Atomic weapons have returned for a second act. This time the bomb's spread has nothing to do with the cold war, the first nuclear age that remains the context for so much of our thinking about nuclear weapons. Over the past two decades new nuclear powers have emerged from “natural causes,” the normal dynamics of fear and insecurity that have long characterized international relations.

This isn’t a welcome message, yet it’s one we ignore at our peril. Perhaps the United States could have done more to stop the spread of nuclear weapons, cracking down harder on India or Israel, on North Korea or Pakistan. Perhaps it could have cut its own nuclear forces to the bone to entice Russia and China not to modernize theirs. But such efforts would have looked too much like a historical grand design to freeze temporary power advantages into permanent history, preserving U.S. military superiority using the mask of arms control. In an era of shifting great powers, rising new ones, and deep uncertainty about the future shape of world order, such efforts were bound to fail.

The United States did nearly everything it could to foster global antinuclear policies after the cold war. I cannot think of any policy in American history, not the Monroe Doctrine, not liberal internationalism, not containment, that had more widespread, bipartisan support in domestic politics, or more energetic backing. The problem is this: it just didn’t work. Other countries simply didn't buy it. They were sovereign nations in charge of their own destiny so they could choose to keep the bomb or get it. The spread of the bomb, and other advanced military technologies, wasn’t some aberration or false start, a path that was briefly followed until people woke up to the dangers. As a result, the bomb has become deeply entrenched in international relations, at the global and regional levels.

I don’t think any U.S. policy to prevent the bomb from returning for a second act would have worked, short of some colossal effort on the scale in dollars and blood of World War II. This is because it wasn't just a handful of rogue actors like North Korea that went nuclear. Major powers did too. India, the world's largest democracy, joined the nuclear club. China has upgraded its nuclear forces along with the rest of its military. Add Russia to this group and three of the four BRICs (Brazil, Russia, India, and China), the dynamic comers in the twenty-first century, are modernizing their nuclear arsenals. Even Britain and France didn’t give up their nuclear weapons, in great measure to preserve their declining influence as other countries rose in power. Looking back, these are natural developments in the international system as responses to geopolitical change.

One more factor is behind the return of the bomb. Distrust of the United States has also fueled its spread, as a
counter to American military interventions. China, Russia, India, Pakistan, North Korea, and Iran hardly desire a world that is “safe” for U.S. strong-arm tactics with conventional forces. In their eyes, the bomb counters America precisely because it is so risky. Because if there's one thing nuclear weapons do it is to increase the risks in any military showdown, with the prospect of a large spike in the level of violence. This suits many countries just fine. It's exactly what they want, given that most of them can't possibly compete against the United States in conventional technologies.

Nine countries currently have the bomb. Eight have modernized their nuclear arsenals, with weapons of longer range and with a diverse menu of delivery means and warhead types. The one exception is the United States. In the second nuclear age, it is misguided for America to continue the charade that nuclear weapons are useless. Other countries sure don't think so, and they are the ones that count.

**STRATEGIC IMPLICATIONS**

What is now developing goes beyond merely getting the bomb. Strategic innovation—new strategies built for a nuclear environment—is increasing among those in the nuclear club and among those about to join it. As countries acquire these weapons they are developing new ways to use them to advance their strategic purposes.

For example, India’s strategy of rapid conventional attacks explicitly accepts the atomic threshold as defining the new strategic environment of battle. Pakistan is fielding a whole new class of battlefield nuclear weapons. The threat of a breakdown of command and control serves as a deterrent to India starting something that Pakistan cannot control. China’s nuclear modernization is creating a far more agile force, one that can be placed on nuclear alert using its road-mobile missiles and submarines. Political signaling with this more agile force is vastly greater than China’s old missile force. North Korea also has innovated, and tested a quick launch salvo scheme keyed to radar warning of attack against it.

Each of these innovations is worth studying in itself. But there is a larger connection. They demonstrate strategy innovation in the second nuclear age, as occurred in the first nuclear age. The kinds of innovation are different between the two era. But it is taking place. Some of the new innovations are shrewd. Some are crazy. Others are dangerous. But this doesn't belie the point that they are taking place. This is sometimes difficult to recognize in the United States because of the certainty that nuclear weapons have no conceivable uses, that is, that they have no value. Would that this were true.

There is also a continued reliance on theories and vocabulary invented for a different, earlier age: the cold war. Deterrence, containment, first and second strike, counterforce and countervalue. These terms from the 1950s are used today as if their meanings were self-evident or in no need of clarification when applied to very different conditions. Our frameworks and vocabulary may block us from seeing the reality that other countries view the bomb very differently than we do. Our theories of deterrence and containment have a powerful grip—so much so that we don’t even see them as theories but as reality.

**RIVALRY IN A NUCLEAR CONTEXT**

The grip of the atomic bomb is especially strong in the regions. In this respect, the second nuclear age is almost the mirror image of the first. In the cold war the path to atomic war ultimately had to go through Washington and Moscow because the nuclear triggers were controlled there. The U.S. and Soviet governments served as safety valves to make sure that whatever happened in the region clashes of the cold war didn't escalate to a nuclear exchange. The locals might have wanted this to happen, or not, but the superpowers surely did not.

For example, newly released transcripts of the Cuban missile crisis meetings in 1962 between Fidel Castro and Soviet officials showed that there was no way Moscow was going to let the Cuban leader have the bomb. There is no doubt that the Soviets did not want Castro to have the bomb. Indeed, for Moscow, withdrawal of nuclear weapons from Cuba was a desired outcome because it meant the Cubans would never get their hands on one of these weapons.

Think how different things are in the second nuclear age. The “locals,” North Korea, Pakistan, Israel, and quite probably others will have the bomb—and they will control the trigger. Conflict in the Middle East, South Asia, and
East Asia is hardly new. What is new is the nuclear context it will take place in.

The influence of major powers adds a measure of reserve and caution to regional conflict, but to me, it has nothing like the strength of the bloc discipline of the cold war. This shift of nuclear risk to the regions hardly makes the old conflicts disappear. To frame these conflicts in an altogether different framework, namely nuclear deterrence, overlooks the principal sources of risk, which are the local political differences. It substitutes a familiar calculus that worked in the cold war, deterrence, for fundamentally different strategic realities. Convoluted discussions of nuclear strategy, like the targets Pakistan and India might fire at, or Israel’s greater throw-weight compared to a nuclear Iran, miss the main risks of escalation.

THE BREAKDOWN IN MAJOR POWER MONOPOLY OVER THE BOMB

The second nuclear age lacks an overarching ideological struggle as the cold war had. But it does have an overarching theme: the breakdown of major-power monopoly over the bomb. The victorious powers of World War II, the United States, Russia, China, France, and Britain once had monopoly rights to it. Their monopoly position was even enshrined in treaty, in the NPT, and in their permanent seats in the United Nations Security Council.

This monopoly has broken down, just as it has in other areas of technology and politics. This has profound implications that go beyond the regional security issues discussed above. A multipolar nuclear order has come about because the original five nuclear powers have been unable to block entry into the club.

India’s nuclear program makes this especially clear. The Indian nuclear program has become virtually an accepted, legitimate weapons program, whatever the fiction of the NPT says. Moreover, India in 2012 tested an ICBM, one that almost surely has independently targeted warheads (MIRVs). India has "used" the bomb quite successfully to claw its way into the major power club, and to leverage its way to greater international status with it. The recent U.S.-Indian commercial nuclear deal ratifies this strategy. Think for a moment if the United States had sold some old tanks or destroyers to India, instead of nuclear reactors. It wouldn't have caused any kind of a political stir. It would be considered a laughing stock of strategic American influence. But sell nuclear reactors and it changes the balance of global power.

Some people in the United States still argue that the bomb is an outdated relic of the cold war, and that it is a weapon without any uses. The Indian case is one of many example that belie this argument.

CONCLUSION

There are many implications of having to live through a second nuclear age. Arms control will have to change dramatically. The military balance will shift. New, innovative strategies are likely to develop. Further modernization of nuclear forces and the spread of the bomb is likely.

A great deal of artful, creative thinking is needed to handle these challenges. The world made it through the first nuclear age with thinking, and with luck. It is time to start thinking in a much more sober way about the challenges ahead for living through a second nuclear age.
Second atomic bomb dropped, 9 August 1945. The city was added to the target list to replace Kyoto only on 24 July. Kyoto. He said in a letter dated 19 July that he wanted to use at least two and as many as four atomic bombs on Japan. “You can argue that he had a personal stake in using both of the different types of atomic bombs,” says Prof Wellerstein. So, 70 years ago today, instead of thousands of temples and shrines, it was the people of Nagasaki that evaporated in the blink of an eye. The city which was not even on the initial list of targets on the bombing order was chosen because of bad weather over the second target of Kokura city - which prevented the pilots from dropping the bomb on 9 August. As e-commerce grows (with its much higher rates of product returns), the cost of returns and exchanges is becoming an increasing and unsustainable issue for more and more brands. A crisis looms on the horizon. Over the years, I have worked for two retailers with significant catalog businesses. I’ve also been the chief operating officer for a furniture brand. We worried about returns, which could often run in excess of 30% in certain product categories - quite a lot. Of course, back in the day, outbound shipping was rarely free, and free returns and exchanges were virtually unheard of. Today, as the direct-to-customer business is almost entirely e-commerce driven, free shipping is nearly ubiquitous, and "hassle-free" returns and exchanges are increasingly common.