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What Do We Do with Nuclear Weapons Now?

by

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His principal activities outside the laboratory have included representative on the Threshold Test Ban Treaty Negotiating Team in Moscow, 1974; member of the U.S. Delegation to SALT, 1974-76; member of the Defense Science Board; member of the General Advisory Committee of the AEC; trustee of the RAND Corporation; a member of the Committee on International Security and Arms Control of the National Academy of Sciences; and a member of the Secretary of Energy Advisory Board of the U.S. Department of Energy.

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Workshop for the Future of U.S. Nuclear Weapons Policy

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affect the European security situation, especially in its nuclear dimension.

A similar degree of cooperation in the Far East seems much further off. The U.S.-Japan security alliance is the most stabilizing force in that area, especially as regards nuclear security. Priority efforts in both countries must be devoted to maintaining this alliance regardless of economic competition and its attendant political fallout. This may entail closer U.S.-Japanese cooperation on matters such as maritime strategy.

Whether the present situation in China will evolve into disaster or some form of stable government cannot be foretold. It seems likely that China will continue to view its nuclear power status both as a form of insurance and as a political equalizer. To what extent it will cooperate in international nuclear (and other arms) security arrangements will depend on the overall political relations of China with the major nuclear powers.

The worldwide nuclear non-proliferation regime may become more difficult to maintain as security guarantees become more difficult to give. The danger of nuclear proliferation may be increased and complicated by the likely spread of advanced military and intelligence technologies.

In the end, conference agreed that, while the shape of a future nuclear weapons policy is not clear, it is necessary that we have such a policy and that be be in tune with the new needs for stability. Nuclear weapons are too destructive a potential force for their disposition to be left to the vagaries of international interactions.

Preface

On Feb. 22-25, 1990, the University of California Institute on Global Conflict and Cooperation held a workshop at UCSD regarding the Future of U.S. Nuclear Weapons Policy. Approximately thirty participants, many with extensive relevant government experience, came to the workshop from academia, the weapons laboratories and the defense industry. Our purpose was to identify questions and options rather than to recommend answers.

A report on the workshop is planned for publication later in the year. It will present the papers and as much of the discussion as feasible. The attached is a summary of the main ideas discussed, written for the early use of participants and others interested. The structure and emphasis inevitably reflect my own approach to the subject, and the order of this summary does not always follow the order in which subjects were discussed. What is substantive and informative should be credited to the participants, to whom John Ruggie, the director of IGCC and co-organizer of the workshop, and I are very grateful. Mistakes are my own.

Michael M. May
June, 1990
Conclusions
INSTABILITY QUESTIONS

(1) Associated with Present Deployments. To an undesirable degree, currently deployed and some prospective forces rely on rapid reaction to protect against vulnerabilities. Examples include strategic and tactical aircraft, some mobile missiles, and missiles in silos. The forces can be made less volatile without affecting their deterrent capability, although the Soviet Union may have a more significant problem than the U.S. in this regard. Deep cuts can provide an opportunity to decrease this potential for instabilities on a bilateral basis. However, clear national policy guidance to that effect is needed if U.S. arms control and deployment decisions are to alleviate the problem.

(2) Associated with Deep Reductions. Deep reductions will also make new instabilities possible: cheating, defenses, and the allegiance of third countries will all be more significant, and meaningful demobilization and rearmament will become possible. The thresholds at which these new instabilities are of concern have not been identified. Both technical and political factors enter into their determination.

(3) Associated with New Political Arrangements. If the present and major potential nuclear powers evolve towards cooperative security arrangements, presumably there will be fewer potential instabilities associated with changes in the balance of power. If they do not, however, the old balance of power instabilities may return. In theory, the spread of nuclear weapons could destabilize the situation. In practice the dangers associated with this spread and the accompanying competition could be considerable. It is possible that the U.S. and the Soviet Union, which may have similar interests in maintaining the status quo, will act in concert to limit conflict and crisis situations. There is some precedent for such U.S.-Soviet cooperation, but there are also enormous obstacles to it — some stemming from political instabilities in the Soviet Union, some from U.S. commitments to its allies, others from the differing nature of the two political systems, and still

WHAT DO WE DO WITH NUCLEAR WEAPONS NOW?

I. The Environment for Nuclear Policy

This is a time of fundamental change in much of the world, particularly those regions relevant to U.S. nuclear policy. In the Soviet Union, Central and Eastern Europe, China, and perhaps elsewhere, the range of potential political outcomes has broadened significantly during the past several months. We begin this summary with a brief overview of the areas that seem especially relevant to U.S. nuclear policy.

THE SOVIET UNION, over the long run, is likely to remain a large, militarily powerful state. The road to the long run, however, could include anything from peaceful modernization to civil war. Gorbachev has considerable support, including support from powerful pro-modernization groups in the military and the organs of state security, but he also faces widespread dissatisfaction and daunting problems. Apocalyptic views are not hard to find in the Soviet Union.

Regarding questions of security and defense, no single opinion prevails. Historically, support for military reforms has been cyclical, dependent on the leadership's need for military support in order to acquire and retain power. As of yet, there is no indication of structural change that would alter this dependence. However, many in the Soviet Union, both in and outside of the military, believe that technological change has made historical Soviet deployments obsolete; that getting into an arms race with the U.S. was a mistake; that much demobilization should be carried out, along with, according to some academics, an evolution to a minimum nuclear deterrent posture. On the other hand, some think that nuclear parity has offered political advantages in dealing with the U.S., and
(3) Disposal of excess weapons

In the event that the user does not require the material or equipment involved, the material or equipment involved is to be destroyed. This may be done in the following ways:

1. Burning
2. Disposal in a manner that is not likely to cause injury or damage
3. Destruction by a method that does not cause injury or damage

The user shall ensure that all measures are taken to ensure that the material or equipment is disposed of in a safe and secure manner.

(2) Safety and security

The user shall ensure that safety and security are maintained at all times, and that all personnel involved in the disposal of excess weapons are properly trained and equipped.

The user shall also ensure that all records and documentation related to the disposal of excess weapons are kept for a period of at least five years from the date of disposal.

(1) Annex Control

Annex Control

Control of excess weapons

1. Annex Control
2. Annex Control

(Annex Control)

Control of excess weapons

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2. Annex Control

(Annex Control)
The third proposal is to target only the principal cities in the Soviet Union and perhaps other countries. The main rationale for such targeting would be to move towards minimum numbers of warheads as early as possible.

Targeting doctrine will depend in part on which of the above approaches to nuclear policy is adopted, or allowed by political circumstance. But, given the catastrophic potential of nuclear escalation, the nuclear missions that may be realistic for the U.S. and other major powers may be quite limited, regardless of the nuclear policy adopted. The same may not be true of all potential new nuclear actors.

The roles of the services and their missions have played a major part in determining the actual approach to targeting adopted in the U.S., and presumably in other countries as well. Any revision of nuclear policy must be accompanied by a reconsideration of the organizations that will carry out the policy and of the roles and missions assigned to the various branches of service concerned. This question was not dealt with at the symposium, but must form part of any further study.

(2) Numbers and Types. The numbers of nuclear weapons systems associated with either of the first two targeting approaches would probably run to the thousands, although perhaps a few thousand rather than the tens of thousands at present. The numbers associated with the last targeting approach might be as low as a few hundred, depending on the survivability of the systems deployed. The types of systems would vary depending on the nature of the political entity deploying the systems, as well as on traditional considerations of effectiveness and survivability.

Thus, assuming it chose to deploy nuclear weapons at all, a pan-European security alliance with no immediate enemy might have some aircraft and cruise missile delivery capability, but no short-range nuclear weapons systems of the "assault breaker" type. Nuclear weapons would be in the background of deterrence in this situation, but the political and military mechanisms required to bring them to bear would exist.

The European Community could also provide an approach to a security organization but, again, security mechanisms would have to be created.

Whatever provisional and permanent arrangements are made, certain conditions must be met by the participating states if cooperative security is to work. All states must agree not to attempt to change borders by force or threat of force. Highly desirable, if not essential, are commitments by members to aid any other member against aggression and to abide by mutually agreed upon limitations on relevant forces, areas of deployments, exercises, etc. Perhaps there should be an alliance force, as with NATO, that would incorporate elements from the member states and would be trained to intervene in actions anywhere on the continent. Such a force might reduce the obstacles that defensive alliances and balance of power arrangements have had in the past with efforts to unite politically in time to deter war effectively.

At present, there is no obvious threat in Europe. This may mean that now is the time to begin building meaningful cooperative security arrangements. On the other hand, without an obvious enemy, it may be difficult to obtain serious commitments from the countries to be involved. In particular there are understandable reservations, especially on the part of newly formed Eastern and Central European governments, regarding "collective security" or any arrangement that might in the future infringe militarily on their newly found sovereignty.

Japan remains united in its desire to rely on its security alliance with the U.S. and not to procure nuclear weapons of its own. This disposition is not likely to change soon, at least not as a result of any factor internal to Japan. External factors that could cause it to change would be a nuclear Korea, or growing estrangement with the U.S. together with an increased threat from the Soviet Union or China. If the U.S.-Japan alliance can be kept intact, Japan can be a significant factor for stability through diplomatic support of cooperative policies, economic aid and credits. However, if economic rivalries lead to dissatisfaction, a rearmed Japan could cause serious
embodying the desire for global cooperation in nuclear policy. The purpose of this document is to explore the role of the United Nations in promoting peace and security, focusing on the 1995 NPT Review Conference and the nuclear non-proliferation regime. It discusses the challenges and opportunities posed by nuclear proliferation, highlighting the need for collective security mechanisms. The document also examines the potential for regional cooperation, emphasizing the importance of dialogue and diplomacy in addressing nuclear threats. The final section discusses the implications of these findings for future nuclear policy, advocating for a more proactive and collaborative approach to global security.
Delegitimization is incompatible with the practice of deploying nuclear weapons to deter situations that might lead to central war, i.e., general war involving the major powers. Such situations now seem unlikely, but in part that may be a result of the existing nuclear deterrence policies of the two superpowers. In this regard, the essential policy judgment the U.S. must make is whether nuclear weapons used as a deterrent would help maintain stability or, on balance, would increase the likelihood of situations that might lead to central war. If central war does occur, or even if it seems reasonably likely, any agreement to ban nuclear weapons will be at risk.

BACK TO THE BALANCE OF POWER.
Difficulties in establishing or maintaining any kind of cooperative security organization could lead back to a balance of power approach to security. Under such a regime, the U.S. might establish temporary alignments and participate in arms control agreements as it did in the 1920s, but there would be no effective permanent security structure such as NATO or those discussed above. The U.S. would rely on its own military force for security, probably in the form of technologically advanced naval and air forces, with minimum reliance on overseas bases. Deployment of space and anti-satellite weaponry is more likely in this case than in others, as are development and deployment of ballistic missile and other defenses.

The traditional problem of the balance of power approach is that the balancing forces often come into play too late to avoid war. Perhaps the existence of nuclear weapons and the increased transparency of military preparations would help in this regard, but that is far from obvious. This approach to security is not desirable. Certain trends, such as intra-West economic competition, could nevertheless weigh the scales in that direction. A balance-of-power world could lead to new arms races and might seriously damage cooperative attempts to limit levels of armaments and arms technology sales.

an adequate mechanism to deal with "closet" nuclear and near-nuclear states, in large part because the ambiguous status of these states cannot be officially admitted or acted upon. This may lead to difficulties in dealing with nuclear security and safety matters.

NEW TECHNOLOGIES AND NEW IDEAS FOR THEIR USE may significantly change the nature of the security problems. One view is that, in this regard, the 1990s may turn out to be like the 1920s, when the technologies and ideas that would determine the next war were unaffected, indeed unacknowledged, in the arms control and diplomatic activities of the time. In the coming decade, new technologies — including very accurate weapons, real-time, accurate, world-wide intelligence, and much of the technological infrastructure for nuclear weapons — will be more widely and cheaply available. It was also noted that for the past several decades the U.S. has had to deter an adversary who was doctrinally averse to taking high risks. This fortunate situation may not hold in the future.

II. Options for Nuclear Policy

The following are some basic approaches to nuclear policy. While the original choice of approaches is that of the author, each approach was considerably sharpened and, in some cases, transformed by the workshop discussion.

COOPERATIVE DETERRENCE. Under this approach, the U.S. would continue to deploy nuclear weapons so as to deter nuclear attack and induce caution in at least some of the circumstances that might lead to war. Where possible, nuclear deterrence would be exercised on behalf of and under the aegis of cooperative arrangements aimed at preventing the emergence of threats from in or outside of the cooperative structure.