

CORRESPONDENCE

Nuclear Myth-Busting

In his article "The Myth of Nuclear Deterrence," Ward Wilson aims what is intended as an analytic deathblow at deterrence theory (15.3, November 2008, pp. 421–39). Wilson argues that threats to attack cities have been central to the practice of deterrence throughout the nuclear age. He correctly observes that attacks against civilians, including the destruction of cities, have historically not proven an effective means of winning wars. Further, he notes the emerging consensus among historians that Japan's surrender in 1945 had less to do with the U.S. use of nuclear weapons and more with Soviet entry into the war.

But if he wishes to assess the efficacy of deterrence, Wilson asks the wrong question. The question he should be asking is whether *threats*—implicit or explicit—of destruction have served to avert or end wars. Wilson's argument appears to be premised on the notion that cases in which city destruction was undertaken can be read as threats to engage in *further* city destruction, but these are by definition cases in which deterrence has already failed, because prior implicit or explicit threats failed.

As a result, the cases Wilson selects are a poor basis for exploring the possibly far larger universe of incidents in which implicit or explicit threats may have successfully averted or ended conflict, i.e., what the political science literature calls the "dogs that didn't bark." At most, Wilson demonstrates that not all forms of deterrence infallibly prevent conflict under all circumstances. But it would be an odd world indeed if all deterrent threats accomplished

their goals, no matter the credibility of the threats, the magnitude of the demands made, or the willingness of the targets to sustain costs or run risks.

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All scholars, analysts, and politicians convinced of the validity and usefulness of nuclear deterrence should welcome Ward Wilson's intriguing attempt at demolishing the theoretical and historical foundations of this concept; it gives them a chance to exercise intellectual muscles that have rarely been used since the end of the Cold War.¹

Wilson makes two broad arguments about nuclear deterrence. Neither can withstand scrutiny. Wilson's impressive historical scholarship is for the most part irrelevant to his analysis because of logical fallacies and factual mistakes contained in his article.

Wilson's first argument is that the theoretical underpinnings of nuclear deterrence are flawed. He states that because city bombing is at the heart of nuclear deterrence and city attacks are not likely to be decisive, nuclear deterrence cannot be expected to work.

¹ The author would like to thank David Yost, Brad Roberts, Olivier Debouzy, Diego Ruiz Palmer, and Frank Miller for comments and suggestions.

City Bombing Is Not Central To Nuclear Deterrence

But city bombing is neither “at the heart of” nor “central to” nuclear deterrence. Wilson bases his claim on statements and plans that date almost exclusively from the 1950s and 1960s. He ignores the facts that nuclear doctrines and forces have changed considerably in the past four decades and that after the late 1950s U.S. nuclear targeting was about far more than city targeting.

Population targeting—the threat of *deliberate* destruction of the adversary’s population—long ago disappeared from the strategic vocabulary of nuclear-armed states. (Since the early 1970s, U.S. officials have publicly stated that Washington does not target populations *per se*.) Western nuclear powers threaten “assets most valued by an adversary” (the United States) or “centers of power” (France). And the majority of nuclear countries use the expression “unacceptable damage.” The reason is that they acknowledge that most potential adversaries would be primarily interested in regime survival and would not necessarily care about their own populations.

Advances in intelligence and accuracy have made it possible to credibly threaten key targets such as leadership and command centers, military bases, power plants, economic installations, etc., without leveling cities. Gone are the multimegaton “city busters” of the 1960s.

There is no doubt that nuclear strikes against targets in urban areas would generate massive civilian casualties. But cities are much larger today, and buildings more resistant, than they were in 1945. In addition, many targets would be located outside urban areas, entailing limited collateral damage. “Unacceptable damage” would not necessarily mean the destruction of cities.

Wilson claims that even when governments do not overtly threaten cities, targeting policy may differ from declaratory policy. In addition to being unsubstantiated, his argument is contradicted by factual evidence: declassified U.S. nuclear planning documents show that there was no major difference between the two during the Cold War.² And it is a poor argument to bolster a thesis according to which nuclear deterrence is primarily about “the *threat* to destroy cities.”

City Bombing Can Stop Wars

Even if nuclear deterrence were about destroying cities, Wilson’s argument would still be debatable. First, Wilson may be correct in stating that the bombing of Hiroshima and Nagasaki was not the critical factor that explains Japan’s decision to surrender. But he misses the point. Hiroshima and Nagasaki were not about deterrence: they were about coercion. The United States did not try to *deter* Japan with nuclear weapons; it tried to *coerce* it. Nuclear deterrence did not exist in August 1945. It was born out of the horrendous images of the destruction of the two Japanese cities. It is based on the idea that one country can *prevent* large-scale military aggression by threatening the potential attacker with unbearable levels of

² An example is *U.S. Policy Guidance for the Employment of Nuclear Weapons* (April 3, 1974), which gave four objectives for major attack options: “selected economic, and military resources of the enemy critical to post-war recovery”; “the political leadership of the enemy, its control resources, and its military command structure”; “the nuclear offensive capabilities of the enemy”; and “the enemy conventional forces.”

destruction. The validity of the theory of nuclear deterrence is primarily based on the *perception* of a historical reality. Whether the Japanese emperor's decision was due to the effectiveness of the August 1945 bombings or to other factors is not as relevant as Wilson implies.

Second, Wilson's generalization, which can be summarized with the idea that the destruction of cities does not stop conflict, goes too far. The destruction of Berlin was an important element in ensuring the Third Reich's defeat because it was Germany's capital. And historical examples are relevant only up to a point. Most modern states have less tolerance for human suffering and destruction than was the case until 1945. To take but one example, Iraqi missile attacks against Iranian cities from 1985 to 1988, limited as they were by World War II standards (they involved aircraft bombing and 520 missile launches), had a profound impact on the Iranian leadership and contributed to Tehran's decision to accept a ceasefire in 1988.

Third, Wilson's preemptive counterargument—that the use of nuclear means to destroy cities would not change the perspective—misses an important point. Nuclear bombing would be much more effective than conventional bombing because of the immediate and almost certain destruction it would cause. Nuclear weapons could dismember an enemy state in minutes. In addition, the horror associated with nuclear weapons makes them particularly terrifying due to their invisible effects (radiation).³ It is because of these anti-

³ Most of the effects of nuclear weapons involve blast, heat, and indirect fires. But the psychological impact—the one expected to work in deterrence—is not necessarily rational. Means matter: most people would rather die by a bullet than by radiation.

pated effects that nuclear deterrence is expected to be much more effective than conventional deterrence.

Nuclear Deterrence Is Not Terrorism

A related point made by Wilson is that strategies based on "terrorizing" populations have proven inefficient: they bolster rather than degrade the adversary's morale. Here, Wilson conflates nuclear deterrence with terrorism and strategic bombing in one sweeping generalization.

Terrorism and deterrence have little in common, apart from their etymology. As Wilson acknowledges, terrorism is most of the time about coercion (and the rest of the time about revenge or other motives, such as nihilist destruction). It is an *active* form of political pressure to force an actor to change its policies, whereas deterrence is a *passive* form of conflict prevention and seeks to avert aggression. (The exercise of deterrence involves statements and demonstrations of capabilities, but no physical aggression or destruction.) Therefore, Wilson's subsequent demonstration of the ineffectiveness of terrorism—flawless as it is—is irrelevant. Even assuming, as Wilson does, that "terrorist attacks are the closest and best analogy to nuclear attacks against cities," his conclusion that "if terrorist attacks rarely succeed, what basis is there for confidence that nuclear deterrence will succeed?" is debatable. Common sense dictates that a government would react differently to the sudden annihilation of a major city than it would to the bombing of shopping malls.

A nuclear bombing campaign would differ from strategic conventional bombing. Before the end of World War II, achieving a level of destruction equivalent to that caused by, say, the bombings of Hiroshima

and Nagasaki, required a sustained and prolonged bombing campaign; populations would have time to adjust and adapt, a process that often leads, as Wilson correctly observes, to bolstering their will to resist. It is unlikely that such effects would exist in a nuclear war. Nuclear deterrence does not seek to influence the civilian population, but rather the country's leadership; it targets objectives that are essential to the leadership's grip on power. While targeting in the 1950s was indeed inspired by General Giulio Douhet's theories and World War II, nuclear deterrence has since then evolved into a very different strategy.

Nuclear Deterrence Has a Strong Historical Record

The second broad argument made by Wilson is about history. He claims that there is no evidence that nuclear deterrence actually works and that, on the contrary, there is evidence that it does not work. But his description of the historical record of nuclear deterrence is inaccurate.

First, he asserts that the argument often made about the validity of nuclear deterrence—the absence of a nuclear attack during the Cold War—is unconvincing. It is impossible to prove a negative, and the absence of nuclear war between 1945 and 2009 is not in itself evidence of the validity of nuclear deterrence. But Wilson's argument is easy to refute. He submits that the absence of major interstate war since 1945 is not unprecedented, thereby implying that nuclear deterrence is not needed to explain the absence of major conflict during the Cold War. Specifically, he mentions two examples: the era that followed the Thirty Years War, and the era that followed the Napoleonic Wars. These are poor examples. To claim that there was peace in Europe

after the treaties of Westphalia is nonsense. There were about twenty interstate military conflicts in the fifty years that followed the treaties of 1648, involving Denmark, England, France, Holland, the Ottoman Empire, Poland, Russia, Spain, and Sweden, among others. The same can be said for the period lasting from 1815 to 1914, which saw dozens of open military state-to-state conflicts involving major European and Asian powers (excluding colonial wars). The fact remains that nearly sixty-five years without a major military conflict between great powers is a complete historical anomaly. This is a strong indication that nuclear deterrence played an important role.⁴

Second, Wilson argues that because the possession of chemical weapons by both sides did not prevent World War II, there is no reason to believe that nuclear deterrence could prevent major war. This argument deserves a two-fold reply. The non-use of chemical weapons during World War II actually indicates that "terrorizing weapons" can indeed have a deterrence role. The reasons behind their non-use include the fact that their effects had been demonstrated during World War I (none of the belligerents in Europe was keen to see such horrors again on the battlefield, including Hitler, who had experienced chemical warfare as a soldier), and the fact that the Allies had expressed clear "deterrence warnings" to discourage Germany from using them.⁵ More importantly, no one has ever made the claim that chemical weapons

⁴ For more on this, see John Lewis Gaddis, Philip H. Gordon, Ernest R. May, and Jonathan Rosenberg, eds., *Cold War Statesmen Confront the Bomb: Nuclear Diplomacy since 1945* (Oxford: Oxford University Press, 1999).

⁵ By contrast, Japan used chemical weapons against China, which did not have them.

could deter the outbreak of conflict and thus have the same war-prevention effect as nuclear weapons. Nuclear weapons are different from chemical (and biological) weapons: they can instantly destroy both people and buildings. And, to reiterate the point, they are *seen* as being different. For these reasons, nuclear weapons have a war-prevention effect distinct from all other military means.

Third, Wilson argues that nuclear weapons did not prevent the U.S. defeat in Vietnam or the Soviet defeat in Afghanistan. This is true—but it has nothing to do with nuclear deterrence. Nobody has ever claimed that countries endowed with nuclear weapons are immune to defeat on a distant battlefield. Nuclear deterrence is about preventing major aggression by a state against a country's vital interests; as is sometimes said, it is not an "all-purpose" deterrent.

Fourth, Wilson seeks to refute the argument of proponents of nuclear deterrence that no nuclear country has ever been the subject of a major military attack by a non-nuclear country. He believes that he has found two exceptions: the Egyptian-Syrian attack against Israel in 1973, and the Argentine attack against the United Kingdom in 1982. Apart from the fact that the existence of a few exceptions does not negate the general validity of a rule—possessing nuclear weapons could be useful even if it does not prevent *all* major military aggressions—the two examples he gives are not valid. Neither of the two cases involved a military attack against the sovereign, undisputed territory of the countries attacked—the core interest protected by nuclear weapons. In 1973, as archives and testimony show, Anwar el-Sadat and Hafiz al-Assad knew exactly what they were doing: they invaded the Sinai and the Golan, which had been

occupied territories since 1967, but refrained from attacking the territory of Israel itself, for they knew that endangering its existence would trigger a nuclear response. In 1982, the Argentine junta knew that the Falkland Islands and South Georgia were self-governed "British Dependent Territories." While General Leopoldo Galtieri and his colleagues wrongly assumed that London would not fight for them, the British government had never asserted that the U.K. nuclear deterrent covered aggression against these territories.

Finally, Wilson overlooks two other strong indications of the validity of nuclear deterrence. First, there has never been a war between nuclear-armed adversaries. The change in the South Asian strategic landscape since India and Pakistan became nuclear-armed states is a good illustration. There were three major wars between them before they went nuclear (1947, 1965, and 1971) and only severe crises afterward (1987, 1990, 1999, and 2002).⁶ South Asia vindicates the so-called paradox of stability-instability.⁷ And second, chemical and biological weapons have never been used against a nuclear-armed adversary. The history of the Middle East provides a good case study. Egypt used chemical weapons

⁶ The Kargil crisis of 1999 is sometimes referred to as a war but was not one by the standards of post-1947 South Asia. Both sides exercised considerable restraint: Pakistan did not use its air force, and India did not cross the Line of Control.

⁷ As suggested by Basil H. Liddell Hart in 1954 and formalized by Glenn Snyder in 1961, the concept predicted that once two adversaries became nuclear, the probability of major war between them would decrease (stability), while the probability of low-level fighting would increase (instability).

against Yemen between 1962 and 1967 but not against Israel in the 1967 or 1973 wars; Iraq used them against Iran from 1983 to 1988 but did not use Scuds loaded with chemical and biological weapons against Israel in 1991.

Wilson's main conclusion is that nuclear deterrence does not work. This response demonstrates that the case for nuclear deterrence is much more solid than he asserts. Nuclear deterrence is not perfect and is no panacea, but it has proved to be one of the most effective tools ever devised to avoid major war.

Wilson's secondary conclusion is even more problematic: he argues that we should rely on non-nuclear forces for our security. This implies relying on conventional deterrence, which has demonstrably failed over and over. Thus, Wilson's concluding prescription that nuclear weapons should be abolished could equally be applied, according to his own logic, to all weapons. But while general and complete disarmament is a noble goal, it is not useful as a policy prescription.

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Ward Wilson responds

I want to thank Philipp Bleek and Bruno Tertrais for their letters about my essay, "The Myth of Nuclear Deterrence." We may not agree on everything, but I appreciate their willingness to put thoughtful and careful effort into this subject. It is a matter in need of a great deal more debate, and I hope this discussion will prompt others to think about and possibly reexamine their views on nuclear deterrence.

The fundamental problem with nuclear weapons is that they are likely to kill large numbers of civilians. No matter whether you attempt to use them carefully against purely military targets or indiscriminately against civilian-occupied cities, large numbers of civilians are at risk in almost any scenario. The readers of *Nonproliferation Review* do not need to be reminded of the famous 1976 study by Sidney Drell and Frank von Hippel of a "limited" nuclear attack on the United States, carefully restricted to missile silos, submarine bases, and air bases, in which an estimated 110 million Americans would be killed. It is possible, of course, to contrive scenarios in which far fewer civilians die, but nuclear weapons are too big, too blunt, and too poisonous for very many of these scenarios ever to arise in the actual course of events. By their nature, nuclear weapons are clumsy.

The problem that killing civilians creates is two-fold: experience shows that killing civilians breeds a desire for revenge, and killing civilians often persuades your opponent that you intend to try to exterminate him. There is no surer way of getting someone to fight to the death than to persuade him that you intend to try to wipe him out, to eradicate his way of life. Nuclear weapons are difficult to use in any practical military way.

These difficulties have not been lost on those who study military issues. But it has long been thought that perhaps you could use the threat of a horrific attack to get what you want—even if you couldn't, in actuality, carry out the horrific attack itself. This is the basic premise behind coercive diplomacy with nuclear weapons and defense that relies on nuclear deterrence.

Most thinking about nuclear deterrence, however, has noted that a nuclear attack would be horrible, presumed that

horrifying threats against civilians must work, and then looked no further. When great matters are at stake, however, it is not clear that threats against civilians affect decision makers. Considerable historical evidence supports the notion that when significant issues are at stake, the lives of civilians actually don't count for much. Given a choice between an intuition that the threat of civilian deaths would surely coerce decision makers and the evidence of history, my prejudice is to rely on evidence over intuition. Much more could be said (and should be said) on this subject. It was this that spurred me to write the original article.

Philipp Bleek is right that the ideal way to evaluate nuclear deterrence would be to look at the success or failure of individual cases. The problem with this approach is that evidence is almost impossible to get. How can implicit threats be examined in a disciplined way? How would one judge whether an implicit threat had been made, had been heard, or had been interpreted as a threat by the person being threatened, much less whether that threat played any part in subsequent decision making? Even if this sort of threat making could be explored using social science experiments, as a practical matter, evidence is simply not available in most real-world crises. Threats that fail are typically disowned. When leaders are asked about a threat that failed, they almost always respond, "What threat?" And leaders who give in to threats are equally disingenuous. They almost always claim to have been acting altruistically or for the good of their country. They rarely—if ever—admit that they gave in because they were scared out of their wits.

Exploring the outcome of explicit threats is at least theoretically possible, but there are actually very few explicit

threats of nuclear attack—clear, unambiguous threats with well-defined conditions and carefully outlined consequences—in the public domain. Of the few that exist, the clearest and most explicit threat has to be Harry Truman's threat to bring a "rain of ruin" down on Japan if it did not surrender at the end of World War II. As Bleek acknowledges, there is an emerging consensus that this threat was not successful.

Bruno Tertrais says we should welcome the chance to think about nuclear deterrence, if only to dust off all the arguments from the Cold War. This is, of course, precisely the problem. The Cold War is over, yet many of those thinking about nuclear weapons are still happily using outmoded Cold War concepts. The lessons of the Cold War no longer apply, and some of the "certainties" of that era were based more on fearful thinking than careful analysis.

Tertrais asserts that "city bombing is neither 'at the heart of' nor 'central to' nuclear deterrence." Because the United States and other governments have talked about not targeting cities, this is a view that often gets support; however, it is an attitude that seems to overlook harsh realities about war. Revenge and senseless destruction have often played a leading role in war, and it is only sensible to imagine that they will again. Particularly in a nuclear war. Even in the midst of what would surely be a gut-wrenching, survival-threatening conflict, Tertrais and others seem to imagine that governments would act calmly and in accordance with pre-war rhetoric. Governments have said they would not target cities, and there are people who claim to believe them. I do not.

Imagine that I invented a new, high-tech weapon, and the first time I used it I disintegrated a baby with it. Imagine that afterward I said, "But, of course, I won't use

it against babies anymore." Would that mean you could count on me not to disintegrate any babies in the future? Wouldn't it be prudent for those who face me in some future, dire, angry confrontation to imagine that I might once again use the weapon against babies, despite my peacetime assurances?

Even Thomas Schelling argues that the implicit threat that a nuclear conflict might "get out of hand" (i.e., weapons might be used against civilians) is an integral part of nuclear deterrence.

On city bombing, Tertrais says, "The validity of the theory of nuclear deterrence is primarily based on the *perception* of a historical reality. Whether the Japanese emperor's decision was due to the effectiveness of the August 1945 bombings or to other factors is not as relevant as Wilson implies." First, the Japanese emperor did not make the decision to surrender. At most he helped to persuade the military to agree to surrender. But this historical matter aside, Tertrais and others seem to believe that appearances matter more than reality. It does not matter, they seem to be saying, whether the Bomb really coerced the Japanese, as long as we all look at the horrifying pictures and believe that it did. This is like saying it doesn't matter that the wall we're using for protection is made from papier-mâché, as long as everyone believes it's made from stone. It may be that nuclear deterrence is solid and certain. But it is built on a factual foundation that has recently been seriously called into question. Shouldn't that be of some concern? Is it sensible to rely on a tremendously destructive, delicately balanced, hair-trigger system that may be based on nothing more than perception?

What I was trying to do with the discussion of terrorism was to turn the focus

a little bit toward killing civilians. Because nuclear weapons inevitably kill large numbers of civilians in almost all applications, the effects generated by killing civilians matter. We all know nuclear weapons can kill a lot of civilians. The question, however, is not how many, but rather, what then? What will be the result of killing many civilians? Will those civilian deaths affect the way decision makers think?

People almost always presume they know the answer to this question, usually without reference to any evidence. Max Abrahms's work on terrorism suggests that terrorists who kill civilians always fail. This suggestive example, which I cited in my essay, was intended to prod thinking about whether killing civilians works as a military strategy. What, exactly, would be its impact on decision makers? No one, apparently, has thought carefully about this. Killing civilians is one of the key effects of nuclear weapons, and the consequences of this key effect have, in essence, not been studied. I understand that there are difficulties with comparing terrorism to nuclear bombing (although I happen to think that the parallel is not as problematic as does Tertrais). But in an area where there is no evidence, information that is even tangentially relevant is welcome.

Tertrais and I might argue about what constitutes "quite long periods of relative peace" in European history. But the fact that he doesn't like my alternative explanation for the relative peace in Europe over the last fifty years doesn't constitute proof that his explanation is true. We might want peace to be attributable to nuclear deterrence. We might hope it with all our hearts. There might even be signs that could be interpreted as its being true. But in important security matters, shouldn't we

have a higher standard of evidence than wishful thinking?

For proof that deterrence must work, Tertrais points to the fact that no two nuclear nations have ever fought a war. (Presumably the border clashes between the Soviet Union and China in 1969 and the clash between India and Pakistan in 1999 can be ignored because they weren't full war.) It's certainly true that the nine countries that possess nuclear weapons have never fought a war against each other while they possessed nuclear weapons. It's also true that no two of the nine nations whose names begin with the letter "P" have ever fought a war against each other. The second is surely no more than a mildly interesting coincidence. Is it certain that the first is not also? Is it certain enough for us to bet our lives on it?

The problem with deterrence is that it is entirely unproved. Its advocates constantly ask us to rely on their intuitions and hunches about what "must" be the case. Real evidence is lacking, and in a matter as serious as this, that is disquieting.

Finally, in arguing that nuclear deterrence might work, even though killing civilians doesn't seem to have affected war's outcome very much in the past, Tertrais notes, "Most modern states have less tolerance for human suffering and destruction than was the case until 1945." It is certainly true that there seems to be

less stomach for violence since World War II (although Cambodians and Rwandans might disagree). But even a cursory review of history will show that the lust for war ebbs and flows across time. We appear to be sailing through a period of relative calm now, with less destruction and less killing than sixty years ago. But these sorts of calms have come before.

At the turn of the nineteenth century, the European Victorians congratulated themselves on their civility and good manners. There may be wars in the colonies (fighting savages), they said, but there would never be savage war again in Europe. We have evolved too far, they said, our commercial interests are too intertwined, we are too cultured for the sort of brutal, rampaging war that engulfed all of Europe during the 1600s or the Napoleonic era. Massive wars like that are gone forever, they confidently and complacently asserted. World War I disabused them with a savage fury.

Human beings have demonstrated, time and again, a lust for war that does not seem to fade or wear itself out. It is true that there have been times when we fight less. But the desire for war—and the destruction and killing that go with it—seems to be a savagery that only sleeps. When we think about the most destructive weapons yet created by man, this is a bit of history worth remembering.

U.S. Decisions and Deception Regarding Pakistan's Bomb

Mark Hibbs's review of three major books on the Pakistani nuclear program ("Pakistan's Bomb: Mission Unstoppable," 15.2, July 2008, pp. 381–91) provides a detailed and thoughtful assessment by a knowledgeable

specialist who has followed these issues in detail for years. His core thesis is solid: Pakistan was wholeheartedly committed to acquiring the bomb; although the authors of the three books decry the result, they

offer no real indication that the acquisition could have been prevented.

Nevertheless, there are two key points that need to be challenged.

The first is Hibbs's reluctance to acknowledge that "U.S. officials or agencies conspired to mislead the public and prevent action from being taken to halt the proliferation," simply concluding that "other factors than conspiracy or deceit were at play in decisions taken by U.S. officials to keep what they knew about Pakistan's nuclear program secret." Hibbs bases this on two arguments: that Richard Barlow (a former analyst who alleges the U.S. government had intelligence on Pakistan's nuclear program and failed to act on it) is at the center of these claims and is not totally credible, and that officials had to set priorities under difficult circumstances and did the best they could.

Although Barlow is cast as a central figure in the three books, the authors also detail dozens of instances unrelated to Barlow in which questionable U.S. actions were taken—the charge of deception does not hinge on Barlow alone. Hibbs presents Barlow as a divisive figure, and this may well be true. But that does not mean his claims are inaccurate; the publicly available information on Barlow's case does depict high-level deception on the part of the U.S. government. Yet Hibbs provides no refutation of any of these specifics. Hibbs criticizes David Armstrong and Joseph Trento, authors of *America and the Islamic Bomb*, because some of their endnotes are unavailable, but his own review is full of unnamed sources and ambiguous references, including "senior Pakistani officials," "told on good authority," "one former official," "a few people deeply involved," and "one expert." His most specific (yet unnamed) source regarding Barlow denies

that Barlow was a "truth-teller" and simply says that "the real story" is "all classified."

Undoubtedly, what Hibbs calls "other factors" were important in U.S. decisions, and many officials found it difficult to balance the competing requirements of nonproliferation and ensuring Pakistani cooperation on critical strategic programs. The fact that decisions were difficult and that administrations had to protect programs may justify some degree of deception, but it does not mean that deception did not take place. Deception is also muddied by the uncertainties involved. For example, President Ronald Reagan in 1986 certified Pakistan as a non-nuclear state. It is easy to argue that this was a true assessment, as no U.S. official had actually seen a Pakistani nuclear bomb. But intelligence at the time apparently provided overwhelming evidence of Pakistani weapon development. So the certification seems at best misleading; i.e., deceptive. It is also worth noting that deception is really only applicable to upper-level officials. At the working level, individuals see only part of any picture and are obligated to follow guidance from above; they do the best they can and pass assessments and recommendations up the line. Only at higher levels do officials begin to see a comprehensive picture. And administrations are in a very difficult position when critical (and perhaps unpopular) decisions are taken based on sensitive information. "Other factors" are inevitably present; this does not necessarily mean that no deception takes place.

The second key point at issue is whether the Pakistani program could have been stopped. Hibbs sees as "inconceivable that the IAEA or its member states could have halted Pakistan in 1979." He certainly makes the case that the United States lacked real leverage. Options such as cutting off aid were ineffectual—indeed,

during periods when U.S. aid was cut off, Pakistan was compelled to work even harder. The India-China-Pakistan strategic triangle made this a very difficult problem. The predominant position of the army in Pakistani society depended on the specter of an Indian enemy and ensured that civilian governments lacked real power. China's own disputes with India spurred Indian military developments (which Pakistan presented as threatening) and promoted Chinese support to Pakistani military expansion.

Against this backdrop, stopping Pakistani military (including nuclear) expansion would have required a much stronger U.S. regional effort. That does not mean it could not have been done, but that the top levels of the U.S. government decided preventing it was not a priority. Pakistani weapon development was not an inevitability, but a choice. The key problem was that the United States promoted Pakistani cooperation on the cheap by choosing for many years not to address the underlying India-China-Pakistan triangle. This allowed a focus on other strategic issues (e.g., engaging the Soviet Union) but is one reason that the region is so unstable today.

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Mark Hibbs responds

I have no qualms with Edward Corcoran's conclusion that U.S. success in halting Pakistan's nuclear weapons program "would have required a much stronger U.S. regional effort." That didn't happen, however, and the three books I reviewed did not themselves bring any evidence to bear suggesting that the United States had launched such an effort. Given different

security policy priorities operating in Washington, Moscow, Beijing, New Delhi, and Islamabad during most of the late 1970s and 1980s, putting together an international coalition to shut off Pakistan's nuclear development might have been equivalent to squaring the circle. Then, even more than now, nonproliferation took a backseat to states' other policy objectives.

Corcoran says that the books I reviewed elaborated "dozens of instances . . . in which questionable U.S. actions were taken" in reacting to nuclear developments in Pakistan. But that doesn't imply there was a government-led conspiracy afoot to suppress what was known about Pakistan's clandestine achievements. Did U.S. administration officials bend the truth to fit a desired policy outcome? Yes. But the record indicates that, by and large, the key players knew the essential facts, and that few if any actors were taken in by U.S. government statements crafted to dodge questions about Pakistan's nuclear endgame.

That was also the case for deliberations in the U.S. Congress during the 1980s, when lawmakers had plenty of opportunity to halt aid to Pakistan by blocking Ronald Reagan's certification of Pakistan as non-nuclear.

During this period, Leonard Weiss, who devoted a large part of his career as an aide to Senator John Glenn (Democrat of Ohio) to trying to get the United States to stop Pakistan's bomb program, organized hearing after hearing of the Senate Foreign Relations Committee. At these hearings, some witnesses spelled out that Pakistan's nuclear complex was out of control. They included Richard Barlow, who directly challenged statements that were made by other U.S. executive branch officials.

Some of my early research into Pakistan's nuclear program was cited as

evidence during these congressional hearings. This research documented that autoclaves for uranium enrichment, based on technology that had been diverted from the Urenco program to Pakistan, had been reconfigured by criticality engineers to process weapon-grade uranium, and that Pakistan had imported other German equipment for the purpose of producing pure tritium. Both developments were a clear indication of Pakistan's non-peaceful ambitions.

"The Congress heard all the testimony. No one was fooled about what was going on in Pakistan," Weiss told me in a telephone conversation in March 2009. In the final analysis, he said, U.S. lawmakers' decision to approve certification "was an act of political cowardice. The bottom line was that no one wanted to take the responsibility for standing in the way of the president on this issue."

Glenn, who strongly opposed U.S. accommodation of Pakistan's nuclear program, was pressed hard during closed-door personal briefings by U.S. executive branch officials, including U.S. Ambassador for Nonproliferation Richard T. Kennedy, to give in to Reagan in the interest of not derailing U.S. policy. In the end, Congress approved Reagan's certification.

I have no knowledge of whether Richard Barlow's version of events as presented in the books I reviewed is true or not. I have spoken with a few U.S. officials and former U.S. officials who assert that some assertions in these books attrib-

uted to Barlow were incorrect or unsubstantiated. The authors relied on Barlow's account without any serious qualifications and without making reference to any dissenting views about its veracity. The individuals I spoke with appeared to differentiate between what they said were unsubstantiated assertions attributed to Barlow—most generally that U.S. officials did nothing to stop Pakistan's unbridled nuclear pursuits—on the one hand, and considerable problems Barlow encountered in dealing with his adversaries in U.S. government agencies, on the other.

I did not object to use of unnamed sources by the authors of these books. Doing so would have been disingenuous, since for all of us working in this field, much information is made available on the basis that sources are not identified. For that reason, my review did not name the Pakistani officials who told me in 1994 that Pakistan was building a plutonium production reactor. Individuals who voiced objections to statements attributed to Barlow—whom I had named in my first draft of the review—requested that they not be identified, and I complied with those requests.

I did point out in the review that Douglas Frantz and Catherine Collins (not, as Corcoran writes, David Armstrong and Joseph Trento) had given up on endnoting half way through their book, making it more difficult to identify what kind of sources were relied upon over their final, and most interesting, 300 pages.

The Nonproliferation Review welcomes input from its readers and encourages a dialogue on the topics covered and articles published in the journal. Please send all letters to Editor Stephen Schwartz, stephen.schwartz@miis.edu. Be sure to include your contact information, including mailing address. Letters may be edited for length, clarity, and style. The authors of the correspondence published in this section maintain the copyright to their letters.