Apparently START II is being held hostage in a dispute over the consolidation of our foreign affairs agencies. I hope this is not the case.

Even worse, some groups are now calling to add certain conditions for ratifying START II. These conditions have all been discussed in bills that have now passed the Senate, and should not be attached to the ratification of a treaty. The Senate can not change START II, either we ratify it or not. Attaching political conditions on a treaty is a dangerous practice and should be avoided on procedural considerations.

Mr. President, START II should be ratified for many reasons. First, START II destroys weapons. This reduces the risk of an accidental launch. Second, every Russian weapon destroyed is a weapon we don't need to defend against. The following table shows the numbers and kinds of ICBMs that can be eliminated under START II.

I ask that it be printed in the RECORD.

The table follows:

INTERNATIONAL BALLISTIC MISSILES—ELIMINATED UNDER START II

Delivery system	Launchers	Warheads
SS–18	188	1,880
SS–19	[1] 170	1,020
SS–24	46	460
SLBM's		[2] 600
Totals	304	3,960

[1] Some SS–19's may be converted to carry only a single warhead in order to offset the cost of developing a new launcher.

[2] Based on limit of 1,750 submarine launched ballistic missiles. The current Russian arsenal of SLBM's is estimated at 2,350.

Source: ''Bulletin of Atomic Scientists,'' Nuclear Notebook, September/October 1995.

Mr. HARKIN. Additionally, destroying weapons saves taxpayers' money. Just look at the current Senate Defense authorization bill. As my friend from New Mexico pointed out in the report to the Defense Authorization Act, the act ''proposes a nuclear weapons manufacturing complex sized to meet a need of a hedge stockpile far above the active START II stockpile of 3500 weapons.'' The total cost of producing our nuclear weapons to date is about $4 trillion. Compare that with our $5 trillion national debt. In 1995 alone, $12.4 billion was spent to build, operate and maintain strategic nuclear weapons. If we ratify START II we can give taxpayers the double peace dividend of higher security at lower cost.

Even if START II were fully implemented, we would have more than 3,000 deployed strategic missiles—500 warheads on missiles in silos, 1,680 warheads on submarine-launched missiles, and 1,320 on airplanes. Furthermore, an additional 4,000 nuclear weapons would remain in our stockpile. Surely, this will be more than enough atomic fire power to counter any conceivable threat to the United States.

Mr. President, Russia and other former Soviet Republics are more open than ever before. We have all seen the unprecedented pictures on television of Russian missiles and airplanes being destroyed. This new openness will make START II even more verifiable then START I. With Russian elections this month and our own presidential election season just starting, we must act now to keep the this olive branch from withering.

In conclusion, Mr. President, we need to ratify START II quickly. It is not in the national interest to play politics over the ratification of any treaty. Russian President Yeltsin is ill and needs quick American ratification of START II to help get the Russian Parliament to ratify it. We need the security of fewer Russian warheads now. We need to stop spending so much money making our nuclear weapons now. We can use the warheads we have now to defend America. We need to ratify START II now.●

THE PASSING OF THOMAS L. WASHINGTON

● Mr. ABRAHAM. Mr. President, it is with great, personal sadness that I note the passing this Tuesday, December 5 of Thomas L. Washington. Tom was a personal friend, a valued supporter, a concerned husband and father, and a dedicated leader in his community.

Tom was an avid and renowned sportsman. He exemplified all that is good about the sportsman: he was hardy and self-reliant; he also was frugal with and respectful of our great outdoors. Tom loved Michigan's wetlands and forests. He spent time in them, enjoying them and working to preserve them.

Because he loved the outdoors, Tom founded and led the Michigan United Conservation Clubs. Indeed, he built that organization into the largest single State conservancy in the Nation.

Tom was a strong, committed advocate for preserving Michigan's outdoors, and also the great outdoors of America and beyond, for all to enjoy.

He served on the board of directors of Safari Club International and the National Wildlife Federation. True sportsman that he was, he was as concerned to preserve the environment for future generations as to enjoy it for himself.

Thus he helped draft legislation creating the Michigan Natural Resources Trust Fund. This fund purchases prime recreational lands for public use with royalties from oil, gas, and mineral production on State lands. In 1976 Tom was appointed a charter member of the board that administers the fund. He served on the board until his death, including several terms as chairman.

He served on a number of Michigan State committees, including the committee that wrote administrative rules for the Michigan Farmland and Open Space Preservation Act, which is central to the State's land-use program.

Tom also served on the Governor's Interim Committee on Environmental Education, the Michigan Department of Natural Resources Endangered Species Committee, and the Governor's Interim Committee on Environmental Education. And he served as vice chairman of the Governor's Michigan Land Inventory Committee.

He was a recipient of the American Motors Conservation Award, Safari Club International's Chairman's Award, and the Miles D. Pirnie Award for his leadership in preserving wetlands and wetlands wildlife.

Part of the reason for Tom's care for the environment no doubt stemmed from the fact that he was a family man. He cared about his wife and children and wanted to pass on to them the same rights and the same opportunities that he enjoyed.

A hunter concerned to protect all our rights, he also fought for the second amendment.

Tom was elected president of NRA's board of directors in 1994 and reelected in 1995. First elected to the board of directors in 1985, Tom served as second and then first vice president prior to being elected president.

Tom worked for responsible use of our rights, working with training and informational programs along with second amendment defense.

He was a fine man, whom I personally shall miss. I extend my condolences to the Washington family.●

RATIFY THE CHEMICAL WEAPONS CONVENTION

● Mr. HARKIN. Mr. President, the Chemical Weapons Convention [CWC] is a watershed agreement that will eliminate an entire class of weapons of mass destruction. Upon ratification, the CWC calls for the complete elimination of all chemical weapons within 10 years.

This landmark treaty is perhaps the most comprehensive arms control agreement ever signed. To begin with, the Chemical Weapons Convention requires all signatories to begin destruction of their chemical weapons stockpiles within 1 year of ratification, and to complete this destruction within 10 years. In addition, the CWC prohibits the production, use and distribution of this class of weapons, and provides an intrusive international monitoring organization in order to prevent the development of these weapons.

This verification allows not only for the inspection of ''declared'' sites, but also permits international inspectors access to any suspected undeclared facilities. Signatories do not have the right of refusal to deter inspection. Should a member nation request a ''challenge inspection'' of a suspected chemical facility, the nation called into question must permit the inspectors to enter the country within 12 hours. Within another 12 hours, the inspectors must have been allowed entry into the suspected warehouse. It is very unlikely that every trace of the banned chemicals could be eliminated within 24 hours.

In addition to providing broader powers to an international inspection regime, the CWC includes strong punishment to those nations who choose to violate this agreement. The violating nation, as well as nonmember nations, could no longer purchase an entire group of chemicals from member nations. The chemicals which would be banned are necessary for factories to produce products such as pesticides, plastics, and pharmaceuticals. So this measure is not only a ''carrot'' to induce nations to join, but a ''stick'' to ensure their compliance.

Obviously, Mr. President, no treaty is 100 percent watertight, but the strength of the international monitoring regime, the Organization for the Prohibition of Chemical Weapons, makes the manufacture of chemical weapons difficult to conceal, and the punishment provides a strong deterrent to developing this class of weapons.

Among all weapons of mass destruction—biological, chemical, and nuclear—chemical weapons are the most plausible and potent threat available to terrorists. These chemical weapons are relatively easy to make, and a dosage that can kill thousands is very easy to conceal. Recent events in Tokyo and Oklahoma City have provided the wake-up call to the international community, showing that the world can no longer slumber in a blanket of false security.

From a historical perspective, agreements to curtail chemical weapons use have been largely successful. The best example is the 1925 Geneva Protocol. Even during World War II, the vast majority of nations observed the Geneva Protocol, which banned the first-use of chemical weapons in war. However, the use of chemical weapons by Saddam Hussein against Iran and the Iraqi Kurdish population forced the world community to realize the danger of these weapons. The production of chemical weapons by nations facilitates the proliferation of these weapons to state sponsored terrorist groups.

The United States must place a high priority on the elimination of this deadly class of weapons. If the United States wishes to retain its position as a world leader, the Senate must provide its advice and consent to the ratification of the Chemical Weapons Convention with urgency, and persuade other nations to follow our lead.

Mr. President, to call attention to the proliferation of weapons of mass destruction, I would recommend a highly informative article by Robert Wright entitled ''Be Very Afraid'', which appeared in the May 1, 1995 edition of The New Republic. To Quote Mr. Wright:

All told, the world's current policy on weapons of mass destruction can be summarized as follows: The more terrible and threatening the weapon, the less we do about it. There has never been a more opportune time to rethink these priorities. * * * A good model for reform exists in the Chemical Weapons Convention, which now awaits ratification after more than a decade of negotiation involving three administrations. The CWC has both kinds of teeth that the NPT lacks: A tough inspection regime and real punishment for violation.

I ask that the text of the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the New Republic, May 1, 1995]

NUKES, NERVE GAS AND ANTHRAX SPORES—BE VERY AFRAID

(By Robert Wright)

Once you've assimilated the idea that an apocalyptic new-age cult with offices on three continents had stockpiled tons of nerve-gas ingredients and was trying to cultivate the bacterial toxin that causes botulism, the rest of the story is pretty good news. The cult, Aum Supreme Truth, employed its nerve gas on only one of the continents, rather than aim for synchronized gassings of the Tokyo, New York and Moscow subways. Only a small fraction of its chemical stock was used, and that was prepared shoddily; the gas seems to have been a degraded version of sarin, and the ''delivery systems'' the emitted it were barely worthy of that name. Rather than thousands dead on three continents we got eleven dead on one. A happy ending.

On the other hand, a worldwide display of well-run chemical and biological terrorism would have had its virtues. From mid-April through mid-May, on the eve of the Nuclear Non-proliferation Treaty's expiration at age 25, representatives of more than 170 nations are meeting in New York to vote on renewing the treaty. Conceivably, this gala event could inspire a broader and much-needed dialogue on the state of the world's efforts to control weapons of mass destruction, including chemical and biological arms. Then again, conceivably it couldn't. So far attempts to take a truly fresh look at this issue have tended to encounter a certain dull inertia within policy-making circles. This is the sort of condition for which 10,000 globally televised deaths on three continents might have been just the cure.

One salient feature of the world's approach to weapons of mass destruction is perverseness. The Nuclear Non-proliferation Treaty—the NPT—is a much weaker document than the recently negotiated Chemical Weapons convention, which now awaits American ratification; yet nuclear weapons are much more devastating than chemical ones. Meanwhile, biological weapons are essentially devoid of international control, yet they're the scariest of the three. They may not be the most potent—not for now, at least—but they have the greatest combination of potency and plausibility. If someone asks you to guess which technology will be the first to kill 100,000 Americans in a terrorist incident, you shouldn't hesitate; bet on biotechnology. And not futuristic, genetically engineered, genocidal viruses, though these may be along eventually. Plain old first-generation biological weapons—the same vintage as the ones Aum Supreme Truth was trying to make—are the great unheralded threat to national security in the late 1990s.

All told, the planet's current policy on weapons of mass destruction can be summarized as follows: the more terrible and threatening the weapon, the less we do about it. There has never been a more opportune time to rethink these priorities.

I

To its credit, the Clinton administration has lately worked doggedly on behalf of NPT renewal. Officials have traveled the globe, reminding world leaders that they're more secure with the treaty than without it, and promising the more ambivalent ones God-knows-what in exchange for their support. The treaty now seems assured of extension before the New York conference adjourns.

Extension is certainly better than non-extension. Still, since its inception back in the 1960s, the treaty's structural weakness has gotten sufficiently glaring that one wishes those weren't the only two options.

The idea behind the treaty was that the nuclear haves—Britain, China, France, Russia, the United States—would buy off the have-nots. The have-nots would pledge not to acquire nuclear weapons, and the haves would help them get and maintain nuclear energy for peaceful use. That was the carrot. Once the have-nots had signed on, they would be subjected (along with the rest of us) to the stick: international inspection of nuclear reactors, with the understanding that misuse of the technology would lead to its cutoff. Administering both carrot and stick is the International Atomic Energy Agency, or IAEA.

One oddity of this arrangement is that the IAEA's job is to relentlessly complicate its own life. As it helps spread ''peaceful'' nuclear materials around the globe, opportunities for illicit use multiply, and so does the need for stringent policing. Thus, the world must get better and better at two things: detecting cheaters, and punishing them with sufficient force to deter others. Recent events show the world to have failed in both regards.

At the outset of the Persian Gulf war, Iraq was an NPT member in technically good standing. After the war, the world discovered what a meaningless fact that can be. Indeed, as if to drive home the IAEA's impotence, a separate agency, under United Nations auspices, went into Iraq, documented the nuclear weapons program and dismantled it.

It's true that the existence of this program didn't come as a bolt from the blue. There had long been grave suspicions, but President Bush's aversion to regional Iranian hegemony had given him a certain tolerance for Iraqi excesses. Still, few suspected the scope of Saddam Hussein's nuclear program, or the subtlety of its concealment. Hussein proved that the IAEA's inspection regime—confined to declared nuclear sites—is inadequate.

The first application of this lesson was in North Korea. After inspection of a declared site revealed nuclear materials to be missing, the IAEA, for the first time ever, asked to look at an undeclared site. The North Korean refusal confirmed everyone's worst suspicions, and thus revealed a second NPT deficiency: once the world knows something fishy is going on, there are no provisions for assured and effective punishment. In theory the IAEA could appeal to the U.N. Security Council for economic sanctions—or, indeed, for the authorization of air strikes against the suspect facility. But often this channel will be blocked by a Big Five veto—possibly China's in the case of North Korea, perhaps Russia's in some future case involving Iran. Of course, the IAEA can stop all further shipment of nuclear materials to outlaw nations. But it may be too late for that tack to keep the bomb out of their hands, and any adverse effect on their energy supply wouldn't be felt for a while.

Notwithstanding these flaws, the NPT has been pretty effective. Nobody called John Kennedy an hysteric when in 1963 he predicted that within a dozen years fifteen to twenty nations would have the bomb. Yet now, thirty-two years later, the best guess is that eight nations have a functioning bomb—the Big Five within the NPT and, outside of it, Israel, Pakistan and India. (In

addition, Ukraine, Belarus and Kazakhstan were born with the bomb, and say they'll give it up.) A primary reason for this glacial pace is that the NPT eased fears, in large chunks of the world, about the imminent nuclearization of neighbors.

Still, the Middle East and south Asia have gotten arms-race fever since 1963, and North Korea may yet start a race in the Pacific. So it would be nice to make the NPT more seductive and effective: to raise both the benefits of signing and the costs of reneging. And, though no one is talking about using the present conference to amend the NPT (this would supposedly open up various cans of worms) there is talk of reaching that goal in other ways. For example, the IAEA can interpret its sometimes-ambiguous mandate broadly—as it did in claiming the right to inspect undeclared sites in North Korea—and hope everyone goes along, thus setting a precedent. Or the agency can approach member nations collectively about a generic rewrite of their individual ''safeguard agreements,'' the documents, technically separate from the NPT, which grant the IAEA's power to inspect. In any event, if NPT extension happens early enough in New York, there will be time for the conference at least to open a dialogue about the grave flaws of the current regime.

II

A good rough model for reform exists in the Chemical Weapons Convention, which now awaits Senate ratification after more than a decade of negotiation involving three administrations. The CWC has both kinds of teeth that the NPT lacks: a tough inspection regime and real punishment for violation. In the arms-control field, says Berry Kellman, a law professor at DePaul University, it is a ''wholly unprecedented document of international law.'' Were it already in effect, Aum Supreme Truth's attempt to make chemical weapons would have been a lot harder.

Under the chemical convention, the Organization for the Prohibition of Chemical Weapons (or OPCW, the CWC's version of the IAEA), would be routinely informed about the commercial transfer of substances used to make chemical weapons—and substances used to make substances that are in turn used to make chemical weapons. That covers dozens and dozens of substances. It also covers a lot of sellers and buyers, because those substances tend to have legitimate uses as well. Thiodiglycol is used to make both mustard gas and ballpointpen ink. Dimethylamine makes for good nerve gas and detergent. In an impressive balancing act, CWC negotiators managed to craft a system that (*a*) monitors the sale and transport of these chemicals and entails periodic inspections; and (*b*) has the unambiguous support of the Chemical Manufacturers Association.

Unlike the NPT, the CWC goes well beyond this inspection of ''declared'' sites—factories that avowedly employ the suspect chemicals—and provides explicitly for the inspection of undeclared sites. And here things can happen pretty fast. If the United States request a ''challenge inspection'' of, say, a suspicious-looking warehouse in Iran (a signatory), Iran must let inspectors into its country within twelve hours of being notified. After another twelve hours, it must have escorted the inspectors to the perimeter of the warehouse. (eliminating every trace of chemical weapons manufacture within twenty-four hours is considered quite unlikely.) At this point there can be up to ninety-six hours of negotiations about which parts of the warehouse are subject to inspection. But any vehicles leaving the area in the meanwhile can be searched.

A country could conceivably keep this standoff going longer by arguing that a search warrant at the national level is required. Indeed, it might even be telling the truth (though for chemical factories, already subject to government regulation, this excuse wouldn't wash). And, what's more, such a warrant might wind up being truly unobtainable—if, for example, the requested search were of your indoor tennis court and the OPCW could provide no evidence of illegal activity there. Still, if such appeals to national sovereignty had an overpoweringly phone air, the country could be deemed in noncompliance with the treaty by a vote of OPCW member-states.

Nations so deemed would truly be put in the dog-house. There is a whole slew of substances relevant to chemical warfare that treaty violators could no longer buy from OPCW members, a group that would include roughly the whole industrialized world. And the cutoff of these substances could harm factories that make things ranging from pesticides to plastics to ceramics to pharmaceuticals.

Here the CWC breaks momentously new ground, though less by design than by technological happenstance. Because of the flexibility of chemical technology, the treaty's punishment by denial of ''military'' chemicals amounts to broad and immediately painful sanctions against the civilian economy. And these sanctions are a good reason not just to stay in compliance, but to sign the treaty in the first place. If you don't join the OPCW, its members—just about everybody—won't sell you these chemicals in the first place. *That's* a carrot; and *that's* a stick.

Obviously, no weapons control regime can be foolproof. (That's why, notwithstanding the NPT's high-minded call for the eventual elimination of all the Earth's nuclear weapons, this won't happen anytime soon. A few powerful but reasonably responsible nations must preserve a nuclear arsenal, lest the next, slightly wilier version of Saddam Hussein be empowered to hold the world hostage with half a dozen warheads, or other weapons of mass destruction.) Still, the CWC, given the complexity it confronts, would have a good chance of success. It would make the manufacture of chemical weapons an endeavor with a significant risk of unmasking, and unmasking would bring painful penalties—penalties that no Security Council member would have the chance to veto. If the NPT had the CWC's built-in vigilance, Hussein would have found it much harder to reach the point he reached and still retain NPT membership. And if the NPT had the CWC's membership benefits, it would be much harder for any nation—Iraq, Israel, India, Pakistan—to bear the prospect of nonmembership.

The irony in this disparity between the NPT and the CWC is that nuclear weapons are much more devastating than chemical weapons. Japanese newspapers estimated that Aum Supreme Truth's many tons of chemicals could theoretically cause 4 million deaths, but the key word here is ''theoretically.'' This calculation assumes that the poison gas is spread with perfect efficiency, so that every bit gets breathed by someone and no one breathes more than his or her share (a lot to ask of a dying subway rider). More reasonable figures would be in the hundreds of thousands.

And even those numbers are inflated. If you discovered a cache of 800,000 bullets, you might say this was enough to kill 500,000 people, even allowing for inefficient application. But inefficiency is only half the problem; fairly early in the application process you'd attract official resistance. So, too, with chemical weapons. Whereas converting a single nuclear bomb into 500,000 deaths is a simple matter of parking a van and setting a timer, converting a single chemical weapon into 500,000 deaths isn't even remotely possible. A thousand deaths is more like it. Racking up large numbers means mounting a well-orchestrated campaign.

This doesn't mean chemical weapons don't warrant the tight treatment they get in the CWC. For one thing, some of them, such as skin-melting and often nonlethal mustard gas, have uniquely horrifying effects. Second, although a single chemical weapons possesses a tiny fraction of a nuclear bomb's lethality, chemical weapons are much easier to get. The recipe for making them is public, a first-rate chemistry major can follow it (if at some health risk), and the ingredients grow more widely available each decade.

Besides, chemical weapons, though the least massively destructive weapon of mass destruction, are much more potent than conventional explosives. A conventional warhead might kill ten people in a suburban neighborhood where a chemical warhead could kill 100. The Iraqi chemical arsenal discovered after the Persian Gulf war—100,000 artillery shells, warheads and bombs—was theoretically enough to wipe out the entire Israeli population many, many times over. It is with good reason that chemical weapons are put in a special class of global abhorrence and regulation, along with nuclear and biological weapons.

Still, chemical weapons aren't nearly as pernicious as nuclear weapons. And what most people still don't understand is that in important respects nuclear weapons aren't as pernicious as biological weapons.

III

In one sense, biological weapons are commonly overestimated. People tend to assume they work by starting epidemics, when in fact most biological weapons kill by direct exposure, just like chemical weapons. To be sure, contagious weapons exist. American settlers purposefully gave Native Americans blankets infested with smallpox; more recently, both American and Soviet military researchers have experimented with some readily transmittable viruses. Still, in general, contagious weapons have a way of coming back to haunt the aggressor. So biological weaponry this century has involved mainly things like anthrax spores, which enter your lungs and hatch bacteria that multiply within your body and finally kill you, but don't infest anyone else in the meanwhile.

Genetic engineering may eventually make contagious weapons more likely. In principle, for example, one could design a virus that would disproportionately afflict members of a particular ethnic group, thus giving some measure of safety to attackers of other ethnic persuasions. And—more realistically in the near term—genetic engineering makes it easier to match a killer virus with an effective vaccine, so that the aggressor could be immunized. Still, the main effect of modern biotechnology to date—and it has been dramatic—is to make traditional weapons, such as anthrax, much cheaper and easier to produce. A basement-sized facility, filled with the sort of equipment found at garden-variety medical labs and biotechnology companies, will do the job; the recipes are available at college libraries; and the ingredients—small cultures of pathogens that can be rapidly multiplied in fermenting tanks—are routinely bought from commercial vendors or passed from professor to graduate students.

The weapons that can result are phenomenally destructive. An (excellent) Office of Technology Assessment (OTA) report on weapons of mass destruction estimates that a single warhead of anthrax spores landing in Washington, D.C., on a day of moderate wind could kill 30,000 to 100,000 people—a bit more

damage than a Hiroshima-sized atomic bomb would do, though nothing like the devastation from a modern nuclear warhead. (And a day of fever, coughing, vomiting and internal bleeding is an appreciably less desirable way to die than incineration.) In addition, anthrax spores buried in the soil, beyond the reach of sunlight, live on. Gruinard Island, where Britain detonated an experimental anthrax bomb during World War II, is still uninhabitable.

But a warhead is not the most likely form in which biological weapons will first reach an American city. A ballistic missile, after all, has a return address: so long as the United States has a nuclear deterrent, Americans can feel pretty secure against missile attacks in general. And there's another problem with missile-delivered biological weapons. The technological challenge of making an explosive device yield a widespread mist is considerable. Iraq, we've learned since the war, has done research on anthrax and botulin weapons, but not with evident success. Still, if you're not attacking from a distance and can deliver the spores in person, the obstacles to biological attack diminish. ''Figuring out how to do it in a terrorist kind of way is trivial,'' says one analyst in the defense establishment. Thus the fact that no nation has used biological weapons since World War II is no reflection of the likelihood of their future use. Only recently has the technology become so widely available that a well-organized terrorist group can harness it.

Of all the things that might attract terrorists to biological warfare—the relative cheapness, the inconspicuous production—perhaps the most important is the anonymity. A small, private airplane with 220 pounds of anthrax spores could fly over Washington on a north-south route, engage in no notably odd behavior and—by OTA reckoning—trail an invisible mist that would kill a million people on a day with moderate wind. A plane spewing ten times that much sarin would kill only around 600 people—or, on a windier day, 6,000. More to the point: the sarin attack, with its immediate effects, would have authorities hunting for a culprit before the plane landed. Anthrax, in contrast, takes days to kick in; the pilot could be vacationing in the Caribbean before anyone noticed that something was amiss.

Or consider this charming scenario, courtesy of Kyle Olson of the Chemical and Biological Arms Control Institute. Get a New York taxicab, put a tank of anthrax in the trunk and, by slightly adapting commercially available equipment, arrange for it to release an imperceptible stream of aerosol. (You would be wise to build a special filter for the air entering the cab, though getting an anthrax vaccination might be enough protection.) Then drive around Manhattan for a day or two. You'll kill tens of thousands, maybe hundreds of thousands, of people. And, again, nobody will know. With nerve gas, in contrast, the long line of gagging, writhing people leading to your taxicab would arouse the suspicion of local authorities—even if your gas mask had somehow escaped their attention.

Note that these scenarios make biological weapons potentially genocidal even in an ethnically heterogeneous city. A taxi-cab can be driven all over Harlem, block by block—or, instead, through Chinatown or through the Upper East Side. Terrorists, who have been known to harbor ethnic prejudice, needn't wait for an ethnically biased designer virus.

Though biological weapons are the most horrifying terrorist tool today, they are also the furthest from being on the radar screen of any politician who matters. The Biological Weapons Convention of 1975, which commits the United States, Russia and other signatories to forgo any biological weapons program, is so toothless as to make the NPT seem like a steel trap. (When in 1979 the Soviet Union suffered a mysterious outbreak of anthrax in the vicinity of a military research facility, Pentagon officials weren't stunned; but the United States was powerless to pursue its suspicions.) And no remedial proposal from the Clinton administration is imminent. Meanwhile, the most visible result of a series of meetings among BWC signatories about revising the BWC is a series of agreements to keep meeting. There is very little talk anywhere about giving the Biological Weapons Convention a rigor reminiscent of the chemical convention.

When you ask people to explain this anomaly, they cite the practical problems that make detecting biological weapons harder than detecting chemical weapons. There are so many small, theoretically suspect rooms, at so many medical and biotech facilities. And upon inspection it's so hard to say for sure whether anything illicit is going on. The perfectly legitimate endeavor of making anthrax vaccine, for example, is an excuse for having anthrax around—one of several potential ''masks'' for weapons production. What's more, a small, inconspicuous supply to pathogens can, via fermentation, be turned into a weapon-scale supply a mere two weeks after a satisfied international inspector cheerfully waves goodbye.

It's true that these things dramatically complicate enforcement of the treaty. It's also true that they dramatically underscore the need for enforcement. Knowing that in thousands and thousands of buildings on this planet some graduate student or midlevel manager could be breeding enough anthrax spores to decimate the city where I live—well, somehow I don't find that conducive to a laissez-faire attitude. Using the plausibility of biological warfare as reason not to reduce that plausibility is a bit too rich in irony.

A few wild-eyed radicals have gone so far as to suggest new approaches to the problem. One idea is to ''internationalize'' the production of vaccines; or, at least, to compress each country's vaccine production into fewer facilities, for easier (and assiduous) international monitoring. That would strip all other facilities of one of the masks for weapons production—so that, say, anthrax spores found during a challenge inspection would be hard to explain away.

This reform, of course, assumes that there is such a thing as a challenge inspection for biological weapons, which there isn't. Adding such inspections to the BWC is about the most ambitious idea now floating around in the Clinton administration (and it's not floating at the highest levels). The idea hear wouldn't be to make the BWC as comprehensive as the CWC. The degree of routinized inspections envisioned in the CWC is probably impractical for biological weapons, given the sheer number of places that would be candidates for inspection. Rather, a revised BWC might simply have signatories provide data about all such sites and be subjected to an occasional challenge inspection—at these sites, or at undeclared sites. This would make the production of biological weapons an endeavor of at least incrementally increased risk. And with weapons of mass destruction, every increment counts.

To that end, various other measures—for ''transparency,'' international intelligence pooling and so on—are also bandied about. The collective result of such measures is called a ''web of deterrence'' by Graham Pearson of Britain's Ministry of Defense. Pearson reflects the view of the British government that the BWC is in principle ''verifiable.'' The Clinton administration, in contrast, has yet to amend the official U.S. verdict to the contrary, which it inherited from the Reagan-Bush era of cold-war-think, with its inordinate fear of intrusive inspections by communist masterminds. (The Reagan administration more or less stumbled into a highly intrusive CWC; Assistant Secretary of Defense Richard Perle raised the issue of ''challenge inspections,'' confident that the Soviets would say no, as a means of embarrassment. Then Mikhail Gorbachev assumed power and called his bluff. The rest is history.)

One idea that has surfaced at the BWC's periodic meetings on self-improvement is to piggyback a new, tougher BWC onto the CWC. The CWC's governing body at the Hague could expand to encompass both chemical and biological weapons, metamorphosing from OPCW to OPCBW. Assuming that a new biological convention emulated the chemical convention in providing penalties for noncompliance, the two sets of penalties could be fused. If a country not complying with either treaty were cut off from some trade in both chemicals and biotechnology equipment, noncompliance would be extremely unattractive.

For that matter, in theory—and in the long run—the NPT could be thrown in with this mix, so that the illegal development of any weapon of mass destruction complicated one's access to state-of-the-art chemical, biological and nuclear technology. This would give the NPT much of the force it now lacks, and would create a world in which the responsible use of technology is a prerequisite for untrammeled access to it. Needles to say, anyone who suggested such a thing in Washington policy-making circles would be expelled on grounds of hopeless romanticism.

IV

There are political reasons why biological weapons have been given little of the attention they deserve. For one thing, ratification of the Chemical Weapons Convention is seen as a prerequisite for a new biological weapons initiative. The CWC took more than a decade of arduous negotiating. If it flops, no one is going to volunteer to lead the world on another visionary arms-control campaign.

Unfortunately, the CWC has been languishing in the Senate for nine months. It has the nominal support of some important people, such as President Clinton and Senator Richard Lugar of the Foreign Relations Committee. (Fortunately, Committee Chairman Jesse Helms—who at last check was getting India mixed up with Pakistan—is said to have ceded control of the CWC issue to Lugar.) But neither Clinton, Lugar nor anyone else of stature has chosen to adopt the CWC as his mission in life. Eleven deaths on a Japanese subway didn't push the issue across the cause-du-jour threshold.

Just as progress on chemical arms would pave the way for progress on biological arms, extension of the NPT by an overwhelming majority is considered a prerequisite for discussing major reforms in the NPT verification regime. Indeed, NPT extension would provide a quite bright spotlight in which President Clinton could inaugurate this very discussion—or for the matter a broader discussion on weapons of mass destruction. This spotlight would also provide a domestic political opportunity for a president often dismissed as insufficiently presidential.

Of course, this is boilerplate thinkpiece-ending advice for presidents: give a speech; have a vision. It's easy to say if you don't have to spell out your fuzzy idealism in detail, much less reconcile it with gritty reality. But Brad Roberts of the Center for Strategic and International Studies—not exactly a hotbed of woolly-minded oneworldism—laid out a pretty concrete version

of a lofty Clintonesque vision in a recent issue of The Washington Quarterly. Roberts extensively invoked internationalist acronyms—not just CWC, BWC and NPT, but GATT and NAFTA. Making some nonobvious connections between trade regimes and nonproliferation regimes, he argued that both must be carefully crafted to attract and enmesh a ''new tier'' of states recently endowed by technological evolution with the capacity to manufacture potent weapons. With all these acronyms now in a critical phase in one sense or another, 1995 could ''prove a genuine turning point''; ''basic international institutions will end the year either much strengthened or much weakened''—and if the latter, the prospects for a stable post-cold-war world will sharply diminish.

If President Clinton ever did decide to exert leadership on the issue of weapons of mass destruction, there is little chance that posterity would deem him alarmist. Not only are the threats he'd be addressing growing; their growth has deep and enduring roots: increasing ingenuity in the manufacture of destructive force; increasing access, via information technology, to the data required for this manufacture; wider availability, in an ever-more industrialized world, of the requisite materials; and the increasing ease of their shipment. The underlying force is truly inexorable; the accumulation of scientific knowledge and its application, via technology, to human affairs.

Every once in a while the inevitable results of these trends become apparent—in the discovery that Iraq had an extensive nuclear bomb project and enough chemical weapons to murder a small nation; in the fact that the World Trade Center bombers succeeded in a mission that, given slightly more deft personnel and better financing, could well have involved biological weapons rather than explosives; in the news that a nutty Japanese cult with an international presence was busily amassing a chemical and biological arsenal. So far none of these object lessons has been driven home at the cost of tens of thousands, or hundreds of thousands, of lives. But as time goes by, the cost of lessons will assuredly rise.●

ORDERS FOR MONDAY, DECEMBER 11, 1995

Mr. HATCH. Mr. President, I ask unanimous consent that when the Senate completes its business today, it stand in adjournment until the hour of 12 noon on Monday, December 11; that following the prayer, the Journal of proceedings be deemed approved to date, no resolutions come over under the rule, the call of the calendar be dispensed with, the morning hour be deemed to have expired, the time for the two leaders be reserved for their use later in the day and there then be a period for the transaction of morning business until 1 p.m., with Senators permitted to speak for up to 10 minutes each, and that at 1 p.m., the Senate resume consideration of Senate Joint Resolution 31.

The PRESIDING OFFICER (Mr. COATS). Without objection, it is so ordered.

PROGRAM

Mr. HATCH. Mr. President, for the information of all Senators, by a previous consent agreement, at 1 p.m., amendments will be in order to the constitutional amendment regarding flag desecration. However, no votes will occur and all votes ordered with respect to amendments and the final vote will occur at 2:17 p.m. on Tuesday, December 12, 1995.

Also, Senators should be aware that it will be the majority leader's intention, following the flag amendment vote, to begin the debate on Bosnia, hopefully, under a time agreement.

ORDER FOR ADJOURNMENT

Mr. HATCH. Mr. President, if there is no further business to come before the Senate, I now ask unanimous consent that the Senate stand in adjournment under the previous order, following the remarks of Senators DORGAN and DODD.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HATCH. I yield the floor.

Mr. DODD. I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. DODD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

TRIP TO IRELAND

Mr. DODD. Mr. President, a week or so ago, I had the distinct pleasure of traveling with our colleague from the State of Florida, CONNIE MACK, along with a bipartisan delegation of 16 Members of the House of Representatives, to Northern Ireland and the Republic of Ireland on the occasion of President Clinton's visit there. It was a historic visit, the first time that a sitting American President visited Northern Ireland.

Allow me to say, first of all, that regardless of one's party, ideology or political persuasion, I think every American, those who were there, those who witnessed on CNN the President's historic visit to Ireland, were moved by the reception that our President received.

On three different occasions, at speeches in Derry, in Belfast, and in Dublin, the estimates of the crowds greeting the President were approximately 250,000 people. That does not include the thousands of people who lined the various roadways to welcome the President to the North of Ireland and to the Republic.

His reception was directly related to his efforts over the past 23 months to try and bring an end to the generational conflict in Northern Ireland. The last 15 of those months have been the first time in more than 25 years that there has been the absence of violence and the threat of violence that has stemmed from what the people in Ireland refer to as the Troubles.

The President deserves enormous credit for setting the stage for that cessation of hostilities. His decision to extend a visa to Gerry Adams, the president of the Sinn Fein Party, early in 1994 was the bold move that ultimately resulted in the decision by the IRA to announce a unilateral cease-fire in the fall of 1994.

For more than 15 months, the peoples of Northern Ireland and Ireland, as well as people in Great Britain, have enjoyed the first period of unprecedented peace in more than a generation.

Still, the issues which are at the root cause of that violence remain to be addressed and resolved, Mr. President. Our former colleague, Senator George Mitchell of Maine, has been asked by the Governments of Great Britain and Ireland and the political parties in Northern Ireland to chair a commission, an international commission, to try and see if the issue of decommissioning of arms and related matters can be resolved as we proceed on a twin track, of commencing all-party talks by the end of February. It is through these twin tracks that the people of Northern Ireland can live in permanent peace, free from violence and discrimination.

The remarkable change in the North is very apparent to all who go there. President Clinton's efforts have made that possible. I would say to my colleagues that there is a deep appreciation on the island of Ireland for that effort. There was a risk involved in it. As my colleague, the Presiding Officer, will recall or remember, that the President received a lot of advice and counsel about the wisdom of extending that first visa to Mr. Adams, given the history of Sinn Fein and the IRA. Some questioned whether or not there was a sincere commitment to seek a peaceful resolution of this conflict. Even after the IRA announced its cease-fire last year some continued to question whether it would hold. I know the President heard a lot of advice, the bulk of it, in fact, recommended against extending that visa.

Our colleagues, Senator MOYNIHAN of New York, Senator KENNEDY, and others, urged the President to take the chance, to extend that visa and to test whether there was a true commitment to adopting the political track to resolve differences and whether a cease-fire might work. As a result of that, we have seen, as I described briefly, the events that unfolded over the past year or so.

Again, Mr. President, Ambassador Jean Kennedy Smith and her staff, the Government of Prime Minister Bruton, Deputy Prime Minister Dick Spring, and other Irish officials, did a remarkable job, along with Sir Patrick Mayhew and the people of Northern Ireland.

I mentioned earlier Gerry Adams. This is a man who has played a very courageous part in the quest for peace for his country men and women.

There was a tremendous effort over many months that went into making this trip the tremendous success that it turned out to be.