sible research, testing and development in terms which would have avoided a debate about the broad versus narrow interpretation of the treaty, but which would have allowed the SDI programme to continue as scheduled.

The Soviets were firmly opposed to language which shifted the emphasis from support of the ABM Treaty to the transition to missile defences. In the months following, the negotiators sought to develop a draft agreement based on the language of the Washington communiqué, but the differences remained. Although the Soviets still appeared willing to accept a more flexible interpretation of permitted research (emphasizing more the importance of adherence to the treaty than the SDI programme itself), at critical points Shevardnadze re-emphasized the link to the START treaty: there could be no deep reductions in START without adherence to the ABM Treaty. Consequently, the Moscow summit at the end of May did little more than encourage continued negotiation to develop a joint draft text.

Other developments, however, appeared to make the issue of SDI less critical. First, in May 1988 the Defense Science Board of the Pentagon recommended a radical restructuring of the SDI programme to begin with the deployment of a single ground-based system within the terms of the treaty, and clearly indicating that operational space-based systems were many years away. This report was apparently accepted by senior officials including Shultz and Carlucci, who recommended to the president that a system be built in the first instance to protect the national capital region. Second, funding cutbacks and restrictions made it apparent that early deployment was not practical, thus implying that there was little advantage in negotiating an end to the ABM Treaty when there was little prospect of an early transition to ballistic missile defences.

NUCLEAR TESTING

During 1986 the Soviet Union had pressed the United States to include a ban on nuclear tests as part of a total arms control summit package. Throughout 1987 and 1988 the United States repeated its position that nuclear testing was necessary for national security reasons, but repeated its suggestion that the two sides discuss means to improve the assessment of compliance with two existing treaties - the Threshold Test Ban and the Peaceful Nuclear Explosions treaties, both of which banned explosions above 150 kilotons. Talks on this issue began in November 1987 centring on the proposal for an exchange of nuclear tests. This would have permitted each side to calibrate its seismic equipment on the basis of a nuclear explosion of known magnitude. While this was not agreed, in the fall of 1988 scientific exchanges began to witness nuclear tests and take accurate seismic recordings. Known as the Joint Verification Experiment (JVE), the exchanges will provide greater certainty about the yield of the nuclear tests.

While the official negotiators sought to agree on the procedures for the verification of a 150-kiloton threshold, however, there appeared to be an increasing scientific consensus that a very low yield test ban was verifiable. In late May 1988 a blue-ribbon scientific panel in Washington produced a report which concluded that explosions over ten kilotons could be easily monitored by external seismic networks and national technical means. It identified the area of difficulty as being below two kilotons, at which level detailed verification agreements involving in-country seismic networks would be required to ensure compliance.

CONCLUSIONS

As the negotiations continue in Geneva in 1989, it seems evident that further arms control agreements are within reach. In particular, the new US Administration seems likely to accept the basis for agreement in strategic weapons, as described above. At the same time, the substance of the proposals suggests two contrary conclusions. The first is that superpower arms control negotiations provide a continuing forum for superpower diplomacy which is itself of great value. The agreements on a nuclear riskreduction centre and notice of ballistic missile test flights are illustrations of the stabilizing procedures that result from continuing negotiations.

On the other hand, insofar as the "deep reductions" will legitimize the continuation of massive superpower nuclear arsenals and largely unconstrained modernization, they may be seen as modest arms control measures at best, which may increase political and public confidence, but which will scarcely dent the massive superpower nuclear arsenals. Since START will require many years to implement, it seems likely that the next agreement will remain in place for a generation. In these circumstances the pause during the US presidential transition may provide an opportunity to ask whether this is the appropriate agreement on which to base nuclear stability in the 1990s and beyond.

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The views expressed in this paper are the sole responsibility of the author, and should not be taken to represent the views of the Institute and its Board.

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