I've been asked to speak briefly about why the U.S. Senate failed to ratify the Comprehensive Test Ban Treaty. I believe the answer to this question can be sought at three levels. First, there's the level of raw partisan politics, the existence of an almost visceral dislike of President Clinton by the Republican majority. Second is the level of what I will call "technical readiness," the readiness of various institutions and agencies of the United States government to maintain the nuclear weapon stockpile without reliance on nuclear explosive testing and their readiness to detect possible non-compliance with the terms of the treaty and positively identify it as such. The third level concerns the broader and oddly static U.S. strategic policy context that surrounded the treaty's negotiation and the tardy, almost perfunctory, way the Clinton Administration submitted the treaty to the Senate for ratification. I'll call this category, for lack of a better term, "ideological" or "paradigm readiness." Given the partisan power balance on the hill, any one of these negative factors would have posed serious, but not necessarily insurmountable, difficulties for the treaty. But the combination of all three factors was fatal.

Certainly, highly polarized partisan politics on the eve of an election year played a role, perhaps not so much in the Senate's failure to ratify the CTBT as in its insistence on explicitly voting it down. This was done despite the willingness of a majority of Senators from both parties to see the treaty simply withdrawn from consideration. But raw partisanship alone cannot be the full explanation. Certainly, the U.S. Senate was highly polarized, for example in 1972, when then-republican President Richard Nixon signed the ABM treaty on May 26. A democratic majority controlled the Senate, a majority that by and large detested President Nixon personally and politically. They nonetheless consented to the ABM treaty's ratification on September 30, four months later. Bitter fights, encompassing more inter and intra party splits over arms control policy, likewise characterized the Senate's consideration of the SALT II treaty. But when the Soviet Union invaded Afghanistan, dooming prospects for an affirmative ratification vote, the Senate leadership then did not respond by forcing the treaty to a vote; rather, they complied with President Carter's request to delay consideration of the treaty. So I would have to say that, if
history is any guide, the partisanship factor, while important, cannot be considered determinative in the failure of the CTBT.

So let me move to the next level of analysis: the technical readiness of the executive branch to maintain confidence in the safety and nuclear explosive performance of the stockpile and its technical readiness to verify the terms of the treaty. There are in fact three aspects to this problem that must be carefully delineated because they are not the same. The first is the actual objective state of our capabilities for weapons maintenance and verification. The second is the Administration's preferred strategy for employing those capabilities. And the third is the subjective presentation of those capabilities to an already skeptical Senate majority.

Concerning the first aspect, as you can well imagine, the objective technical readiness of the U.S. security establishment to maintain its stockpile and monitor the treaty is quite high, especially in comparison with other States Parties. But there were, and still are, some gaps in facilities and capabilities stemming from the egregious misallocation of defense resources during the Reagan, Bush and Clinton Administrations, which have left certain parts of the nuclear weapons complex in a barely functional state. But remedying those kind of gaps, real or imagined, is straightforward and solemn pledges to do so in the form of domestic treaty safeguards appended to the Resolution of Ratification are now a routine part of their arms treaty ratification ritual. So we can draw the conclusion that objective technical deficiencies do not lie at the root of the Senate's refusal. The Clinton Administration's slowness in rectifying these gaps only reinforced other more dominant concerns.

That brings us to the choice of technical strategies for both stockpile maintenance and verification. Did the Clinton team choose the appropriate strategies that were persuasive to the Senate? Here the evidence is quite strong that the Clinton Administration test ban policy was driven first and foremost by a desire to placate and coddle key constituencies ranging from the diplomats attending this NPT conference to the nuclear design laboratories, across the full spectrum, rather than by any coherent plan for building a persuasive case for the CTBT. In fact, numerous senior defense and security officials in the Clinton Administration were, and remain, indifferent or even hostile to the CTBT. One can thank the political dynamics generated by the NTP extension process in 1995 for the fact that the treaty was concluded at all. So the strategies that have evolved for both stockpile maintenance and verification reflected not a coherent integrated plan for achieving ratification, but rather they reflected various parochial, even hostile interests of the self-serving and, in some cases, dysfunctional national security agencies involved in the process. It's no exaggeration to say that the ship of ratification had no captain, no helmsman and no navigator, but it was burdened with some very obnoxious entitled passengers bent on obtaining first class service, while down in the bowels of the ship mutineers quietly prepared to scuttle it.

There is a huge disconnect between, on the one hand, the so-called zero-yield threshold and indefinite duration of the treaty and, on the other hand, the highly qualified and tentative case for computer simulation-based capability that might mature, as the laboratory directors testified, to a full suite of capabilities sometime between 2005 and 2015. Rather than building a rock-solid case for its ability to maintain the stockpile, the Clinton Administration Department of Energy spent the five years preceding ratification arguing that successful development of a hugely
ambitious and complex nuclear explosion simulation capability was absolutely essential to "replace underground testing," and that this capability was essential for maintaining the safety and the reliability and the performance of the nuclear stockpile. The Clinton Team invited equivocation and delay by arguing that this capability could not be fully demonstrated for a decade or more, but was "working now" because the weapons were still young and a sufficient number of test-experienced designers were around to work on them. Of course, this only begged the question of what would happen to the stockpile in 10 or 15 years when most of the test-experienced people had retired, the weapons were no longer young, and the stewardship program had imploded from the stress of its own needlessly baroque complexity.

What Senators most wanted and needed to hear, and were never told, was that the U.S. Department of Energy already had or could soon put in place procedures and capabilities for maintaining the nuclear weapons stockpile in a safe and reliable condition indefinitely as long as the national security strategy of the country required it - with no "ands," "ifs," or "buts." The glaring contradictions in the stockpile stewardship case that the Clinton team presented to the Congress for the CTB were evident from the very beginning, as early as 1994, but as many in the room have painfully learned over the years, the Clinton national security team proved remarkably impervious to education on substantive technical issues. They saw only the political value of the stockpile stewardship program as a big buy-out of the weapons community that would neutralize its opposition to the CTBT. This was and remains a sadly ineffective strategy as evidenced by the Senate testimony ultimately delivered by the laboratory directors, which clearly sandbagged and undermined the Administration's case for the CTBT.

The Clinton team tried to bridge the contradictions in its brief for the test ban by arguing that, if the planned science-based stockpile stewardship program failed to solve a critical stockpile problem, the United States could simply withdraw from the treaty and resume testing to resolve the problem. The Clinton team even went so far as to enshrine this pledge in safeguard "F" that was submitted along with the treaty. Safeguard F simply says that the U.S. government would regard a nuclear stockpile problem as a threat to its supreme national interest, thereby triggering the U.S. right to withdraw under the Treaty's withdrawal clause. This is an obvious perversion of the intent of a withdrawal clause in the Treaty. I don't believe self-generated technical problems can legitimately be construed as extraordinary events that jeopardize the supreme interests of any State Party. Moreover, the Republicans correctly noted in debate that this remedy for the potential effectiveness of the stockpile stewardship program was unlikely ever to be invoked precisely because the political penalties for doing so would be so high. To make its point, the Administration was essentially reduced to arguing that it would be easy to get out of a very solemn international obligation, the very obligation that it was pressing the U.S. Senate and other nations to ratify.

To make matters worse, a month before the vote, the flagship of the science-based stockpile stewardship, the National Ignition Facility, was revealed to be in deep trouble, adding to the Congressional perception that the stewardship program was a kind of Rube Goldberg playground for under-employed weapons scientists. Of course, we already know what the proposed remedy for this, and any other deficiency, will be. We heard it from Senator Domenici in the debate and we are hearing it now: spend more money on the U.S. nuclear weapons complex. In fact, all the years preceding ratification, all the years of self-interested blather and promotion about the
absolutely critical need for three dimensional simulations, validated by NIF experiments, made the case for ratification more, not less, difficult.

Assuming that nuclear deterrence will continue to play an important role in U.S. defense doctrine and capabilities, the technically achievable case for continuing stockpile confidence and safety will have to be rebuilt, properly this time, from the ground up. This has to be based on a confidently achievable engineering and re-manufacturing paradigm long advanced by Dick Garland, Ray Kidder, Arjun Makhijani, myself, and a few other people. Of course, if nuclear deterrence is assessed as no longer playing a significant role in U.S. policy, that opens up other possibilities for structuring the stewardship program. I sincerely doubt that a significant re-orientation of the stewardship program will be done by this current leadership and by the weapons laboratories, which are very wedded to the virtual testing paradigm. If that remains the case, it will be difficult to persuade the Congress that the United States has the confident capabilities to maintain a stockpile under the CTBT.

Similar problems plagued the Administration when it came to verification. As with stewardship, the difficulties were long evident before the Treaty was signed and they could have been dealt with differently. The Administration took what should have been a manageable problem and turned it into a glaring weakness that was exploited to the fullest by the Republican opponents. I'm referring to the U.S. decision, supported at the time by the other nuclear weapons states, to insist in the negotiations on continuing use of the underground environment for stockpile stewardship experiments, thus opening the door to continued use by other nuclear weapons powers. The difficulty, of course, is the draft Treaty did not, and still does not, contain verification protocols that permit routine discrimination of underground explosions having a nuclear yield from those that do not. This problem is compounded by a lack of agreed technical definition in the Treaty of a banned nuclear explosion, leaving the right wing conservative opponents of the Treaty, in the relatively strong position of being able to argue that not all parties may agree with the U.S. "unilateral" definition of zero-yield. And therefore, other parties may feel no compunction about conducting nuclear yield tests that the U.S. could not reliably detect and positively identify as Treaty violations.

This problem could have been rectified in one of two ways: the most obvious is more extensive and intrusive verification of ongoing experimental activities at the nuclear test sites. The Administration made a modest effort to achieve this in parallel talks with the Russians outside the main track of the negotiations. Similar proposals for such cooperative transparency were also made to the Chinese, who rejected them. In reality, however, these transparency measures did not amount to high confidence monitoring of each side's subcritical experiments. Such monitoring would require data on gamma and neutron output and mutual inspection of the test geometry to verify that these detectors are placed properly to gauge the experiment. So given its lack of success in persuading China and Russia to accept more intrusive verification, the Clinton Administration should have revisited the decision to permit continued experiments in the underground environment, and advanced a protocol forcing all such experiments above ground and into steel containments of a given thickness and given tensile strength, thereby limiting the upper bound of ambiguity involved in those experiments. So unlike today, where there is the possibility of successfully containing significant yield in a deep underground experiment, the so-called evasion space in an above-ground sphere where you know the thickness is perhaps a few
tens of kilograms. Had we done this, the Administration would have had a much simpler verification case to make.

Today, unfortunately, we are in a position where, if Russia re-nuclearizes its combat forces with low-yield nuclear weapons, the nuclear aparatchiks in America will fairly leap to assert the significance of any such underground low-yield tests on the theory that any nuclear weapons state that gains an edge in controlling collateral damage from nuclear weapons by developing new low-yield devices will feel less deterred about threatening to use them in a crisis and, therefore, more likely to coerce its adversaries.

Needless to say, with such flawed strategic approaches to both stockpile maintenance and verification, the Clinton Administration completely flubbed its presentation of these issues to Congress. The content was bad, the presentation was awful. In fact, it was almost non-existent. In the four years that elapsed between Clinton's signing of the CTBT and the abortive attempt at ratification, there were virtually no such presentations. The hard job of educating members of the Senate and ascertaining their concerns in advance, in order to better accommodate or counter them during the ratification process, was simply never conducted.

When such briefings finally began in the ten days prior to the scheduled vote, there were few takers from the Republican side. They didn't even want to hear what the Administration had to say. The presentations that were made during this radically condensed consideration process were riddled with inaccuracies. Incompetent, tendentious presentations by "the intelligence community" were given without adequate technical peer review in closed sessions to conservative, ideologically driven politicians with little or no technical background. That is a formula bound to generate misinformation and confusion. For example, the intelligence community presented its verification capability assessments based on the data set collected or collectable by U.S. national technical means, not on the total universe of data potentially available. The intelligence community simply omitted the very valuable data set from hundreds of open seismic stations and arrays deployed in digital seismic networks all over the globe for scientific purposes. That data set is available for verification, but apparently not to our intelligence community. And it presented spurious conclusions, far outside its capacity for technical competence, regarding the technical utility of extremely low-yield hydro-nuclear tests for nuclear weapon design. These were the very conclusions that a classified conference of senior nuclear weapons designers had expressly rejected in the summer of 1995, and which in turn had led directly to President Clinton's very sound decision to seek a zero-yield treaty.

It's quite clear when the ideological predispositions of the opposition are further inflamed by misinformation and ignorance from within your own ranks, any president, much less one with all of President Clinton's baggage, would have faced a very difficult task in ratifying this treaty. In other words, when the CTBT finally arrived on the floor of the Senate last fall, it was already a very sick patient on life support, severely weakened by the malpractice of the national security apparatus ostensibly entrusted with its care. All that remained for Republicans was to pull the plug, which they did.

That grim assessment leads rather quickly to the consideration of the third level of analysis that I spoke about - the overall nuclear policy context, the ideological paradigm within which the
CTBT ratification occurred. Here we encounter the Clinton Administration's third big, and possibly greatest error: the failure to change the overall nuclear policy context in which the testing of nuclear weapons is but one component. The Clinton Administration - and I have to say some within the international arms control community as well - sought to obtain a test ban, as it were, on the cheap, without engaging Congress and the American people in a larger debate about the future roles and missions of nuclear weapons in U.S. and international security strategy.

This early failure of the Clinton team to establish a nuclear strategy context more hospitable to the CTBT was evident in the do-nothing nuclear posture review of 1994 and in the wholesale capitulation to military counter-proliferation strategies, rather than diplomacy, as the primary vehicle for combating proliferation. Indeed, historians may later pinpoint 1994 as the essential failure that predetermined the outcome of this Treaty. Nuclear issues in general and the strategic rationale for the test ban went largely unattended by the White House and the Congress for six years and thus receded steadily into the deep background of public consciousness, where the White House and the Democrats were more than happy to let them lie, believing that a politically neutered me-too "we're all hawks now" defense policy was the most advantageous approach to winning elections. Of course, when the time suddenly arrived for the CTBT to be ratified, this approach failed to provide the conceptual launching pad needed for test ban ratification.

Thank you.