

Thomas C. Schelling

A world without nuclear weapons?

A new and popular disarmament movement was provoked by a completely unexpected combination of Henry A. Kissinger, William J. Perry, Sam Nunn, and George P. Shultz with their op-ed pieces in *The Wall Street Journal* from January 4, 2007, and January 15, 2008. For the first time since the demise of General and Complete Disarmament (GCD) in the 1960s, there is a serious discussion of the possibility of utterly removing nuclear weapons from the planet Earth. Furthermore, the discussion is taking place among nuclear policy professionals, the people who publish in *Foreign Affairs*, *International Security*, and other serious journals.

The International Institute for Strategic Studies, founded in London in 1958 and notable for its Adelphi papers, published in August 2008, Paper 396, *Abolishing Nuclear Weapons*, by George Perkovich and James Acton of the Carnegie Endowment for International Peace. It was central to a conference at the Carnegie Endowment that produced 17 response papers from around the world. Other meetings similarly motivated have been occurring, many under the sponsorship of the Nuclear Threat Ini-

tiative (NTI). The Stanley Foundation convened 25 officials, including diplomats from UN institutions, U.S. and foreign experts, and officials from other nations “to examine the first steps toward a world free of nuclear weapons.” The rapporteur of that meeting noted, “Participants were in general agreement that complete and eventual disarmament, or global zero, is the objective.”

The American Academy of Arts and Sciences, which publishes *Dædalus*, awarded the Rumford Prize to Perry, Nunn, Shultz, Kissinger, and Sidney Drell at its 1929th Stated Meeting in October 2008, for “their contribution to nuclear abolition.” President Obama’s April 2009 Prague speech, in which he stated “clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons,” was a sign that the disarmament debate was now a serious enterprise.

Some of the motivation, among the diverse respondents on the issue, is to fulfill, or appear to fulfill, the “commitment” undertaken by the official nuclear-weapons states in the Non-Proliferation Treaty (NPT) “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear

© 2009 by the American Academy of Arts & Sciences

disarmament, and on a treaty on general and complete disarmament under strict and effective international control." The underlying motive would be to renew and strengthen the Treaty itself, by removing an objection often voiced by non-nuclear governments about unacceptable discrimination. Some of the motivation is evidently to spur an overdue drastic reduction in Russian and American nuclear warheads, especially those on high alert.

But hardly any of the analyses or policy statements that I have come across question overtly the ultimate goal of total nuclear disarmament.¹ Nearly all adduce the unequivocal language of *The Wall Street Journal* quadrumvirate.

None explicitly addresses the question, why should we expect a world without nuclear weapons to be safer than one with (some) nuclear weapons? That drastic reductions make sense, and that some measures to reduce alert status do, too, may require no extensive analysis. But considering how much intellectual effort in the past half-century went into the study of the "stability" of a nuclear-deterrence world, it ought to be worthwhile to examine contingencies in a nuclear-free world to verify that it is superior to a world with (some) nuclear weapons.

I have not come across any mention of what would happen in the event of a major war. One might hope that major war could not happen in a world without nuclear weapons, but it always did. One can propose that another war on the scale of the 1940s is less to worry about than anything nuclear. But it might give pause to reflect that the world of 1939 was utterly free of nuclear weapons, yet they were not only produced, they were invented, during war itself and used with devastating effect. Why not expect that they could be produced – they've already

been invented – and possibly used in some fashion?

In 1976, I published an article, "Who Will Have the Bomb?" in which I asked, "Does India have the bomb?"² India had exploded a nuclear device a couple of years earlier. I pursued the question, what do we mean by "having the bomb?" I alleged that we didn't mean, or perhaps didn't even care, whether India actually possessed in inventory a nuclear explosive device, or an actual nuclear weapon. We meant, I argued, that India "had" the potential: it had the expertise, the personnel, the laboratories and equipment to produce a weapon if it decided to. (At the time, India pretended that its only interest was in "Peaceful Nuclear Explosives" [PNEs].) I proposed an analogy: does Switzerland have an army? I answered, not really, but it could have one tomorrow if it decided today.

The answer to the relevant question about nuclear weapons must be a schedule showing how many weapons (of what yield) a government could mobilize on what time schedule.

It took the United States about five years to build two weapons. It might take India – now that it has already produced nuclear weapons – a few weeks, or less, depending on how ready it kept its personnel and supplies for mobilization. If a "world without nuclear weapons" means no mobilization bases, there can be no such world. Even starting in 1940 the mobilization base was built. And would minimizing mobilization potential serve the purpose? To answer this requires working through various scenarios involving the expectation of war, the outbreak of war, and the conduct of war. That is the kind of analysis I haven't seen.

A crucial question is whether a government could hide weapons-grade fissile

material from any possible inspection-verification. Considering that enough plutonium to make a bomb could be hidden in the freezing compartment of my refrigerator, or to evade radiation detection could be hidden at the bottom of the water in a well, I think only the fear of a whistle-blower could possibly make success at all questionable. I believe that a “responsible” government would make sure that fissile material would be available in an international crisis or war itself. A responsible government must at least assume that other responsible governments will do so.

We are so used to thinking in terms of thousands, or at least hundreds, of nuclear warheads that a few dozen may offer a sense of relief. But if, at the outset of what appears to be a major war, or the imminent possibility of major war, every responsible government must consider that other responsible governments will mobilize their nuclear weapons base as soon as war erupts, or as soon as war appears likely, there will be at least covert frantic efforts, or perhaps purposely conspicuous efforts, to acquire deliverable nuclear weapons as rapidly as possible. And what then?

I see a few possibilities. One is that the first to acquire weapons will use them, as best it knows how, to disrupt its enemy’s or enemies’ nuclear mobilization bases, while itself continuing its frantic nuclear rearmament, along with a surrender demand backed up by its growing stockpile. Another possibility is to demand, under threat of nuclear attack, abandonment of any nuclear mobilization, with unopposed “inspectors” or “saboteurs” searching out the mobilization base of people, laboratories, fissile material stashes, or anything else threatening. A third possibility would be a “decapitation” nuclear attack along with the surrender demand.

And I can think of worse. All of these, of course, would be in the interest of self-defense.

Still another strategy might, just might, be to propose a crash “rearmament agreement,” by which both sides (all sides) would develop “minimum deterrent” arsenals, subject to all the inspection-verification procedures that had already been in place for “disarmament.”

An interesting question is whether “former nuclear powers” – I use quotation marks because they will still be latent nuclear powers – would seek ways to make it known that, despite “disarmament,” they had the potential for a rapid buildup. It has been suggested that Saddam Hussein may have wanted it believed that he had nuclear weapons, and Israel has made its nuclear capability a publicized secret. “Mutual nuclear deterrence” could take the form of letting it be known that any evidence of nuclear rearmament would be promptly reciprocated. Reciprocation could take the form of hastening to have a weapon to use against the nuclear facilities of the “enemy.”

But war is what I find most worrisome. In World War II there was some fear in the U.S. nuclear weapons community that Germany might acquire a nuclear capability and use it. There is still speculation whether, if Germany had not already surrendered, one of the bombs should have been used on Berlin, with a demand that inspection teams be admitted to locate and destroy the nuclear establishment. Would a government lose a war without resorting to nuclear weapons? Would a war include a race to produce weapons capable of coercing victory?

Could a major nation maintain “conventional” forces ready for every contingency, without maintaining a nucle-

ar backup? Just as today's intelligence agencies and their clandestine operators are devoted to discovering the location of terrorist organizations and their leaders, in a non-nuclear world the highest priority would attach to knowing the exact locations and readiness of enemy nuclear mobilization bases.

Would a political party, in the United States or anywhere else, be able to campaign for the abandonment of the zero-nuclears treaty, and what would be the response in other nations?

I hope there are favorable answers to these questions. I'm uncertain who in government or academia is working on them.³

One can take the position that substantial nuclear disarmament makes sense, and that the abstract goal of a world without nuclear weapons helps motivate reduction as well as presents an appearance of fulfilling the NPT commitment. Maybe some leaders of the movement have no more than that in mind. But even as a purely intellectual enterprise the "role of deterrence in total disarmament," to use the title of an article I published 47 years ago, deserves just as thoughtful analysis as mutual nuclear deterrence ever received.⁴

In summary, a "world without nuclear weapons" would be a world in which the United States, Russia, Israel, China, and half a dozen or a dozen other countries would have hair-trigger mobilization plans to rebuild nuclear weapons and mobilize or commandeer delivery systems, and would have prepared targets to preempt other nations' nuclear facilities, all in a high-alert status, with practice drills and secure emergency communications. Every crisis would be a nuclear crisis, any war could become a nuclear war. The urge to preempt would dominate; whoever gets

the first few weapons will coerce or preempt. It would be a nervous world.

It took a couple of decades for the United States to work out a satisfactory theory of "strategic readiness," of how to configure strategic nuclear forces to provide reasonably comfortable assurance against surprise or preemption, with appropriate command and control. Nothing is perfect: we never did solve the MX missile basing problem; we apotheosized a "triad" that didn't really exist; we missed the early opportunity to restrain multiple independently targetable reentry vehicles (MIRV); we never had an agreed understanding of "flexible response" or "no-cities" and its relation to counterforce targeting; and we let a president carry us away with an expensive dream of active defense of the population. Still, we got away from soft, exposed, unready bombers and missiles; we avoided the troubles that rival anti-ballistic-missile (ABM) systems would have brought; and we understood the MX problem, if we couldn't solve it.

There are now many proposals for radically reconfiguring the strategic offensive force. Possible reductions in numbers get plenty of attention. The composition of the force – undersea, airborne, and fixed; gravity, ballistic, and cruise; air and naval – gets less attention, but will receive it intensely when service rivalries become aroused. The proposals that to me sound hasty and in need of more thought than I can detect behind them are those that would drastically change the readiness status of the strategic force. These involve various proposals for reduced alert status. In particular, some propose physically separating warheads and vehicles. An extreme case is the idea of "strategic escrow," warheads removed from vehicles, presumably at quite some distances, and stored

under international supervision. I have heard proposals for keeping warheads nearby but separate from the bombers or the missiles themselves. There are also proposals, which I'm not able to judge, for electronic de-alert or fail-safe retargeting.

What I think took those couple of decades I mentioned was really getting "vulnerability" under control. It began seriously with the Gaither Committee in 1957, got incorporated into the surprise-attack negotiations in 1958, led to airborne alert for bombers and abandonment of Atlas and Titan, and gave the navy a strategic lease on life. One key to reduced vulnerability was dispersal. Minuteman was spread out so that no single enemy weapon could destroy more than one. (Decoys for the same purpose were considered during the MX predicament.)

What has me worried is a new kind of "dispersal," a perverse kind: offering multiple disabling points for an enemy to target. If a missile or bomber can be rendered inactive by, alternatively, destroying it, destroying its warhead, or destroying the means of locomotion from warhead storage to vehicle, vulnerability has increased. If removed warheads are stored centrally, or in clusters, "dispersal" has been reversed. (Subjecting warhead storage to inspection eliminates the possibility of keeping locations secret from potential targeting.) If there are limited transport routes by which warheads can join their vehicles, vulnerability is increased. And maybe not just vulnerability to strategic attack but to disruption or sabotage as well.

Another theme of strategic readiness that took pretty good hold during those decades was "crisis stability." The concept involved a couple of potentially contradictory ideas: that any urgent ef-

forts to enhance readiness in a crisis should be unnoticeable, lest they alarm the enemy, and that any efforts should be so visible that, if they were not being taken, the enemy could see they were not! On balance I think the consensus was that the dynamics of mobilization should be minimized; that, of course, could depend on what kinds of actions we are talking about. And the actions depend on just what mode of de-alert or separation of components is being considered.

I worry that the necessary scenario analyses to find the strengths and weaknesses, especially the weaknesses, of these proposals have not been done. I do not want to see many years – more than half a century now – of painfully acquired understanding of the requirements of "safe readiness" be lost or ignored in a hurried effort to invent new configurations of readiness-unreadiness. In particular, just what can be done on what time schedule and with what visibility to the public or to the enemy (or to international referees) in various kinds of crises needs to be thoroughly worked out; the logistics need to be carefully simulated; and the range of choices needs to be identified.

I do not perceive that this analysis is being done before proposals are launched that would produce highly unfamiliar strategic-readiness situations. What we have developed and become acquainted with should be dismantled only when we are sure we understand what we may be getting into.

We have gone, as I write this, more than 63 years without any use of nuclear weapons in warfare. We have experienced, depending on how you count, some eight wars during that time in which one party to the war possessed nuclear weapons: United States vs.

North Korea, United States vs. People's Republic of China, United States vs. Viet Cong, United States vs. North Vietnam, United States vs. Iraq twice, United States vs. Taliban in Afghanistan, Israel vs. Syria and Egypt, United Kingdom vs. Argentina, and USSR vs. Afghanistan. In no case was nuclear weapons introduced, probably not seriously considered.

The "taboo," to use the term of Secretary of State John Foster Dulles in 1963 – he deplored the taboo – has apparently been powerful. The ability of the United States and the Soviet Union to collaborate, sometimes tacitly, sometimes explicitly, to "stabilize" mutual deterrence despite crises over Berlin and Cuba, for the entire postwar era prior to the dissolution of the USSR, would not have been countenanced by experts or strategists during the first two decades after 1945.

These are two different phenomena, the taboo and mutual deterrence. We can hope that mutual deterrence will subdue Indian-Pakistani hostility; we can hope that the taboo will continue

to caution Israel, and that it will affect other possessors of nuclear weapons, either through their apprehension of the curse on nuclear weapons or their recognition of the universal abhorrence of nuclear use.⁵

There is no sign that any kind of nuclear arms race is in the offing – not, anyway, among the current nuclear powers. Prospects are good for substantial reduction of nuclear arms among the two largest arsenals, Russian and American. That should contribute to nuclear quiescence.

Concern over North Korea, Iran, or possible non-state violent entities is justified, but denuclearization of Russia, the United States, China, France, and the United Kingdom is pretty tangential to those prospects. Except for some "rogue" threats, there is little that could disturb the quiet nuclear relations among the recognized nuclear nations. This nuclear quiet should not be traded away for a world in which a brief race to reacquire nuclear weapons could become every former nuclear state's overriding preoccupation.

ENDNOTES

¹ For exceptions, see Harold Brown and John Deutch, "The Nuclear Disarmament Fantasy," *The Wall Street Journal*, November 19, 2007, and Charles L. Glaser, "The Instability of Small Numbers Revisited," in *Rebuilding the NPT Consensus*, ed. Michael May (Stanford, Calif.: Center for International Security and Cooperation, Stanford University, October 2008), <http://iis-db.stanford.edu/pubs/22218/RebuildNPTConsensus.pdf>.

² Thomas C. Schelling, "Who Will Have the Bomb?" *International Security* 1 (Summer 1976): 77–91.

³ See Sverre Lodgaard's and Scott Sagan's essays in this issue of *Dædalus* for expert analyses of the problem of stability without nuclear weapons.

⁴ Thomas C. Schelling, "The Role of Deterrence in Total Disarmament," *Foreign Affairs* 40 (1962): 392–406.

⁵ T. V. Paul, *The Tradition of the Non-Use of Nuclear Weapons* (Stanford, Calif.: Stanford University Press, 2008); Nina Tannenwald, *The Nuclear Taboo* (Cambridge: Cambridge University Press, 2007); and Thomas C. Schelling, "The Legacy of Hiroshima," in Schelling, *Strategies of Commitment and Other Essays* (Cambridge, Mass.: Harvard University Press, 2006).