945 poll, only 4.5 percent of the U.S. public opposed the dropping of the bombs, while 22.7 percent thought that the U.S. "should have quickly used many more of the bombs before Japan had a chance to surrender."[12]) There was certainly no fear of retaliation in kind, or even retaliation of any kind. Moreover, what appeared shocking to revisionist historians – that U.S. statesmen might have considered the dropping of the bombs on Japan to have beneficial "bonus" effects on the emerging conflict with the Soviet Union – would appear natural and predictable to most realists. With all these factors favoring immediate use of the atomic bomb, the case appears to be overdetermined.

Given the twin belief in statesmen's rationality and in the effectiveness of balances of power, it is not surprising that modern realists have viewed *mutual possession* of nuclear weapons as a force for peace and stability, rather than as a force for war.[13] Realists would therefore offer a simple explanation – the balance of terror – for the nonuse of nuclear weapons by the Soviet Union and the United States during the height of the cold war. Both cold war rivals developed large and secure (i.e., survivable) nuclear arsenals to ensure that they could retaliate massively after an attack by the other. Both developed nuclear doctrines that emphasized a mix of counterforce targeting (attacking nuclear forces to limit damage in the event of war, to

confound enemy war plans, and to add credibility to limited first nuclear weapons use threats) and countervalue targeting (attacking population centers deliberately to maximize punishment as retribution after a first strike). Both sides targeted the other's senior leadership in the nations' capitals and military bases, with some hope that this might limit damage through "decapitation" in the event of war and with more serious expectations that such "counterleadership" threats would deter even the most ruthless, self-interested capitalist or communist leader.[14]

Preventive War

There is a more specific nuclear puzzle, however, that is more difficult to explain from a realist perspective. First, why did nuclear weapons states not launch a preventive war to prevent their adversaries from developing a nuclear capability that can threaten the utter destruction of their nation? A *preventive* war is an attack deliberately initiated or deliberately provoked in peacetime due to the belief that long-term military trends favor an adversary and that it is therefore better to conduct war now, rather than at a later date.[15] Preventive war is considered illegitimate, for a number of related reasons, in most ethical traditions.[16] First, a state, like an individual under domestic law, must be guilty of an aggressive act, rather than just presumed likely to commit one, in order to justify punishment. Second, it is difficult to predict the future intentions of states, which may change dramatically over time, and thus it is difficult to know with much certainty whether a preventive war today is necessary to prevent aggression in the future. If preventive war is deemed acceptable, it could encourage leaders to go to war whenever they saw potential enemies on the horizon. (General Thomas Powers, General Curtis LeMay's successor at Strategic Air Command, once commented that the United States received its "first strategic warning" of the impending Soviet attack in 1848 when Marx and Engels published *The Communist Manifesto.*[17])

Since realists argue that statesmen should do whatever is necessary to protect the security and survival of the state and should not be influenced by moral norms, how can they explain why statesmen have so rarely engaged in preventive wars when facing an adversary acquiring nuclear weapons? Scholars must be very careful when interpreting documents that report on government officials discussing preventive war or other acts widely considered to be of questionable legitimacy, for there is often a "realist bias" in international security discourse. By this I mean that in much of daily life (and much of public political discourse) individuals mask arguments promoting self-interest in broader moral terms. "We need to do this because it is the right thing to do." But in security affairs decision making, leaders are expected to be tough, cold-minded realists. This encourages statesmen and soldiers in private to mask moral arguments with reference to more

"justifiable" national security interests. Leaders are therefore more likely to argue not that the government should refrain from doing something because it would be wrong, but rather that the government should refrain from doing something because it won't be effective or others will think it is wrong.

Even with that cautionary note, I think the evidence from the most serious "close call" to a preventive nuclear strike in U.S. nuclear history suggests that President Dwight Eisenhower rejected recommendations for a preventive war against the Soviet Union in the early 1950s primarily for realist reasons. During the Truman administration, there was some discussion of a preventive atomic war, but the United States lacked the nuclear weapons capability to win quickly and decisively in what was then expected to become a long and drawn-out conventional war of attrition with the Soviet Union. In the early 1950s, however, U.S. capabilities had grown to the point where senior military officials began to advise the president that a preventive war against the Soviets was advisable.[18] Eisenhower confided to Secretary of State John Foster Dulles in September 1953 that he believed a preventive attack on the USSR might be necessary and justified. In the near future, he argued:

[The U.S.] would have to be constantly ready, on an instantaneous basis, to inflict greater loss upon the enemy than he could reasonably hope to inflict upon us. This would be a deterrent – but if the contest to maintain this relative position should have to continue indefinitely, the cost would either drive us to war – or into some form of dictatorial government. In such circumstances, we would be forced to consider whether or not our duty to future generations did not require us to *initiate* war at the most propitious time that we could designate.[19]

Despite these considerations, Eisenhower rejected the concept of preventive nuclear war in 1954. The president could have been influenced primarily by normative constraints, by fears of domestic or allied nations' opposition, or by more realist concerns about the costs of any preventive war. The evidence suggests that his primary reasons were realist in nature, not due to ethical concerns that preventive war would be illegitimate. First, one should note his view on the effectiveness of nuclear deterrence indicated in the comment to Dulles quoted above. Second, Eisenhower was not convinced that the United States had the military power or political will, even after a "successful" nuclear first strike, to eliminate security threats over the long term. At a National Security Council briefing on nuclear war in March 1954, for example, "The President pointed out that . . . the colossal job of occupying the territories of the defeated enemy would be far beyond the resources of the United States at the conclusion of this war."[20] Finally, although domestic political considerations may have played some role in Eisenhower's reluctance to order a preventive attack, he showed little moral inhibition against planning to use nuclear weapons first and massively if the Soviet Union attacked the United States or NATO even with conventional

forces: "We are *not* going to provoke war, and that is why we have got to be patient. If war comes, the other fellow must have started it. Otherwise, we would not be in a position to use the nuclear weapon. And we have to be in a position to use that weapon if we are to preserve our institutions and win the victory in war."[21]

What about other cases of potential preventive attacks to thwart nuclear proliferation? Two points should be briefly noted. First, as realists would predict, there have been a number of preventive attacks to stop nuclear and missile proliferation, although they were conventional bombing raids or covert operations, rather than nuclear weapon strikes. The Israelis used covert operations to slow down the Egyptian missile programs, which they feared could be used to deliver nuclear weapons, in the 1960s.[22] Israel also destroyed the Iraqi nuclear reactor at Osiraq in 1981, the most clear-cut case of an unprovoked preventive attack to reduce proliferation dangers.[23] The 1991 and 2003 wars against Iraq can also be seen, at least in part, as preventive wars by the United States to stop Saddam Hussein's regime from eventually acquiring nuclear weapons.[24]

Second, realists would correctly stress that in the case of a potential preventive war against China, fear of Soviet intervention constrained American considerations in the early 1960s, and then fear of American intervention limited Russian planning in 1969. In both cases, the potential attacking nuclear power sought military support – or at least a firm commitment of neutrality – from the other nuclear power before attacking China. In neither case, however, did the potential attacker get reassurances on that score and thus could not rule out military responses from the other side.[25] In short, a form of extended nuclear deterrence also helped to prevent preventive war against third parties during the cold war.

DETERRENCE, SELF-DETERRENCE, AND PRECEDENT SETTING

How far does the writ of deterrence run according to realist logic? While realists have argued that mutual deterrence, through the threat of unacceptable retaliation, was both necessary and effective during the cold war, there is a more puzzling set of cases of nuclear nonuse when the United States faced a weaker power that did not possess nuclear weapons. These cases include North Korea in the 1950s, Vietnam in the 1960s, and Iraq in the 1990s. This phenomenon has been labeled by John Lewis Gaddis as "self-deterrence."[26] Self-deterrence is a confusing term, however, because there are many different reasons why state leaders may decide not to use nuclear weapons against nonnuclear states. First, there could be fear of setting a precedent whereby others would be more likely to use nuclear weapons in the future. Second, there could be a paucity of appropriate targets or a shortfall in nuclear weapons capabilities at the time. Third, there could be pressures from important allies or public opinion. Fourth, it is possible that

the decision was made because senior political authorities believed that such nuclear strikes would be morally wrong.[27] Only the third and fourth causes of nuclear restraint could be accurately seen as "self-deterrence" produced by ethical norms or a nuclear taboo. I illustrate the distinction between deterrence and self-deterrence – between realist explanations and neoculturalist explanations – by examining the most recent case of American nonuse of nuclear weapons in a major war against a nonnuclear adversary. The case also raises dilemmas about how to best deter the use of chemical and biological weapons.

The Nonuse of Nuclear Weapons in the Gulf War

What was U.S. policy with respect to nuclear weapons use and threats during the Persian Gulf War in 1991? What threats did senior U.S. officials make during Operation Desert Storm, and what was their intent? We now know, from numerous officials' memoirs, that the senior U.S. leaders had decided they would not use nuclear weapons even in response to an Iraqi use of chemical weapons, but nevertheless cautiously planted some seeds of doubt in the mind of Saddam Hussein for the sake of deterrence. As President George Bush and National Security Advisor Brent Scowcroft note in their joint memoirs:

What if Iraq used chemical weapons? We had discussed this at our December 24 meeting at Camp David and had ruled out our own use of them, but if Iraq resorted to them, we would say our reaction would depend on circumstances and that we would hold Iraqi divisional commanders responsible and bring them to justice for war crimes. No one advanced the notion of using nuclear weapons, and the President rejected it even in retaliation for chemical and biological attacks. We deliberately avoided spoken or unspoken threats to use them on the grounds that it is bad practice to threaten something you have no intention of carrying out. Publicly, we left the matter ambiguous. There was no point in undermining the deterrence it might be offering.[28]

Secretary of State James Baker later recalled that, at a meeting with Iraq's foreign minister Tariq Aziz, he nevertheless "deliberately left the impression that the use of chemical or biological agents by Iraq could invite tactical nuclear retaliation."[29] Baker has argued that the U.S. nuclear threat successfully deterred Saddam from using Iraqi chemical and biological weapons.[30] Many government officials and scholars have uncritically accepted this position.[31] An important debate on this issue, however, revolves around whether it was the ambiguous U.S. nuclear threats or the more explicit threat to march to Baghdad and overthrow Saddam Hussein's regime that deterred Iraqi use of their chemical and biological weapons.[32]

Far less attention has been paid to explaining the "dog that didn't bark": Why didn't the United States use nuclear weapons against Iraqi troops

during the 1991 Gulf War? The Gulf War presented a tactical situation where most of the conditions for legitimate nuclear use under just war theory – just cause, discrimination, proportionality – may have been present. Tactical and strategic considerations may also have favored nuclear weapons use. Low-yield nuclear warheads were available in the theater of combat, and with Iraqi forces dug into desert field positions, the potential for a discriminate tactical nuclear attack with virtually no collateral damage to civilian populations was possible. Baghdad was isolated politically, and there was, in contrast to earlier cases such as the Korean and Vietnam Wars, no fear of other states retaliating with their nuclear weapons in response to a U.S. nuclear first use against Iraq. Anticipated American and allied casualties might have been significantly reduced if conventional attacks could be avoided. Under these conditions, U.S. leaders' reluctance to brandish the nuclear arsenal is the puzzle that needs to be explained.

Nina Tannenwald's detailed study makes the strongest case for a nuclear taboo being the main cause of the nuclear restraint displayed by American leaders during the Gulf War.[33] One unnamed White House official is quoted saying that U.S. nuclear use was "so far-fetched" that it never came up in high-level discussions. When asked about tactical nuclear weapons use, the White House chief of staff, John Sununu, replied that "we just don't do things like that." A senior military officer states that tactical nuclear weapons use "is simply beyond the pale. General Colin Powell, then Chairman of the Joint Chiefs of Staff, responded to a request for a study of nuclear options by Secretary of Defense Richard Cheney by arguing: 'Let's not even think about nukes. You know we are not going to let that genie loose.'" When Joint Chiefs of Staff officers developed a military plan with many tactical weapons being used in the desert battlefield, Powell had the plan destroyed after showing it to Cheney. Tannenwald concludes:

These kinds of convictions, which go well beyond arguments from utility to those of identity and community, involve a deeper discourse of "civilization." They illustrate a constitutive effect of the taboo, showing how the taboo works in deeper, more fundamental ways. By the time of the Gulf War – in contrast to 1945 – Americans had come to see use of nuclear weapons as contrary to their perceptions of themselves.[34]

The evidence gathered by Tannenwald clearly does point to a growing conviction among many American political and military leaders that use of nuclear weapons by the United States is "inappropriate." My reading of the Gulf War case, however, differs from Tannenwald's interpretation. Longer term material factors, especially concerns that U.S. nuclear use in this conflict would harm Washington's nonproliferation efforts by encouraging other states to acquire nuclear weapons in the future, appear to have been critical.

Consider the analogy that Powell used to describe his reluctance to plan for the use of nuclear weapons: "We're not going to let that genie loose."[35] This implies not that nuclear use was morally wrong or unthinkable, but that

it was undesirable. It also implies that even if the immediate effects might be positive, the long-term effects were highly uncertain and uncontrollable and potentially disastrous. Powell reports that the secret study of potential nuclear attacks against Iraqi forces "unnerved" him: "To do serious damage to just one Iraqi division in the desert would require a considerable number of small tactical nuclear weapons. . . . If I had any doubts before about the *practicality* of nukes on the field of battle, this report clinched it."[36] The lack of moral language here is noteworthy, especially in contrast to his discussion of following the "warrior's code" of not killing unnecessarily in his memoirs. Powell displayed concern about reducing civilian collateral damage and unnecessary Iraqi military casualties throughout the Gulf War, but interestingly these were not the concerns expressed when arguing for U.S. nuclear restraint.

A second example comes from a postwar interview with General Charles Horner, the commander of the bombing campaign against Iraq. Horner's explanation for not using nuclear weapons is focused on influencing future proliferation decisions:

People have asked me did I ever think about using nuclear weapons. . . . you could use nuclear weapons but for what targets? The nuclear weapon's only good against cities, it's not any good against troops in the desert, I mean it takes too many of 'em. . . . One of the major lessons of Desert Storm is the fact that it's about the new world, it's not about the Cold War world, it's about how useless nuclear weapons are except to people who have no conscience, and one of the principal targets that we had was the nuclear weapons capability of Iraq, the counter proliferation effort that's going to characterize operations in the future. . . . [It is about] India and Pakistan having nuclear weapons – this is the new warfare, the counter proliferation war against nuclear weapons and weapons of mass destruction.[37]

These quotes suggest that the desire to reinforce the "tradition of nonuse" rather than a nuclear taboo may have been the driving factor in the U.S. decision not to use nuclear weapons in the Gulf War. This realist interpretation leads to a different assessment of the future of U.S. nuclear restraint. If nonuse against such nonnuclear enemies is due less to an internalized nuclear taboo and more to concerns about precedent setting, then U.S. restraint may not hold if a so-called rogue state gets nuclear weapons and uses them first, even in self-defense. As is discussed in the conclusion, this perspective also raises concerns about current U.S. policy to threaten nuclear retaliation in response to other states' chemical or biological weapons attacks.

PROLIFERATION: CAUSES AND CONSEQUENCES

What are the central causes of nuclear, chemical, and biological weapons proliferation? With respect to nuclear weapons, realists have a clear and simple answer: States will seek to develop nuclear weapons when they face a

significant military threat to their security that cannot be met through alternative means; if they do not face such threats, they will be willing to remain nonnuclear states.[38] Realists therefore envision the history of nuclear proliferation as a kind of strategic chain reaction. Every time one state develops nuclear weapons to balance against its main rival, it also creates a nuclear threat to another state in the region, which then has to initiate its own nuclear weapons program to maintain its national security. The United States developed the atomic bomb, fearing that Nazi Germany was about to develop one. After August 1945, the Soviet Union developed the bomb because the U.S. attacks on Japan demonstrated that nuclear weapons were technically possible, and the emerging cold war meant that a Soviet bomb was a strategic imperative. Britain and France apparently built nuclear weapons because of the growing Soviet nuclear arsenal and the resulting reduction in the credibility of the U.S. nuclear guarantee to NATO allies. China developed the bomb primarily because Beijing was threatened with possible nuclear attack by the United States at the end of the Korean War and during the Taiwan Straits crises. After China developed the bomb in 1964, India, which had just fought a war with China in 1962, was bound to follow suit. After the Indian test in 1974, the nascent Pakistani nuclear weapons program had to move forward. Facing a recently hostile neighbor with both a nuclear weapons capability and conventional military superiority, it was inevitable that the government in Islamabad would seek to produce a nuclear weapon as quickly as possible.

This standard realist view thus minimizes the role of other factors that can restrain (and sometimes encourage) nuclear weapons procurement, such as ethical norms, domestic political interests, and concerns about global prestige or opprobrium.[39] Instead, most realists maintain that if a state does not acquire nuclear weapons, it must be due to one of three reasons. First, the state may lack the technical capability to build the bomb, a condition that continues to exist in the poorest parts of the developing world. Second, some states that could build nuclear weapons do not do so because they have a nuclear guarantee from an allied nuclear state that it will respond to any attack on its ally. This explains the limited proliferation within NATO and Japan's nonnuclear status. Finally, realists argue that some states have struck an implicit bargain under the Nonproliferation Treaty (NPT) that they will not get nuclear weapons in exchange for a guarantee that their neighbors will also not get them. Under this vision, the NPT is seen as an institution permitting nonnuclear states to overcome a collective action problem. Nonnuclear states in the NPT would prefer to become the only nuclear weapons power in their region, but since that is an unlikely outcome if one state develops a nuclear arsenal, each is willing to refrain from proliferation if, and only if, its neighbors remain nonnuclear.

Realists have written far less on the spread of chemical and biological weapons, but a similar logic would apply.[40] Nonnuclear states that perceive

severe threats to their security are likely to develop chemical or biological weapons despite legal or moral inhibitions. Chemical and biological weapons are often called a "poor man's nuclear weapon" because they are easier and cheaper to develop, though they are generally far less effective (with a major exception being made for some virulent biological agents). Although most states have agreed not to build chemical or biological weapons under the rules of the Chemical Weapons Convention (CWC) and Biological Weapons Convention (BWC), realists would predict that weaker states would be tempted to cheat on the agreements they have signed. This prediction is supported by reports that at least seven nonnuclear states – Iran, Iraq (prior to the U.S.-led invasion in 2003), Libya, North Korea, South Korea, Syria, and Taiwan – are suspected of hiding chemical weapons and/or biological weapons stockpiles or production facilities.[41]

Proliferation Optimists and Pessimists

Given common realist arguments about the necessity for maintaining balances of power, it is not surprising that many realists argue that further proliferation of weapons of mass destruction is inevitable. The major powers today will seek to stem the tide, for it hurts their relative power position, but they are highly unlikely to meet complete success. What is more surprising, at first glance, is that many realists do not worry too much about the consequences of proliferation. These so-called proliferation optimists assume that all states, regardless of their internal characteristics, behave in similar, essentially rational ways. Since a mutual exchange of nuclear weapons would produce disaster for both the initial attacker and the state that retaliates, new nuclear powers are likely to be highly cautious and constrained in their use of their new arsenals. For many realists, a prescription for maintaining a balance of power has turned into a faith in the stability of the nuclear balance of terror. Kenneth Waltz's essays arguing that "more [proliferation] may be better" are the most influential work among the proliferation optimists. Waltz concludes:

The likelihood of war decreases as deterrent and defensive capabilities increase. Nuclear weapons make wars hard to start. These statements hold true for small as well as big powers. Because they do, the gradual spread of nuclear weapons is more to be welcomed than feared.[42]

This view is by no means universally shared. Critics have maintained that Waltz is unrealistically optimistic in minimizing four critical dangers.[43] First, rational states may well be deterred from engaging in preventive wars during early stages of a nuclear arms race. But in many states nuclear weapons are controlled by military organizations, not by statesmen. Military officers are biased in favor of offensive doctrines and preventive wars because they believe war is inevitable in the long term. This leads them to favor decisive

operations and preventive strikes when their nation is ahead in an arms race and the perceived adversary is catching up. Preventive wars are therefore more likely between new nuclear powers where strict civilian control of the military does not exist.

Second, Waltz assumes that it is easy to build survivable deterrent forces. This may not be the case if a new proliferating state's military is not competent in maintaining the secrecy and security of their nuclear arsenal's locations and operations. Third, proliferation pessimists are concerned that the danger of accidental nuclear war – caused by false warnings, unauthorized use, or technical accidents – will increase in new nuclear states. Finally, critics note that the danger of terrorist theft of nuclear weapons will rise as the technology spreads to new nuclear states that either harbor terrorist organizations or have sympathizers of terrorist organizations within their governments.

In short, proliferation pessimists, unlike traditional neorealists, do look inside the state, arguing that different kinds of regimes and military organizations will produce different kinds of nuclear policies. Not all new nuclear states are likely to be able to maintain the degree of nuclear stability created over time by the United States and Soviet Union during the cold war. The proliferation pessimists do, however, still hold the neorealist view that selection effects occur in the competitive international system. Many new proliferators will be able to control nuclear weapons well, but others will not, and those less competent states will suffer the consequences. Unfortunately, the physical and political consequences of any nuclear weapons use by smaller powers may not be limited to those powers themselves.

DISARMAMENT: CAUSES AND CONSEQUENCES

Realists have a clear position on complete nuclear disarmament. They are opposed to it. If there were no world government capable of verifying and enforcing strict disarmament, any state would be tempted to cheat or to develop nuclear weapons quickly in a serious crisis. The first state to get nuclear weapons in such a crisis would not be deterred from using them by the threat of retaliation. Thus, realists argue, nuclear disarmament would ironically increase the likelihood that nuclear weapons would someday be used.[44] This has been called the "instability of small numbers" problem and helps to explain why realists have traditionally focused far more attention on incremental arms control measures than on complete disarmament efforts.

It is by no means clear, however, that all political leaders have shared this logic. Indeed, there are at least two cases – Iran with respect to chemical weapons and Japan with nuclear weapons – in which ethical considerations appear to have led to abstinence. These cases may be exceptions to the neorealist rule that states will develop whatever weapons they can to protect themselves. Iran and Japan may also, however, be prime examples of the

realist idea of the selection mechanism: If states do not follow realist principles in crises, they will suffer severe consequences, as other more ruthless states will take advantage of them.

Iran and Chemical Weapons

When Ayatollah Khomeini created the Islamic Republic of Iran in 1979, he and the ruling mullahs inherited the shah's secret nuclear weapons research program, but the research facilities and power reactor programs quickly fell into disrepair as senior scientists left the country in large numbers and Western governments tightened exports controls over technology and nuclear materials.[45] In 1979, Iran had no dedicated chemical weapons program, having signed the Geneva Protocol outlawing the development or use of such weapons. Despite the outbreak of the war with Iraq in 1980, the Khomeini regime made little effort to revitalize what it considered an "idolatrous" nuclear program, canceling ongoing equipment orders with European firms.[46] Neither did it begin large-scale chemical or biological weapons programs. In 1982, when Saddam Hussein initiated the battlefield use of chemical weapons against Iranian soldiers and revolutionary guards, Iran was unable to respond in kind with chemical weapons or to threaten to escalate the conflict with other weapons of mass destruction.

Despite the Iraqi use of chemical weapons, Ayatollah Khomeini opposed Iran's acquisition or use of chemical weapons on grounds that this would violate the Qur'an's injunctions against polluting the atmosphere, even during a holy war. He reportedly issued a fatwa, or religious edict, outlawing the use of chemical weapons.[47] Khomeini was both the spiritual leader and commander-in-chief of the Islamic Republic of Iran and his ethically driven position held as state policy until 1987, when he relented and approved the use of chemical weapons in retaliation against Iraq.[48]

The results of Khomeini's refusal to prepare for or to permit retaliation in kind to Iraq's chemical attacks were devastating. Estimates of Iranian casualties from repeated Iraqi chemical strikes during the war range from 45,000 to 100,000 soldiers and revolutionary guards. The CIA reportedly argued that the Iraqi use of chemicals was a decisive factor in driving a reluctant government in Tehran to the negotiating table.[49] As realists would also predict, however, the Iraqi chemical attacks eventually pushed Iran to reverse its position. In 1998, Speaker of the Parliament Hashemi Rafsanjani drew the following lessons from Iran's experience during the war with Iraq:

With regard to chemical, bacteriological, and radiological weapons training, it was made very clear during the war that these weapons are very decisive. It was also made very clear that the moral teachings of the world are not very effective when war reaches a serious stage.... We should fully equip ourselves in the defensive and offensive use of chemical, bacteriological, and radiological weapons.[50]

Japan and Nuclear Weapons

Japanese nuclear policy is the most prominent example of the disavowal of nuclear weapons that neoculturalist scholars interpret as being determined by ethical norms. For over thirty years, Tokyo has declared that it follows the so-called three nonnuclear principles: not to make nuclear weapons, not to possess them, and not to bring them into Japan. Peter Katzenstein maintains that without the "nuclear allergy" that comes from Japan's moral opposition to nuclear weapons, the Tokyo government would have developed nuclear weapons long ago. The institutionalization of these ethical and cultural norms into government policy, Katzenstein argues, "places great obstacles in the path of those who want to make Japan a normal country, with a normal military force and normal levels of military spending."[51]

Realists question this interpretation of Japan's nuclear policy, placing more emphasis on the U.S. nuclear guarantee to Japan. They cite evidence that Japan has deliberately created, through its basic technological prowess and its nuclear energy program, a capability to break out of its unarmed position rapidly if the United States withdrew its military support.[52] Moreover, realists note that during the North Korean nuclear crisis of 1993–94, senior government spokesmen hinted that Tokyo might change policies.[53] Realists therefore suggest that if North Korea develops a nuclear arsenal in the future and the U.S. nuclear guarantee is withdrawn in response, then Tokyo would quickly make its latent nuclear weapons capability a real one, which is permissible under the NPT's three-month escape clause.[54]

We cannot know today whether neorealism or neoculturalism would be proven correct in the event that the United States pulled its nuclear umbrella away from Japan. But my realist compass points to the likely outcome if Japanese officials did follow their moral nonnuclear principles and refrained from building a nuclear arsenal to counter a nuclear North Korea. Tokyo would be forced to change its foreign policy radically under the pressure of coercive threats. A historical analogy is relevant, since Japan did practice an unusual form of self-restraint with respect to advanced weaponry once before: In the early eighteenth century, the Japanese outlawed firearms and returned to the use of swords throughout their society. The reasons, as explained by Noel Perrin, were both geopolitical and cultural in nature: geopolitical because once their wars with Korea were over at the end of the seventeenth century, Japanese leaders did not fear conquest by their neighbors; cultural, in that swords, not guns, held symbolic value for the samurai classes (since others were forbidden to own swords), were considered more honorable to use, and were more aesthetically pleasing. This condition continued for over a hundred years, until a defenseless Japan was forced to open up to the outside world by the U.S. fleet. "The samurai of Japan were never willing to make this distinction between what is beautiful and what is useful," Perrin concludes, adding, "at least until they met Admiral Perry."[55]

CONCRETE OPTIONS: ARMS CONTROL REGIMES AND MILITARY DOCTRINES

A realist perspective should maintain that ethical norms matter, but that power shapes which norms are influential in world politics. An example is the norm against assassination of leaders. It is not surprising from a realist perspective that the strongest powers in the international system, from the Romans in their day to the United States today, have been the instigators of international norms that discourage political assassination since they have other military means to defeat adversaries.[56] Realism reminds us that the strong usually make the rules, but also that the strong often flaunt them. The United States clearly targeted Muammar Qaddafi's tent in response to Libyan supported terrorist attacks in 1984 and repeatedly targeted Saddam Hussein's underground command bunkers during the 1991 Gulf War and the 2003 Iraq War.[57] But Washington officials were quick to announce that these were strikes on national "command and control" facilities, not illegal and immoral assassination attempts.

Realism helps to explain why the United States (and other nuclear powers) so strongly supported the creation of the Chemical Weapons Convention (CWC) and the Biological Weapons Convention (BWC). Treaties that outlaw the use and possession of the "poor man's nuclear weapons" clearly favor strong states that have nuclear forces and stronger conventional forces. From most ethical perspectives, it would appear wrong or at least ironic that the possession and potential use of the most harmful and least discriminate of WMD (nuclear weapons) have not been unequivocally outlawed, while the use and possession of the generally less harmful and more discriminate weapons (chemical and most biological weapons) are banned by international law. Such an outcome is understandable, however, in light of the interests of the most powerful actors in the international system.

In a world in which many states could acquire nuclear, chemical, and biological weapons, however, the governments of strong states would be well advised to pay more heed to the perspectives and interests of weaker states. It is here that radical realism can easily misguide the statesmen. The United States is by far the most powerful actor in the international system since the end of the cold war, and the U.S. government has been tempted to abandon many arms control agreements and constraints on U.S. nuclear policy on the grounds that they are no longer necessary to protect American interests.

Four examples stand out. First, the Comprehensive Test Ban Treaty (CTBT) was originally championed by the U.S. government in an effort to increase the constraints on the testing programs of other current and future nuclear powers, albeit at the cost of placing similar constraints on the U.S. testing program. Given that the United States has conducted more nuclear weapons tests than all other nuclear powers combined, this seemed like a very good deal to previous American administrations, Democratic

and Republican alike. The Bush administration, nevertheless, has opposed the CTBT and refused to push for ratification on the grounds that this would hamper nuclear weapons development and the reliability of the American stockpile.[58] If the United States tests nuclear weapons, other states will surely restart their testing and development programs, ultimately leading to a world of more nuclear weapon states.

Second, similar arguments can be made about the Nonproliferation Treaty. In the NPT, the nonnuclear weapon states agreed not to acquire nuclear weapons (article 2) and the nuclear weapon states pledged to work in good faith toward the eventual elimination of nuclear weapons (article 6). The U.S. government, however, has done little to convince others that these article 6 commitments are taken seriously, a source of great debate at every NPT review conference. This too is problematic from a long-term perspective. For if the U.S. refusal to contemplate nuclear disarmament encourages other states to abandon the NPT, it will again lead toward a world of widespread nuclear proliferation. Maintaining a small nuclear arsenal may well be in the ultimate interests of the United States, but having signed an agreement that it will work in good faith toward disarmament, its government officials should not signal bad faith by ridiculing advocates of nuclear disarmament, as they have often done in the past.

A third example is the Anti-Ballistic Missile (ABM) Treaty. The attraction of building a national missile shield appears obvious at first. "Wouldn't it be better to protect the American people than to avenge them?" Ronald Reagan often asked when promoting his Star Wars plan.[59] Yet despite the lure of perfect missile defenses, the U.S. government did not built them because of uncertainty about their effectiveness and because all cold war studies showed that enemy countermeasures would be cheaper than our planned defenses. Republican and Democratic presidents therefore reluctantly accepted nuclear deterrence and agreed under the ABM Treaty not to deploy missile defenses.

What has changed? Technological advances in sensors, kill vehicles, and computer integration systems made the basic task – which once seemed impossible to all but the most committed Star Wars advocates – appear more promising.[60] What has not changed, however, is the basic political problem of countermeasures and secondary reactions. The Chinese are likely to react to U.S. missile defense deployments by deploying more nuclear weapons and advanced missiles. The Indian government will be as disturbed by the Chinese offensive buildup as the Chinese government will be by a U.S. defensive buildup and is likely to increase both the size and alert levels of its arsenal. Pakistan is likely to respond to a future Indian nuclear buildup by increasing the size and alert status of its own nuclear-armed bombers and missile arsenal. If U.S. missile defenses exacerbate the problems of proliferation elsewhere in the world in this way, the end result could be a reduction, not increase, in U.S. and global security.

Finally, the George W. Bush administration has maintained a nuclear policy of "calculated ambiguity," threatening possible nuclear retaliation in response to chemical or biological weapons. This strategy may well reduce the likelihood of the United States being attacked by states with such weapons of mass destruction. But unless this doctrine works 100 percent of the time in the future, it also increases the likelihood that the U.S. president would feel compelled to use nuclear weapons after a chemical or biological weapons attack because he would feel that the nation's reputation of acting on its deterrent threats was at stake.[61] The use of U.S. nuclear weapons, however, would encourage many other states to abandon their ethical inhibitions against developing nuclear weapons and thus would eventually increase the likelihood of future nuclear wars.

The tradition of nuclear nonuse is fragile. If it is in the U.S. interest and the global interest to maintain that tradition, it would be prudent for the U.S. government to abandon threats to respond with nuclear weapons except in response to a nuclear attack. A really strong state should not always do what it can with weapons of mass destruction.

Notes

1. On the classical roots of modern realism, see Benjamin Frankel, ed., "The Roots of Realism," *Security Studies* 5:2 (Special Issue, Winter 1995/96); Kenneth N. Waltz, *Man, the State, and War* (New York: Columbia University Press, 1959); and Laurie M. Johnson Bagby, "The Use and Abuse of Thucydides in International Relations," *International Organization* 48:1 (Winter 1994): 131–53.

2. Thucydides, *History of the Peloponnesian War* (Baltimore, Md.: Penguin, 1974), 404.

3. Carl von Clausewitz, *On War* (Princeton, N.J.: Princeton University Press, 1976), 75–76.

4. The seminal text of neorealism remains Kenneth N. Waltz, *Theory of International Politics* (New York: McGraw-Hill, 1979). See also Kenneth N. Waltz, "The Origins of War in Neorealist Theory," in *The Origin and Prevention of Major Wars*, ed. Robert I. Rotberg and Theodore K. Rabb (New York: Cambridge University Press, 1988), 39–52; and Robert O. Keohane, ed., *Neorealism and Its Critics* (New York: Columbia University Press, 1986).

5. George Bernard Shaw, *Pygmalion*, Act II, lines 245–55.

6. Robert J. Art and Kenneth N. Waltz, "Technology, Strategy, and the Uses of Force," in *The Use of Force*, 2nd ed., ed. Art and Waltz (Lanham, Md.: University Press of America, 1983), 6–7.

7. See Robert W. Tucker, "Morality and Deterrence," in *Nuclear Deterrence: Ethics and Strategy*, ed. Russell Hardin, John J. Mearsheimer, Gerald Dworkin, and Robert E. Goodwin (Chicago: University of Chicago Press, 1985), 53–70; Joel H. Rosenthal, *Righteous Realists: Political Realism, Responsible Power, and American Culture in the Nuclear Age* (Baton Rouge: Louisiana State University Press, 1991); and Michael Joseph Smith, *Realist Thought from Weber to Kissinger* (Baton Rouge: Louisiana State University Press, 1986).

8. Richard M. Price, *The Chemical Weapons Taboo* (Ithaca, N.Y.: Cornell University Press, 1997); Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945* (New York: Cambridge University Press, forthcoming); Dana P. Eyre and Mark C. Suchman, "Status, Norms, and the Proliferation of Conventional Weapons," and Richard Price and Nina Tannenwald, "Norms and Deterrence: The Nuclear and Chemical Weapons Taboos," both in *The Culture of National Security: Norms and Identity in World Politics*, ed. Peter J. Katzenstein (New York: Columbia University Press, 1996), 79–113 and 114–52; and Peter J. Katzenstein, *Cultural Norms and National Security: Police and Military in Postwar Japan* (Ithaca, N.Y.: Cornell University Press, 1996).

9. See Kenneth N. Waltz, *Theory of International Politics* (Reading, Mass.: Addison Wesley, 1979), 118; Scott D. Sagan, "More Will Be Worse," in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (New York: W. W. Norton, 2003), 84.

10. John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W. Norton, 2001).

11. Indeed, the incentives and momentum for using the atomic bomb were so great that there was no single "decision" point. Most of the officials privy to the secret simply assumed that the atomic bomb would be used whenever it was physically ready. See Barton J. Bernstein, "Understanding the Atomic Bomb and the Japanese Surrender: Missed Opportunities, Little-Known Near Disasters, and Modern Memory," *Diplomatic History* 19:2 (Spring 1995): 227–74.

12. Paul Boyer, *By the Bomb's Early Light* (New York: Pantheon, 1985), 183.

13. Waltz, "Origins of War in Neorealist Theory," 49 and 51; and Mearsheimer, *Tragedy of Great Power Politics*, 128–30 and 224–32.

14. On cold war nuclear doctrines, see Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton, N.J.: Princeton University Press, 1989); and Desmond Ball and Jeffrey Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, N.Y.: Cornell University Press, 1986).

15. Jack S. Levy, "Declining Power and the Preventive Motivation for War," *World Politics* 40:1 (October 1987): 82–107.

16. Jeff McMahan, "Realism, Morality, and War," in *The Ethics of War and Peace: Religious and Secular Perspectives*, ed. Terry Nardin (Princeton, N.J.: Princeton University Press, 1996), 84–86.

17. U.S. Congress, House Appropriations Committee Hearing, Department of Defense Appropriations for 1960, 86th Congress, 1st session, pt. 2, p. 376.

18. See Scott D. Sagan, "The Origins of Military Doctrine and Command and Control Systems," in *Planning the Unthinkable*, ed. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz (Ithaca, N.Y.: Cornell University Press, 2000), 16–46; and Marc Trachtenberg, "A 'Wasting Asset': American Strategy and the Shifting Nuclear Balance, 1949–1954," *International Security* 13:3 (Winter 1988–89): 5–49.

19. Memorandum by the President to the Secretary of State, September 8, 1953, *Foreign Relations of the United States, 1952–1954*, vol. 2, National Security Affairs, pt. 1, p. 461 (emphasis in original).

20. Memorandum of Discussion of NSC meeting, March 4, 1954, *Foreign Relations of the United States, 1952–1954*, p. 636.

21. Memorandum of Discussion, December 3, 1954, *Foreign Relations of the United States, 1952–1954*, pp. 804–6.

22. Stewart Steven, *The Spymasters of Israel* (New York: Macmillan, 1980), 139–48.

23. Shai Feldman, "The Bombing of Osiraq – Revisited," *International Security* 7:2 (Fall 1982): 114–42.

24. Avigdor Haselkorn, *The Continuing Storm: Iraq, Poisonous Weapons and Deterrence* (New Haven, Conn.: Yale University Press, 1999).

25. William Burr and Jeffrey T. Richelson, "Whether to 'Strangle the Baby in the Cradle': The United States and the Chinese Nuclear Program, 1960–64," *International Security* 25:3 (Winter 2000–2001): 54–99; Gordon H. Chang, *Friends and Enemies: The United States, China, and the Soviet Union* (Stanford, Calif.: Stanford University Press, 1990), 228–52; Scott D. Sagan, "Correspondence: Proliferation, Pessimism and Emerging Nuclear Powers," *International Security* 22:2 (Fall 1997): 194–97.

26. John Lewis Gaddis, "The Origins of Self-Deterrence: The United States and the Nonuse of Nuclear Weapons, 1945–1958," in Gaddis, *The Long Peace: Inquiries into the History of the Cold War* (New York: Oxford University Press, 1987), 104–46.

27. In *The Long Peace*, Gaddis himself stresses the second and third factors as producing nuclear restraint in his analysis of the Korean War and the Taiwan Straits crises during the cold war.

28. George Bush and Brent Scowcroft, *A World Transformed* (New York: Knopf, 1998), 463. See also Colin L. Powell with Joseph Perisco, *My American Journey: An Autobiography* (New York: Random House, 1995), 486.

29. James A. Baker III with Thomas M. DeFrank, *The Politics of Diplomacy: Revolution, War, and Peace, 1989–1992* (New York: G. P. Putnam's Sons, 1995), 359.

30. Ibid.

31. Daniel Byman, Kenneth Pollack, and Matthew Waxman, "Coercing Saddam Hussein: Lessons from the Past," *Survival* 40:3 (Fall 1998): 132; Leonard A. Cole, *The Eleventh Plague* (New York: W. H. Freeman, 1997), 127; Steven Erlanger, "U.S. Set to Give Up Arms Inspections for Curbing Iraq," *New York Times*, November 8, 1998, sec. 1, p. 1; and Lawrence Freedman and Efraim Karsh, "How Kuwait Was Won: Strategy in the Gulf War," *International Security* 16:2 (Fall 1991): 26, n. 72.

32. For examinations of the effects of the Gulf War threats, see William M. Arkin, "Calculated Ambiguity: Nuclear Weapons in the Gulf War," *Washington Quarterly* 19:4 (Autumn 1996): 3–18; Haselkorn, *Continuing Storm*, 51–85; Barry R. Posen, "U.S. Security Policy in a Nuclear-Armed World, or: What If Iraq Had Had Nuclear Weapons?" *Security Studies* 6:3 (Spring 1997): 1–31; and Scott D. Sagan, "The Commitment Trap," *International Security* 24:4 (Spring 2000): 85–115.

33. Tannenwald, *Nuclear Taboo*, ms. pp. 324–68. See also McGeorge Bundy, "Nuclear Weapons and the Gulf War," *Foreign Affairs* 70:4 (Fall 1991): 83–94; and Thomas Schelling, "The Role of Nuclear Weapons," in *The Turning Point: The Gulf War and U.S. Military Strategy*, ed. L. Benjamin Ederington and Michael J. Mazarr (Boulder, Colo.: Westview, 1994), 105–15.

34. Tannenwald, *Nuclear Taboo*, ms. p. 342. The quotes are from pp. 328, 332–33, and 341.

35. Powell, *My American Journey*, 472.

36. Ibid., 472–73 (emphasis added).

37. http://www.pbs.org/wgbh/pages/frontline/gulf/oral/horner/2.html (November 29, 2001).

38. Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime," *Security Studies* 4:3 (Spring 1995): 463–519; Benjamin Frankel, "The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation," and Richard K. Betts, "Paranoids, Pygmies, Pariahs, and Nonproliferation Revisited," both in "The Proliferation Puzzle," ed. Zachary S. Davis and Benjamin Frankel, special issue of *Security Studies* 2:3/4 (Spring/Summer 1993): 37–38, 100–24.

39. Scott D. Sagan, "Why Do States Build Nuclear Weapons?" in *The Coming Crisis: Nuclear Proliferation, U.S. Interests, and World Order,* ed. Victor Utgoff (Cambridge: MIT Press, 2000), 17–50.

40. Susan B. Martin, "The Role of Biological Weapons in International Politics," *Journal of Strategic Studies* 25:1 (March 2002): 63–98.

41. For more information, see the Center for Defense Information chemical and biological weapons fact sheet at http://www.cdi.org/issues/cbw/factsheet.html.

42. Waltz, "More May Be Better," in Sagan and Waltz, *The Spread of Nuclear Weapons,* 45. For similar arguments, see John J. Mearsheimer, "Back to the Future: Instability in Europe after the Cold War," *International Security* 15:1 (Summer 1990): 5–56; and David J. Karl, "Proliferation Pessimism and Emerging Nuclear Powers," *International Security* 21:3 (Winter 1996–97): 87–119.

43. The paragraph is based on Sagan, "More Will Be Worse," in Sagan and Waltz, *The Spread of Nuclear Weapons.*

44. See Thomas C. Schelling, *Arms and Influence* (New Haven, Conn.: Yale University Press, 1966), 248–51.

45. See Leonard S. Spector, *Going Nuclear* (Cambridge, Mass.: Ballinger, 1987), 45–57.

46. See Sohail Hashmi, Chapter 17 of this volume, under "Disarmament"; and Yoav Yitzhak Schlesinger, "Fumes of Faith: Iranian Chemical Weapons Use in the Iran-Iraq War," undergraduate honors thesis, Stanford University, Center for International Security and Cooperation, 2001.

47. See Gregory Giles, "The Islamic Republic of Iran and Unconventional Weapons," in Lavoy et al., eds., *Planning the Unthinkable,* 82–83.

48. Ibid.; for further details, see Schlesinger, "Fumes of Faith."

49. Giles, "Iran and Unconventional Weapons," 83 n. 15, and Martin Walker, "Iraq's Use of Chemical Arms Main Source of U.S. Fears," *The Guardian* (London), January 6, 1989, p. 1, as cited in Javed Ali, "Chemical Weapons and the Iran-Iraq War," *The Non-Proliferation Review* 8:1 (Spring 2001): 52 n. 72.

50. Giles, "Iran and Unconventional Weapons," 84.

51. Katzenstein, *Cultural Norms and National Security,* 148–51. See also Thomas U. Berger, *The Cultures of Antimilitarism: National Security in Germany and Japan* (Baltimore, Md.: Johns Hopkins University Press, 1998).

52. "The Capability to Develop Nuclear Weapons Should Be Kept: Ministry of Foreign Affairs Secret Document in 1969," *Mainichi,* August 1, 1994, p. 41; quoted in Selig S. Harrison, "Japan and Nuclear Weapons," in *Japan's Nuclear Future,* ed. Selig S. Harrison (Washington, D.C.: Carnegie Endowment for International Peace, 1996), 9.

53. Sam Jameson, "Foreign Minister Says Japan Will Need Nuclear Arms If North Korea Threatens," *Los Angeles Times,* July 29, 1993, p. 4; originally cited in Harrison, "Japan and Nuclear Weapons," 29; David E. Sanger, "In Face-Saving

Reverse, Japan Disavows Any Nuclear-Arms Expertise," *New York Times,* June 22, 1994, p. 10.

54. See Kenneth N. Waltz, "The Emerging Structure of International Politics," *International Security* 18:2 (Fall 1993): 67; and Matake Kamiya, "Will Japan Go Nuclear? Myth and Reality," *Asia-Pacific Review* 2:2 (Autumn/Winter 1995): 5–19.

55. Noel Perrin, *Giving Up the Gun: Japan's Reversion to the Sword, 1543–1879* (Boston: David R. Godine, 1979), 32–80, quote at 41.

56. Ward Thomas, "Norms and Security: The Case of International Assassination," *International Security* 25:1 (Summer 2000): 105–33.

57. David C. Martin and John Walcott, *Best Laid Plans* (New York: Harper & Row, 1988), 286–88; Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War* (Boston: Houghton Mifflin, 1993), 272–74; Michael R. Gordon and General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown, 1995), 86–88.

58. See "The Comprehensive Test Ban Treaty: Next Steps," proceedings of conference at Center for International Security and Cooperation (CISAC), Stanford University (July 19, 2000).

59. Francis Fitzgerald, *Way Out There in the Blue* (New York: Simon and Schuster, 2000), 203.

60. See Dean Wilkening, *Ballistic Missile Defense and Strategic Stability,* Adelphi Paper 334 (Oxford: IISS, May 2000).

61. On this issue, see Scott D. Sagan, "The Commitment Trap," and Susan B. Martin and Scott D. Sagan, "Correspondence: Responding to Chemical and Biological Threats," *International Security* 25:4 (Spring 2001): 193–98.