OCCASIONAL PAPERS

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Steven Cambone and Joseph Cirincione, Thérèse Delpech, Lawrence Freedman, David Gompert, Robert P. Grant, Lisbeth Gronlund, Ian Kenyon, Bernd Kubbig, Bruno Tertrais

Edited by Burkard Schmitt and Julian Lindley-French

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ET L'AVENIR DE LA POLITIQUE NUCLEAIRE

Edited by / Sous la direction de
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PREFACE

Over the last months, the debate on National Missile Defense (NMD) has increasingly dominated the transatlantic security dialogue. The currently proposed system is intended to provide the United States an effective defence of all fifty states against small-scale attacks by intercontinental ballistic missiles (ICBMs). The primary argument made for immediate deployment is the possibility that emerging missile states hostile to the United States might soon acquire ICBMs and use them to threaten to attack US territory.

The current debate demonstrates that there are major divergences between the United States and Europeans on the necessity and the consequences of an NMD system. Even if President Clinton leaves the decision on whether or not to begin deployment to his successor, NMD is likely to remain high on the transatlantic agenda. The Institute therefore organised a seminar on this issue on 9 June 2000 in Paris. Academics and officials from both sides of the Atlantic came together to discuss various aspects of NMD, namely the underlying threat perceptions, the feasibility of the system, its impact on arms control, and its significance for deterrence.

This paper contains the written contributions to the seminar, in their original language and in the order they were presented, as well as a summary of the debates and some concluding remarks in English and French by the editor. The Institute would like to express its sincerest gratitude to all participants in the seminar and the authors for their contributions.

Au cours des derniers mois, le débat sur la National Missile Defence (NMD) s'est progressivement imposé dans le dialogue transatlantique en matière de sécurité. Le système actuellement proposé a pour but de fournir aux Etats-Unis une protection efficace de l'ensemble de leur territoire contre des attaques, limitées, par des missiles balistiques intercontinentaux (ICBM). L'argument en faveur d'un déploiement immédiat est surtout que des Etats hostiles aux Etats-Unis pourraient acquérir prochainement des ICBM et s'en servir comme menace contre le territoire américain.

Le débat actuel met en exergue des différences majeures entre les Etats-Unis et les Européens sur la nécessité et les conséquences d'un système NMD. Même si le président Clinton laisse à son successeur le soin de décider s'il faut ou non commencer le déploiement, cette question a de fortes chances de rester prioritaire sur l'agenda transatlantique. L'Institut a donc organisé un séminaire sur ce thème le 9 juin 2000 à Paris. Des universitaires et des officiels européens et américains se sont réunis pour examiner les différents aspects de la NMD, notamment les perceptions sous-jacentes de la menace, la faisabilité du système, son impact sur l'*arms control* et son importance pour la dissuasion.

Cette publication regroupe les contributions écrites des intervenants, dans leur langue d'origine et présentées selon l'ordre indiqué dans le programme, ainsi qu'un résumé des débats et une conclusion, en anglais et en français, par l'organisateur du séminaire. Nous souhaitons exprimer ici notre gratitude à tous les participants et aux auteurs pour leur contribution.

Burkard Schmitt

SUMMARY

Session I: Threat perceptions

The first session focused on threat perceptions and threat assessments. The key question was whether a threat exists that justifies NMD deployment. Do the so-called 'countries of concern' really intent to threaten the US homeland and, even more importantly, do they have the financial and the technological means to scale up their existing arsenal to true intercontinental range?

Proponents of NMD deployment referred to the 1998 Rumsfeld Report, concluding that North Korea, Iran and Iraq could develop ballistic missiles with NBC warheads within about five years of a decision to acquire such a capability. There would be increasingly important cooperation between these countries, and their respective missile programmes would make real progress. These developments would threaten not only US territory, but also regional stability in Asia and the Middle East.

Opponents considered this threat assessment as largely exaggerated. Only four nations (India, Pakistan, North Korea and Iran) would have active programmes for developing intermediate-range missiles of over 3,000 km in the next 10 years. Even if these programmes succeeded, none of these missiles could threaten US territory. Moreover, it would be highly unlikely that countries like North Korea could ever make sufficient progress in propulsion, guidance, airframe, warhead and re-entry vehicle technology to develop ICBMs. The current US threat assessment, opponents thought, would be based only on worst-case assumptions and completely neglect the possibility of political changes in countries of concern. The real threat would not come from nation-states with nuclear weapons and long-range missiles, but from non-state actors with non-nuclear weapons and short-range, non-missile delivery systems.

Session II: Concept and feasibility

The key issues of this session was NMD's technological feasibility and operational effectiveness. The currently proposed NMD system would use ground-based interceptors, supported by an extensive network of ground-based radars and space-based infrared sensors. There was general agreement that the so-called enhanced C-1 capability (using 100 interceptors, giving a 95% certainty that a 95% kill probability will be achieved against 25 warheads) would be feasible, but not very effective. As a purely exoatmospheric, single layer system using a hit-to-kill mechanism, it would be extremely vulnerable to disruption by countermeasures, unable to protect against submunitions (designed to disperse chemical and biological agents) and could be 'underflown' by shorter-range ballistic and cruise missiles. An effective NMD system would probably have to be an integrated multi-tier system, involving boost-phase intercept, sea- and land-based interceptors, common earth- and space-based sensors and a unified battle-management system. Several participants doubted that the technological obstacles for an effective NMD could be overcome. In any case, it would be impossible to test an NMD system in a realistic, stressful battle environment. Its operational effectiveness could therefore only be proved if there were a real attack.

Session III: impact of NMD on arms control

This session focused on two questions: first, does NMD represent for a general shift in US policy regarding arms control and non-proliferation? Second, what would be its impact on the existing arms control regime? Again, both questions raised controversy.

Some participants pointed out that NMD would only complement the traditional combination of deterrence and diplomacy. This complement would be necessary because the existing non-proliferation arrangements had turned out to be insufficient in the face of the new challenges. An NMD deployment would need only a few amendments to the ABM Treaty and not endanger the CTBT, nor the NPT or the START process.

Other participants considered NMD as part of a deeper change in US policy. From their point of view, NMD indicates for a profound mistrust, in certain political circles, of the traditional treaty-based arms control diplomacy. They considered that it would reflect a wish for an arms-control policy 'à la carte', where the US picks and chooses those elements that appear to suit its interests. After the rejection of the CTBT, violation of the ABM Treaty would bring the second pillar of the existing arms control and non-proliferation regime down. Moreover, an NMD deployment would 'oblige' the nuclear powers to keep their arsenals above a certain threshold, thereby setting a limit to further disarmament.

Session IV: NMD and nuclear deterrence

This session focused on the impact of an NMD deployment on the current nuclear strategic balance. There was agreement that the envisaged C-1 capability would not threaten the credibility of French, British or Russian deterrence. Among the official nuclear powers, only China would see its retaliation capabilities seriously called into question.

On the other hand, it was suggested that the NMD debate reflected growing discomfort about the credibility of traditional deterrence in regional crises. Would deterrence work against rogue states or could a country that has ICBMs deter the US from intervening in a regional crisis by threatening either US or allied territory ? NMD aims at filling this credibility gap, but several participants stressed that it could create new strategic dilemmas: since NMD's operational effectiveness is almost impossible to test, what role would it objectively play for US strategy? And supposing NMD worked, how would the US react after the successful interception of a hostile ICBM?

Other participants pointed out that NMD would have negative strategic effects. The simple fact that there is a debate on the necessity of an NMD could suggest that US extended deterrence and security commitments would be weakened and thereby undermine the credibility of nuclear deterrence as such. At the political level, it might contribute to a further delegitimisation of nuclear weapons. The biggest concern, however, was China: if Beijing countered an NMD deployment with a built-up of its strategic nuclear forces, this could provoke a new arms race in Asia and destabilise the existing equilibrium among the official nuclear powers.

Burkard Schmitt

RESUME

Session I : perceptions de la menace

La première session a porté sur les perceptions et les évaluations de la menace. La question se pose surtout de savoir s'il existe une menace justifiant le déploiement d'un système NMD. Les « pays préoccupants » ont-ils véritablement l'intention de menacer le territoire américain et, plus important encore, ont-ils les moyens financiers et technologiques de promouvoir leur potentiel à un niveau véritablement intercontinental ?

Les partisans de la NMD ont fait référence au Rapport Rumsfeld de 1998, dont les conclusions indiquaient que la Corée du Nord, l'Iran et l'Irak pourraient développer des missiles balistiques avec des têtes NBC dans les cinq années qui suivraient la décision d'acquérir une telle capacité. Selon eux, la coopération entre ces pays s'est considérablement accrue et leurs programmes respectifs de missiles ont fait de réels progrès. Ces évolutions menaceraient non seulement le territoire américain, mais aussi la stabilité régionale en Asie et au Moyen-Orient.

Les opposants à la NMD ont jugé cette évaluation de la menace très exagérée. Seules quatre nations (Inde, Pakistan, Corée du Nord et Iran) auraient des programmes actifs pour développer des missiles d'une portée intermédiaire supérieure à 3 000 kilomètres pendant les dix prochaines années. Même si ces programmes étaient menés à bien, aucun de ces missiles ne pourrait menacer le territoire américain. De plus, il est serait très improbable que des pays comme la Corée du Nord puisse faire suffisamment de progrès technologiques (propulsion, guidage, aéronautique, tête, véhicule de rentrée, etc.) pour développer les ICBM. L'actuelle évaluation américaine de la menace serait fondée sur les scénarios du pire et ne tiendrait absolument pas compte des changements politiques dans les pays préoccupants. La véritable menace ne viendrait pas des acteurs étatiques dotés d'armes nucléaires et de missiles de longue portée, mais des acteurs non-étatiques ayant des armes non nucléaires et des vecteurs non nucléaires de courte portée.

Session II : concept et faisabilité

Les principaux thèmes de cette session ont été la faisabilité technologique et l'efficacité opérationnelle de la NMD. Le système actuellement proposé utiliserait des intercepteurs fixes basés à terre, appuyés par un vaste réseau de radars et des satellites dotés de senseurs infrarouges. De l'avis général, la « capacité C-1 élargie » (utilisant 100 intercepteurs pour être sûr à 95% d'arriver à une probabilité de 95% d'intercepter 25 têtes nucléaires assaillantes) serait faisable, mais peu efficace. Ses paramètres (une seule "couche" d'interception extra-atmosphérique, destruction par impact direct) rendent le système vulnérable aux contre-mesures et incapable d'intercepter des missiles balistiques de courte portée, des missiles de croisière et des sous-munitions (conçues pour disperser des agents chimiques et biologiques). Une NMD efficace devrait se structurer en système intégré, à plusieurs niveaux, impliquant une interception *boost-phase*, des intercepteurs basés à terre et sur mer ainsi qu'un système unifié de gestion de bataille. Plusieurs participants ont estimé qu'il serait difficile de surmonter les obstacles technologiques à une NMD efficace. Quoi qu'il en soit, il serait impossible de tester un système NMD dans un environnement de bataille

réaliste. Son efficacité opérationnelle ne pourrait donc être constatée que lors d'une attaque réelle.

Session III : l'impact de la NMD sur l'*arms control*

Cette session a soulevé deux questions : premièrement, est-ce que la NMD représente une évolution globale de la politique américaine en ce qui concerne l'*arms control* et la non prolifération ? Deuxièmement, quel serait son impact sur le régime actuel d'*arms control* ? Là encore, les avis ont été très partagés.

Certains participants ont souligné que la NMD ne ferait que compléter la combinaison traditionnelle de dissuasion et de diplomatie. Ce complément serait nécessaire dans la mesure où les arrangements de l'actuel régime de non-prolifération se sont révélés insuffisants face aux nouveaux défis. Un déploiement NMD ne nécessiterait que quelques amendements au Traité ABM et ne mettrait en danger ni le TICE, ni le TNP ou le processus START.

D'autres participants ont considéré que la NMD s'inscrivait dans une mutation de la politique américaine. De leur point de vue, elle révèle une profonde méfiance de certains milieux politiques à l'égard de la diplomatie traditionnelle et des traités. Le programme NMD refléterait le désir d'une politique d'*arms control* « à la carte », permettant aux Américains de choisir les éléments qui répondent à leurs intérêts. Après le rejet du TICE, la violation du Traité ABM détruirait le deuxième pilier du régime actuel d'*arms control* et de non-prolifération. De plus, la NMD « obligerait » les puissances nucléaires à maintenir leurs arsenaux au-dessus d'un certain seuil, ce qui limiterait le processus de désarmement.

Session IV : la NMD et la dissuasion nucléaire

Cette session a porté sur l'impact d'un déploiement NMD sur l'actuel équilibre stratégique nucléaire. De l'avis général, la capacité C-1 envisagée ne menacerait pas la crédibilité de la dissuasion française, britannique ou russe. Parmi les puissances nucléaires officielles, seule la Chine verrait ses capacités de représailles sérieusement mises en question.

Par ailleurs, il a été suggéré que le débat sur la NMD traduisait un malaise croissant quant à la crédibilité de la dissuasion dans les crises régionales. Est-ce que la dissuasion fonctionnerait contre les « Etats voyous » ou est-ce qu'un pays possédant des ICBM pourrait dissuader les Etats-Unis d'intervenir dans une crise régionale en menaçant le territoire américain ou le territoire allié ? La NMD a pour but de combler cet écart de crédibilité, mais plusieurs participants ont souligné qu'elle pourrait créer de nouveaux dilemmes stratégiques : puisque l'efficacité opérationnelle de la NMD est presque impossible à tester, quel rôle jouerait-elle objectivement pour la stratégie américaine ? Et, en supposant que la NMD fonctionne, comment les Américains réagiraient-ils après l'interception réussie d'un ICBM hostile ?

D'autres participants ont souligné que la NMD aurait des effets stratégiques négatifs. Le simple fait qu'il existe un débat sur la nécessité d'une NMD pourrait suggérer que la dissuasion élargie et les engagements de sécurité des Américains seraient affaiblis et nuirait ainsi à la crédibilité de la dissuasion nucléaire en tant que telle. Au niveau politique, elle pourrait contribuer à délégitimer davantage les armes nucléaires. La principale préoccupation est néanmoins la Chine : si Pékin réagissait à un déploiement NMD avec un renforcement de

ses forces nucléaires stratégiques, cela pourrait provoquer une nouvelle course aux armements en Asie et mettre en cause l'équilibre actuel entre les puissances nucléaires officielles.

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CHAPTER ONE: THREAT PERCEPTIONS

I.1 The nature of the threats perceived by states possessing nuclear weapons[1]

Ian R. Kenyon

Introduction

During the Cold War, the threat of direct and imminent nuclear attack by the US or the Soviet Union was the most influential factor shaping the nuclear policies of the Nuclear Weapon States (NWS). Now that relations between the Cold War rivals have improved in relative terms, these dynamics are somewhat diminished. However, new perceived military threats are emerging, including the possibility of nuclear, biological or chemical (NBC) attack by states wishing to challenge the *status quo*. These threats have expanded the scope of the NWS deterrence doctrines, and increased the incentives to explore the costs and benefits of developing more sophisticated conventional weapons and missile defence systems.

At present, traditional modes of thinking dominate debates on the role of nuclear weapons, especially where the subject of deterrence is concerned. It appears that Europe's experience of nuclear deterrence after World War II has been extended into a general principle. Hence, the accepted wisdom appears to be that, in the hands of the NWS at least, nuclear weapons bring peace and stability by deterring military threats. But is this principle relevant to the post-Cold War world? Some have questioned whether nuclear ordnance has a role to play in deterring the biological and advanced conventional weapons of the present and future. The existence of competing conceptions of deterrence (from the various forms of overt deterrence of the NWS, to the opaque deterrence of Israel and the ambiguous deterrence of the Democratic People's Republic of Korea (DPRK)), may make nuclear behaviour less predictable and therefore create more opportunities for dangerous misunderstandings between nuclear adversaries. In addition, the huge range of capabilities that exists amongst the NWS, the *de facto* NWS, and any aspiring nuclear-weapon states may undermine the credibility of nuclear deterrence and thus increase the chances of nuclear war. Despite these doubts and the need for new thinking, there remains a tendency to seek solutions derived from traditional ideas about deterrence in tackling these emerging threats. If this situation continues, it could have adverse effects on future arms control and disarmament initiatives.

The entry into force of the Chemical Weapons Convention in 1997 has considerably reduced the short term threat from chemical weapons although the failure of a small group of known possessor states to adhere and the possibility of 'breakout' cannot be discounted. The threat posed by biological weapons and the difficulty of maintaining an international control regime to check the proliferation of offensive biological warfare capabilities is however a serious concern. Confidence in the effectiveness of the Bacteriological and Toxins Weapons Convention (BTWC) to limit such capabilities is diminished by the belief that it is difficult to prove that a state is actively engaged in an offensive, and therefore illegal, biological weapons programme. Agreement on a Verification Protocol to this Convention may do little to change

[1] The first two sections of this paper are taken from D. H. Howlett et al., *Nuclear weapons Policy at the Crossroads* (London: Royal Institute of International Affairs, 2000). This study draws on a Mountbatten Centre for International Studies project on 'Alternative Nuclear futures' to which the author contributed. The final section is by the author alone.

these perceptions. The insecurity generated by this situation is further exacerbated by the knowledge that modern fermentation procedures allow for rapid and inexpensive production of biological agents, and that to go from laboratory quantities to weapons quantities of these agents takes a matter of days or weeks, rather than years. This has had the effect of reinforcing the commitment of the NWS to their nuclear deterrent capabilities. Moreover, it has fueled the US debate over the advantages of developing a national missile defence system (NMD), and increased the possibilities that existing arms control treaties, such as the Anti-Ballistic Missile Treaty, could be revised or abandoned in the light of current strategic contingencies.

National positions

The US now considers the proliferation of NBC weapons as one of the principal threats to its security. Initially, its policy focus was on containing the potential for nuclear proliferation arising from the dissolution of the Soviet Union. In an attempt to prevent this, the states left with former Soviet nuclear weaponry on their territory (Belarus, Kazakhstan and Ukraine) were offered incentives to transfer their inherited arsenals to Russia. The success of this scheme allayed the immediate proliferation concerns of Western policy-makers, but deepening political, economic and social instability in Russia continues to provoke unease concerning the ability of its central government effectively to guard and account for its stocks of NBC weapons and materials. To this has been added the modernisation of China's limited nuclear arsenal, the proliferation of weapons of mass destruction (WMD) to states hostile to US interests, and the potential for terrorist use of WMD.

In France and the UK, policy-makers appear to consider that neither state currently faces a serious direct threat from WMD. The 1994 White Paper stated that 'for the first time in history, France does not face a direct military threat near its borders.' This helps explain the French decision to dismantle 18 ground-to-ground medium-range strategic missiles, which until 1996 had been on permanent alert on the Albion Plateau. These installations, which were set up by President de Gaulle in the 1960s to bring targets in the Soviet Union within range, were no longer seen as necessary. However, the White Paper did identify the existence of a potential indirect military threat should France become involved overseas against a regional adversary armed with WMD. The document also highlighted the risks and uncertainties surrounding developments in Russia, and showed a growing concern over Chinese nuclear policy. As a result, the French conception of nuclear deterrence was reaffirmed.

Although the UK does not face a direct threat from unconventional weapons, there have been several government statements indicating that the spread of WMD and the ballistic missiles capable of carry such weapons poses a range of longer-term threats to the country. In particular, there is concern over how to respond to a future adversary who is not allied to a NWS, but has a potential nuclear capability, and how to respond to a chemical or biological attack from such a state. This has not, however, led to attempts to justify the continued existence of the UK's nuclear weapons on the basis of potential future WMD threats from states outside Europe. Instead, the main official concern of UK policy-makers remains: Russia's residual nuclear capability; the risks and uncertainties arising from the collapse of the former Soviet Union; and any modernisation of China's nuclear systems which might give it a global reach.

The Washington Summit Communiqué identified the proliferation of WMD as a 'matter of serious concern' for NATO and outlined the 'WMD Initiative' as the Alliance's response to this threat. This Initiative is intended to co-ordinate the Allies' non-proliferation efforts and 'increase military readiness to operate in a WMD environment and to counter WMD threats.' According to the new Strategic Concept, these efforts include the maintenance of an effective nuclear deterrent force in Europe to 'prevent coercion.' This assigns a significant military and political role to nuclear weapons within NATO and shows that, although the Alliance has stressed 'the reduced salience of nuclear weapons' in the post-Cold War strategic environment, NATO believes that such weapons will continue to play a pivotal deterrent role in maintaining peace and security.

In Russia the 2000 National Security Concept identified the proliferation of WMD and their delivery systems as one of its principal sources of external danger. Indeed, Russia's geographical proximity to the *de facto* NWS and nuclear aspirant states means that these states will be capable of posing a direct threat to Russia sooner than they will the US, France or the UK. Iran potentially poses a near-term threat to Russia as it appears within reach of the Shihab-3 and Shihab-4 systems it is developing. These would be capable of targeting small parts of southern Russia and large parts of Central Asia, where it has strategic interests. India and Pakistan are also of concern due to the uncertainty over how they might interact with Russia in a crisis over Central Asia. Policy-makers in Moscow may also be concerned about nuclear developments in the DPRK, which is capable of striking limited parts of the Russian Far East.

Since the end of the Cold War, the residual nuclear threat from the US, and potential nuclear threats from the other NWS, the *de facto* NWS and nuclear aspirant states, have played an important role in the decision of Russia to rely on its nuclear forces as the 'backbone' of its defence. However, of equal significance has been the threat posed by a major conventional attack, which its conventional armed forces might be incapable of repelling. Russia thus relies on its nuclear arsenal to deter both WMD and conventional threats to its security, and is likely to do so for the foreseeable future unless it makes unexpected economic progress. This helps explain the Duma's reservations over the START process and could indicate that, although the salience of nuclear weapons appears to be declining in the West, this is not the case in Russia. The details of Russia's new military doctrine, published in October 1999, reinforced this argument.

China's decision to implement a force modernisation programme may have been driven by an awareness of its technological inferiority relative to the US and Russian nuclear weapons programmes. While the emphasis has been on improving diplomatic relations with Washington and Moscow, Beijing remains deeply distrustful of US global 'hegemony' and Russian territorial ambitions, and appears to be seeking the capability to reciprocate if either state threatens China with an NBC attack. The desire to make qualitative improvements to its nuclear arsenal may also have been motivated by fear of both future development of WMD in Taiwan and Japan and any deployment of Theatre Missile Defence (TMD) systems in either territory. Although China may not currently face an adversary armed with an indigenous nuclear arsenal in North East Asia, any deterioration of US strategic partnerships with China's traditional rivals could spark a regional nuclear arms race. This may explain China's willingness to take part in negotiations to remove the nuclear threat from the DPRK, which is also seen by Beijing as a potential shaper of nuclear proliferation in Japan and Taiwan.

Threats posed by WMD are currently the primary shaper of nuclear policy in the *de facto* NWS. China's defence modernisation programme and Pakistan's nuclear weapons programme have been the cause of great unease in India, leading the New Delhi government to push ahead with its missile and space programmes. Pakistan has responded to these developments by trying to demonstrate that it is able to match India's capabilities with its own missile tests. The mutual feelings of vulnerability generated by these activities have now escalated to a point where both countries have been undergoing a major reassessment of their nuclear policies. In 1998 India and Pakistan both conducted a series of nuclear and missile tests to demonstrate their nuclear ordnance and delivery capabilities. This was followed in August 1999 by the release of a draft policy document by India outlining a doctrine of minimum deterrence based on a triad of nuclear forces.

The threat of attack by WMD has long been a crucial shaper of Israel's nuclear policies. Such threat perceptions have multiplied since the end of the Cold War and the 1991 Persian Gulf War, as international attention has focused on the nuclear activities of Iran and Iraq, and the proliferation of biological and chemical weapons in their region. In March 1995, Prime Minister Peres articulated Israel's fears, stating that 'Israel is the only country in the world that another country is threatening to destroy physically, militarily, and otherwise. Not only are they threatening, they are trying to get a nuclear option and missiles to do so.' Iraq's Scud attacks on Israeli civilians in 1991, as well as reports of Iraq's WMD capabilities and Iran's nuclear development, have brought these threats into sharp focus.

Public perceptions

The foregoing is largely derived from formal statements of government policy but to understand the forces to which governments respond it is necessary to consider the perceptions of the general public in different countries (often, of course, shared by their leaders). Europe has a history of at least one major war per generation until 1945. The territory of France was invaded by German forces three times between 1870 and 1940. Britain has just remembered the 60th anniversary of the successful rescue of the bulk of its trained army manpower from Dunkirk, also in 1940, after which the enemy was only 35 kilometres away across the Channel; the threat of invasion was real; and aerial bombardment of the principal cities continued for five years, culminating in attacks by what, today, we would call cruise and ballistic missiles (the V1 and V2). After 1945 for more than 40 years Europe was divided by the Iron Curtain; Warsaw Pact troops were expected to roll across the inner German border at any time; and the massive nuclear might of the Soviet Union was capable of delivering annihilating destructive force to the principal cities with a warning time of four minutes or less. By comparison, the situation today, with Russia perceived as no longer hostile and preoccupied with its own internal problems; the former members of the Warsaw Pact in the process of joining NATO and the EU; and the rest of the world distant and with no perceived reason to pick a quarrel with the principal European powers, leaves the 'man in the street' feeling more secure than his parents or grandparents could have done.

By contrast, the situation in other parts of the globe is very different. The United States has not suffered war with an external enemy on its continental territory since 1812. The two World Wars saw a magnificent contribution from the US but its armed forces fought on other peoples ground and the 'folks back home' were seen as safe, if concerned for the welfare of their fighting men. This situation changed with the Cuban missile crisis and the subsequent appearance of ICBMs with sufficient range to strike the US from the USSR. This situation

was successfully managed through the deterrence theory of ‘mutual assured destruction’ and the series of arms control agreements which still continue but the population at large remained nervous and happily saw their tax dollars spent on defensive schemes such as SDI. Now the Russian threat is seen as diminished but in its place has arisen the fear of ‘rogue states’, whose leaders are perceived as ready to stop at nothing to acquire weapons of mass destruction and their means of delivery and mad enough to use them, despite the certainty of massive retaliation.

Russia suffered massively in the two World Wars; has lost both its position of leadership in Eastern Europe and huge areas of its former colonial territories. Whilst the US and Europe do not for the present pose a genuine threat the southern border is very vulnerable and religious wars have become a real problem on its current as well as its former territory. Events in Iran must cause more concern in Russia than countries which do not share a long common border. The main solace, following the dramatic reduction in the strength of their conventional forces, must be the continuing existence of credible nuclear ballistic missile forces.

China suffered the humiliation of foreign hegemony following the ‘opium wars’ and the long conflict with Japan. Since the imposition of unified political control and genuine independence on the mainland in 1948 it is clearly the principal aim of the ruling elites to ensure that this situation is not again threatened by external forces. India is conscious of China to the North, whose willingness to expand was demonstrated in Tibet, and lives with the consequences of the religious violence of 1947 which led to partition and the creation of Pakistan with which state a situation of military confrontation has continued, with occasional bursts into flame for fifty years. The situation in Israel is too well known to need repeating.

Under these circumstances it is clear that the political pressure in some quarters to develop or acquire missile defences is likely to increase while in others such developments will be seen as, at the least a threat to international stability, and in some cases a potential threat to national independence.

I.2 Threats and risks prompting a commitment to Ballistic Missile Defense

Stephen A. Cambone[2]

Introduction

On January 20, 1999 US Secretary of Defense William Cohen announced a reorganization of America's national missile defense program (NMD). He directed that the program prepare for a deployment of an NMD system in 2005. Secretary Cohen assigned the system the mission of protecting the fifty United States against attack by a small number of warheads launched by emerging ballistic missile powers such as North Korea and Iran. In order to meet the 2005 deployment date – the earliest date that could be achieved with acceptable technical risk – Cohen directed that the program be conducted so that the President could make a decision in mid-2000 to deploy the system.[3]

Secretary Cohen was encouraged to make his announcement and the White House encouraged to accept the burden of a decision on NMD deployment by the publication of the report of the Commission to Assess the Ballistic Missile Threat to the United States, also know as the Rumsfeld Commission.[4]

The Commission warned and the intelligence community assessment subsequently confirmed that the threat had evolved to the point that, "under some plausible scenarios...the US might have little or no warning before operational deployment" of a ballistic missile threat to the US. The Commission's unanimous findings were validated six weeks later when North Korea attempted to place a satellite in earth orbit. Despite the close attention given to North Korea, the launch surprised the US in a number of ways. These included the fact that the DPRK had a three-stage missile, that one of the stages was solid fueled, that it had a satellite to launch and that it would fly over the territory of a neighboring state (Japan) without prior notification. In addition to these surprises, the intelligence community concluded that if the missile had been armed with a light warhead the payload could have reached Alaska or Hawaii.

This paper will review the ballistic missile threat that has given rise to the American commitment to the deployment of an NMD system. It will begin with the current state of the threat to the US from both extant and emerging ballistic missile capabilities. Attention is given as well to the broader implications of the threat for international stability. It will conclude with a brief discussion of the capabilities the US and other nations will require to offset the threat posed by the extant and emerging ballistic missile threat and to manage the instabilities this threat has created.

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[3] Secretary Cohen had been persuaded of the need for a limited NMD system for some time prior to the January 1999 announcement. See, Prepared Testimony of Walter B. Slocombe before the House Armed Services Committee, October 13, 1999, Federal News Service.

[4] The author served as the Staff Director for the Commission. See, Executive Summary Commission to Assess the Ballistic Missile Threat to the United States, Pursuant to Public Law 201, July 15, 1998. (Hereafter all unattributed page references are to the Commission Report.)

Threat

Emerging capabilities

The Rumsfeld Commission unanimously reached four primary conclusions:

"Concerted efforts by a number of overtly or potentially hostile nations to acquire ballistic missiles with biological or nuclear payloads pose a growing threat to the US, its deployed forces, and its friends and allies."
"The threat is broader, more mature and evolving more rapidly than has been reported in estimates and reports by the intelligence community."
"The Intelligence Community's ability to provide timely and accurate estimates of ballistic missile threats to the US is eroding."
"The warning times the US can expect of new, threatening ballistic missile deployment are being reduced. Under some plausible scenarios… the US might have little or no warning before operational deployment."

The first major conclusion underscored that the efforts of the emerging ballistic missile powers – e.g., North Korea, Iran, Iraq, India and Pakistan – were 'concerted'. That is, there were organized efforts provided with substantial resources by their governments, not marginal or haphazard undertakings of research institutes or other entities in those countries. In addition to work on ballistic missiles, the Commission noted that the emerging powers "have the option to arm [their long- and short-range systems] with biological and chemical weapons" and "the knowledge needed to design and build a nuclear weapon is now widespread".[5]

The word 'concerted' applied in other ways, however. After citing examples of cooperation that existed among the emerging powers and two of their principal suppliers, Russia and China, the Commission reached a significant conclusion. "Through this trade and their own indigenous efforts, these second-tier powers (e.g., North Korea, Iran, Iraq, India and Pakistan) are on the verge of being able to provide one another, if they have not already done so, the capabilities needed to develop long-range ballistic missiles."[6]

The second major conclusion, that the threat was broader, more mature, and evolving more rapidly than had been reported previously was based on this combination of organization, demonstrable progress, trade and indigenous effort.

The Commission argued that, "newer ballistic missile and weapons of mass destruction development programs no longer follow the patterns initially set by the US and the Soviet Union. These newer programs require neither high standards of missile accuracy, reliability and safety nor large numbers of missiles and therefore can move ahead more rapidly". Second, "extensive technical assistance is available from outside sources". Third, "nations are increasingly able to conceal important elements of their ballistic missile and associated WMD programs".[7] The first two make it possible for these programs to move along more rapidly than classic engineering and production models would predict. The third makes it difficult for the intelligence community to appreciate the rate at which the programs were developing.

[5] p. 4.
[6] p. 18.
[7] pp. 6-7.

With regard to outside technical assistance, the Russians and the Chinese have been helpful to many other countries, including Iran, Iraq, North Korea, and Pakistan both in terms of technology and personnel.[8] In addition to Russian and Chinese transfers, the trade and assistance among emerging ballistic missile powers is proving to be an extremely troubling trend. North Korea has provided aid to Pakistan and Iran, and India has assisted other countries as well.[9] Thus, even if the Russian and Chinese aid to other countries stopped right now, a sufficient amount of capability is now extant in these emerging, second tier countries that their programs would be able to move forward. Development might be slightly slower, more expensive and technically risky, but the programs would advance nonetheless.

The third major conclusion, that the capability of the intelligence community to provide timely warning is eroding, was based on an examination of the denial and deception efforts of the extant and emerging ballistic missile powers. These efforts are made possible by the technology and expertise, readily available on the open market, such as encryption software and underground drilling machinery. In addition, the US itself is at least partly to blame for the erosion in its ability to provide timely warning: in the past decade or so, the ballistic missile powers have learned more than they should about US sources, methods and processes for intelligence collection and analysis. Espionage has done great harm. So, too, has past intelligence-sharing practice with states like Iraq and China and the practice of providing intelligence evidence to accompany demarches in bilateral and multilateral settings provides information on US capabilities.

The fourth major conclusion flows from the previous three. The combination of technical assistance, incentives to hide and the availability of technology with which to do it, and increased knowledge among the ballistic missile powers of the sources and methods of US intelligence, all contribute to the erosion of the capability of the US to have timely warning of ballistic missile threats. A series of surprises in 1998 – ballistic missile launches by North Korea, Pakistan and Iran as well as nuclear testing by India – confirmed this and shook public confidence in the assurances provided by the intelligence community of ample warning.

Since the Commission issued its report in 1998, ballistic missile and weapons of mass destruction programs of the emerging powers have progressed. Reviews of DPRK, Iran, Pakistan, and India are particularly relevant in reinforcing the Commission's earlier findings.

North Korea. According to open sources, North Korea continues to develop its ICBM-range ballistic missile, the Taepo Dong 2, (TD-2) even as it engages in the politics of summitry. The National Intelligence Council (NIC) report stated, "in its two-stage configuration, the TD-2 could be used to place a small payload on the US West Coast. In a three stage configuration (made plausible by the August 1998 launch of the three stage TD-1), the TD-2 could place a

[8] See, 'China, Russia Still Exporting Nuclear, Missile Technology', Bill Gertz, Washington Times, February 2, 2000. See also, "Report to Congress on Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions: January 1, 1999 to June 1, 1999, 'required pursuant to Section 721 of FY 97 National Intelligence Authorization Act.

[9] See, Testimony of Director of Central Intelligence, George Tenet before the Senate Foreign Relations Committee on 'The Worldwide Threat in 2000: Global Realities of Our National Security', March 21, 2000. Available at www.cia.gov (visited June 26, 2000).

payload anywhere in the US".[10] In addition, press accounts have surfaced that North Korea is continuing to work on its nuclear weapons program.[11]

Iran. Iran's ballistic missile program has made progress since the July 1998 flight of its version of North Korea's No Dong, the Shahab 3. A US Air Force intelligence report is quoted as saying, "Iran is working on the development of at least two medium range ballistic missile, the Shahab 3 and Shahab 4…The Iranian defense minister also stated that a Shahab 5 missile is in development".[12] If, as the NIC reports, North Korea could launch its Taepo Dong 2 in a three stage configuration and strike the entire US, it likely follows that Iran – which is a recipient of substantial North Korean, Russian and Chinese assistance – could possess a missile of a similar range in a relatively short time following a decision to develop it.[13] A three stage Taepo Dong 2 would give Iran the ability to target the United States. Iran's weapon program continues to worry analysts. In addition to the belief by some that the Bushear nuclear reactor complex is providing a cover for a secret Iranian nuclear weapons program, American officials have revealed that they have a concern that Iran may be able to acquire nuclear materials and technology on the black market. A CIA assessment now holds that the possibility that Iran has acquired nuclear weapons can no longer be ruled out.[14]

Pakistan. The ballistic missile program of Pakistan continued to progress since 1998. It is moving forward on both the liquid fueled Ghuri missiles (I, II, III), [15] its version of the North Korean No Dong, as well as the Shaheen I and II, [16] a variant of the Chinese M11. The Ghauri III would give Pakistan the capability to target all of India. Pakistan tested successfully a static engine test of the Ghauri III engine in September 1999.[17] Pakistan, too, continues to work on its weapons programs, and there are reports that it has acquired expertise in the technology that allows a single missile to carry multiple warheads.[18] Recent reports suggest that it is now operating a plutonium facility.[19] The trade press believes the plant to produce the critical heavy water to operate the reactor was smuggled into Pakistan from Europe and the US.[20]

India. India's ballistic missile programs are progressing as well. In April 1999 it tested the Agni II, a two-stage, rail mobile solid-fueled system.[21] The Agni II provides India the capability to strike central China.[22] India is also working on the Surya, reported to be a

[10] National Intelligence Council Report, 'Foreign Missile Developments and the Ballistic Missile Threat', September 1999, p. 9. (Hereafter NIC Report).

[11] Press reports have speculated that the North Koreans could be bartering training for uranium in Congo, even though intelligence agencies state publicly that they are skeptical of the possibility 'North Koreans in Congo', Washington Times, 6 August 1999; 'North Korea Trains Kabila Troops', London Times, 12 October 1999; 'Alarm Over North Korea's Secret Deal for Congo Uranium', London Sunday Telegraph, 16 January 2000, p.1.

[12] 'Teheran Increases Range on Missiles', Washington Times, 22 September 1999.

[13] The NIC Report presents a range of views on this issue. It is this author's view that Iran is not technology-limited in developing such a capability.

[14] 'CIA Tells Clinton An Iranian A-bomb Can't Be Ruled Out', New York Times, 17 January 2000.

[15] Pravin Sawhney, 'How Inevitable is an Asian 'Missile Race'? Jane's Intelligence Review, 1 January 2000.

[16] 'Pakistan Shows Off New Shaheen 2 Ballistic Missile', Jane' Missiles and Rockets, 1 May 2000.

[17] 'Pakistan Tests Ghauri III Engine', Jane's Defense Weekly, 13 October 1999.

[18] 'Pakistan Wants Multiple Missiles', Foreign Report, 17 February 2000.

[19] 'CIA Knew About Khushab D20 Plant But Not Source, Officials Claim', Nucleonics Week, 23 March 2000.

[20] 'PAEC Made Khushab D2O In Facility Smuggled in as Petrochemical Plant', Nucleonics Week, 16 March 2000.

[21] Pravin Sawhney, 'How Inevitable is an Asian 'Missile Race''? Jane's Intelligence Review, 1 January 2000.

[22] 'Indian Agni II Missile Said Aimed at China', Calcutta The Telegraph, 30 April 1999, p. 12, FBIS ID FTS 19990430001269.

5,500 km system. This would give India a system capable of holding Beijing at risk.[23] India is also developing a variant of its shorter-range Prithvi, the Dhanush, which is designed for launching from aboard surface vessels and possibly submarines, along with a land attack cruise missile.[24] India's weapons program has made significant advances as well. On August 17, 1999 India announced its nuclear doctrine of "credible minimum deterrence", which asserts that "India would respond to a nuclear attack with 'punitive retaliation' should deterrence fail".[25] One of its lead scientists, perhaps prompted by similar Chinese claims, said that India had the capability to build a neutron bomb.[26]

Extant capabilities: the Russian and Chinese threat

Russia's strategic offensive forces are likely going to be somewhere between the three thousand or so that are permitted under START II (Strategic Arms Reduction Treaty II) and whatever the US and Russia may negotiate under START III. [27] However, it is important to appreciate that Russia's forces are going to be far more modern than those forces that the Soviets deployed in the 1980s. The SS-27, Russia's new ICBM, is quite advanced, and the missile it will deploy on their follow-on submarines will likely be just as advanced. Moreover, the Russians have indicated that they hope to use this new SLBM (sea-launched ballistic missile) as a common missile for both the land and sea-based deployments.[28] It is worth noting, in addition, that while the SS-27 is being deployed as a single warhead missile, it is capable of carrying more than one re-entry vehicle. Thus, while there will be fewer delivery vehicles, the Russians will have the potential to maintain a fairly large number of warheads in the force.

China, on the other hand, is the only nuclear weapon state explicitly and openly committed to building up its offensive potential.[29] Its forces in the next ten to fifteen years will be far larger than they are today. The unclassified intelligence estimates indicate that in addition to their land based CSS-4's, China will have some "few tens" of additional land based and sea-based ballistic capabilities.[30] In addition, while the current model of the land based system could carry MaRVs (maneuvering reentry vehicles), the follow-on systems to the DF-31, now in testing, to include the SLBM variant, are projected to have much more throw weight and could carry MIRVs (multiple independently targeted reentry vehicles) and have an 8,000 km range. The DF-31 was tested in August 1999, and unclassified US intelligence sources

[23] Ibid.

[24] 'India Plans to Develop Intercontinental Ballistic Missile', Bangalore Deccan Herald, 16 December 1999, FBIS FTS19991216000121.

[25] 'India Drafts Doctrine on Nuclear Arms', Pamela Constable, The Washington Post, August 18, 1999, p. 1, and Indian Nuclear Doctrine, National Security Advisory Board

[26] 'India Discloses It Is Able to Build a Neutron Bomb', Wall Street Journal, 17 August 1999, p. 16.

[27] NIC Report. See also report of statement by Russian Chief of General Staff, Anatoly Kvashnin, 'Russian CGS Thinks Russian Strategic Arsenal Must Be Cut', Moscow Interfax, June 24, 2000, translated in FBIS.

[28] 'Russian Admiral Vaunts Naval Missile Systems', Interfax, January 4, 2000, translated in FBIS. See also, 'Center TV Carries Interview with TOPOL M Designer', Moscow Center TV, December 17, 1999, translated in FBIS.

[29] 'China, Nuclear Weapons, and Arms Control: A Preliminary Assessment', Brad Roberts, Robert A. Manning, and Ronald Montaperto, published by the Council of Foreign Relations in conjunction with National Defense University, and the Institute for Defense Analyses, 2000. See also, 'U.S. National Security and Military/Commercial Concerns with the People's Republic of China', Volume I, Select Committee of U.S. House of Representatives, 1999 (Cox Report), and 'Annual Report on the Military Power of the People's Republic of China', Pursuant to Section 1202 of the FY2000 National Defense Authorization Act. See also, James R. Asker, 'Determined to Build', Aviation Week and Space Technology, May 15, 2000.

[30] NIC Report, James R. Asker, 'Determined to Build', Aviation Week and Space Technology, May 15, 2000.

suggest that deployment may be near but has not yet happened.[31] The follow-on to the DF-31 is projected to have a range of 12,000 km.[32] Thus, the Chinese are going to have a larger force and one of fairly reasonable strategic potential in the next ten years or so. This potential is of interest particularly in light of the fact that the US offensive force capabilities are coming down in total numbers and in the number of targets the force presents.

Russia and China are of continuing concern as suppliers to emerging ballistic missile powers. According to the Director of Central Intelligence in March, 2000, "expertise and materiel from Russia has continued to assist the progress of several states". China, he has testified, "remains a key supplier of WMD-related technologies to developing nations".[33] Of particular concern is the September 1999 assessment of the Intelligence Community that Russia and China "are probably willing to sell the requisite technologies" for developing countermeasures to the emerging powers. Hopes that China would become less committed to proliferation activities following successful negotiations over its entry into the WTO were delivered a blow by its attitude during recent bilateral talks with the US in early July 2000.[34]

While the likelihood of accidental or unauthorized launch by Russia or China is presently low, there is still cause for concern. Russia's financial condition may lead to reduced confidence in its command and control system or further deterioration in its missile attack warning system. China may prove of increased concern over time as it begins to deploy mobile ICBMs and SLBMs directed by a new command and control system and supported by a rudimentary ballistic missile attack warning capability.

Strategic rationale

The capabilities of the existing and emerging ballistic missile powers pose a strategic and operational challenge to the US that is different than those posed by the USSR during the Cold War.

Thus far – and that is all we can say – the emerging powers seem to have confined their objectives to exerting strategic influence on US political, military and economic decision-making as it affects their own, specific and more limited, national interests rather than posing a threat to American vital interests. At the operational level, the emerging powers – and for the foreseeable future Russia and China as well – have no expectation of being able to match American conventional force capabilities.

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[31] On the flight test, see 'China Develops Warhead Decoys to Defeat US Defenses', Bill Gertz, The Washington Times, September 16, 1999. A PLA daily newspaper quoted in Jane's Defense Weekly states that the missile has already been deployed. See, 'China Deploys Dong Feng 31 Missile Towards Its Southern Borders', Yihong Zhang, Jane's Defense Weekly, November 2, 1999. On US sources, see the Cox report and 'China: The Forgotten Nuclear Power', Brad Roberts, Robert Manning, and R. Montaperto, Foreign Affairs, July 2000.

[32] 'NMD: An International Concern' Jane's Intelligence Review, May 1, 2000, Vol. 12, no. 5, and Brad Roberts, Robert A. Manning, and Ronald N. Montaperto, 'China: The Forgotten Nuclear Power,' Foreign Affairs, July 2000.

[33] See, Testimony of Director of Central Intelligence, George Tenet before the Senate Foreign Relations Committee on 'The Worldwide Threat in 2000: Global Realities of Our National Security', March 21, 2000. Available at www.cia.gov (visited June 26, 2000).

[34] 'Reports Say China is Aiding Pakistan on Missile Project', David E. Sanger and Eric Schmitt, The New York Times, July 2, 2000, p. 1 and 'Taiwan May Get Anti-Missile Technology; US Won't Rule Out Shield Against China', John Pomfret, Washington Post, July 9, 2000, p. A19., and 'U.S. China Talks Don't Resolve Issue of Pakistan Missile Aid', Erik Eckholm, The New York Times, July 9, 2000.

However, the technical characteristics of the ballistic missile systems deployed by both the extant and emerging powers, in combination with their deception and denial techniques, provides them with the opportunity to surprise. At the same time, these emerging powers know far more than they should about the US – how it thinks, how it is structured to wage war, the type of information it can collect easily and that which is more difficult. This knowledge could lead these powers to think they had a decided advantage in a crisis or conflict, most especially one in which US vital interests were not immediately at risk.

Thus, the different strategic and operational-level challenges posed by the extant and emerging powers point to a need to reconsider the structure of US military forces to support peacetime engagement, crisis management, operations in war and the conduct of war termination negotiations. The forces of the US are currently structured to conduct operations in wartime with the aim of destroying an adversary's cohesion by striking hard from the outset of a conflict at its 'centers of gravity' and by attacking its highest value assets. Hence, the force is heavily oriented toward offensive operations conducted simultaneously at the operational and strategic levels of war. The unspoken but essential premise of the contemporary American way of war is that the US homeland is and will remain a sanctuary.

The possession by an adversary of NBC armed ballistic missiles undercuts this premise. American political leaders and military forces will find themselves under enormous strains in time of crisis or conflict to assure their own and allied publics that they are not being placed at risk by the actions of their governments. Yet, warheads and missiles deployed in underground facilities and connected to a command and control net based on fiber optics directed by a leadership whose location is unknown and whose risk calculus uncertain in our view will make it difficult or impossible to provide the public such assurances.

Many assert that no power, especially an emerging ballistic missile power, would dare threaten or attack the US out of fear of retaliation. But solemn assurances that the US, along with allies possessed of the capability to do so, would retaliate in kind if attacked may not persuade US/allied publics to accept the risks associated with crisis management and war operations. Threat of retaliation may have little effect on the behavior of an adversary who has posed the threat with no intention of attacking but of using its forces to undermine the strategic advantages of the US or the confidence of allies in US steadfastness. Lastly, retaliation does not solve the problem of an adversary's first strike against allies, US troops abroad, or the American homeland.

To offset the advantages that may be enjoyed by an emerging power, the US might consider whether and in what proportions it needs to complement its retaliatory capability with credible means of effectively pre-empting and defending against the limited ballistic missile potential of these powers.

Preemption reduces the coercive potential of a short warning ballistic missile launch. At the same time it may encourage a 'use or lose' attitude to be adopted by an adversary. Even before getting to the question of what conduct would prompt such a decision by the US however, the prior question of required capabilities must be addressed. Recalling the penchant of the emerging powers to go underground and for secrecy, two system characteristics come immediately to mind – those with a high probably of kill and those that can destroy hardened and/or buried targets. For the foreseeable future, the only weapon systems with both characteristics are armed with nuclear warheads.

Active defense is far preferable in many respects to restructuring US forces for preemptive nuclear operations. Defense provides disincentives to the acquisition of NBC-armed ballistic missiles that offensive retaliatory forces do not, as current events attest. Defense reduces an adversary's confidence that its threat will be as feared by the opposing side as it intends. While no defense is perfect, the higher the probability of its successful employment the lower the credibility in American minds of an adversary's threat to launch an NBC-armed ballistic missile attack against US territory. If an attack were nevertheless launched, the presence of a defense provides the political leadership with many more options to respond than it might have if possessed only of retaliatory forces.

Others may judge this formulation as an indication of the quest for superiority by the US. But this is a judgement that ignores the purpose of the defense: to restore to acceptable levels the risks run by the US and its allies in the conduct of their security policies and management of crises and conflicts. This effort is made necessary by the increased risks posed in the first instance by the emerging ballistic missile powers. Absent that threat, it is unlikely that the current consensus on NMD would exist.

In this context, missile defense is necessary to sustain confidence, at home and abroad, that in limited regional crises or conflicts involving a ballistic missile power, US military strategy will not be constrained in ways that increase the potential of casualties and damage while reducing the likelihood of an acceptable outcome.

Responding

Those who disagree with the Secretary's recommendation frequently quarrel with specific details concerning the threat. It is said to be insufficiently imminent, numerous or robust to require the deployment of a ballistic missile defense, with all that that entails. Alternative measures are thought more appropriate – some combination of carrots of sticks to lure North Korea, Iran, Iraq, India and Pakistan and other proliferators, away from their programs. But these objections do not go to the heart of the Rumsfeld Commission's analysis or its warning: the ballistic missile threat to the US has gone from being chronic to acute, from potential to real.

While many do agree on the immediacy and unpredictability of the threat, disagreement exists on the appropriate response. For those who oppose NMD in the American debate, the preferred alternative is a mixture of continued reliance on offensive nuclear forces to deter the threat and use of NBC-armed ballistic missiles against the US (and its forces abroad and allies) and new diplomatic initiatives. The latter include not only arms control measures, but engagement of potentially hostile states with the aim of addressing and if possible resolving the source(s) of hostility. [35]

Those who would favor deployment of ballistic missile defenses do not want to continue relying on what they believe are the failed policies of the US government over the last decade or more. They are perplexed that many of the same critics who would endorse offensive deterrence are proponents of the Comprehensive Test Ban Treaty (CTBT) and other measures designed to reduce the very saliency of nuclear weapons required for posing them as effective

[35] See, 'Evaluating the Criteria for NMD Deployment', Arms Control Today, April 2000, available at www.armscontrol.org/ACT/april00/panap00.htm(visited May 2, 2000).

deterrents.[36] With respect to diplomacy, the equivocal outcome of the negotiations with North Korea (even despite the apparent gains of the recent North-South Summit) and the unresponsiveness of Russia and China to American entreaties that they end their support to emerging ballistic missile powers fuel their skepticism.[37]

Consequences

There is no question that a national missile defense deployment by the US will have broader strategic and political consequences.

⇨ *ABM Treaty.* The US cannot develop and deploy an NMD system that meets its objectives while it is constrained by the 1972 Anti-ballistic Missile Treaty (ABMT).

How the US removes the constraints of the ABMT is a matter of consequence. Withdrawal from the treaty is preferred by many for domestic political and diplomatic reasons. No withdrawal is possible without an informed, public debate on the issue in the US. Political leaders need to be unambiguous about American intentions in deploying a limited defense, the cost of the system over time and that it may need to be improved periodically to counter an evolving threat. They need to assure the public that it is not designed to create a 'fortress America' or a 'hyperpower' anxious to intervene unilaterally in the affairs of other states. They need to place firmly missile defense in the context of an effort to restructure American military capabilities. The US is committed already to reducing the size of both its conventional and strategic offensive forces. Leaders need to explain how the addition of missile defense helps to posture these forces to meet the threats of the present and future and to function closely in coalition with allies and friends.

A policy rooted in the informed judgment of the American people will make it easier for US leaders to consult with allies and to address the objections raised by Russia and China. The American people will want a clear statement of the 'limits' beyond which a limited defense will not go and the options available should the threat evolve, for better or worse. These, and other factors, will inform their consent. Legislation passed by the Congress enabling the initial deployment and controlling future deployments will reflect that consent.

⇨ *Russian Attitudes*. Declaring that the US is no longer legally bound by the ABMT will not reduce Russian opposition to NMD. Nevertheless, the Russians know they have nothing to fear from a limited NMD system with regard to their own offensive deterrent, especially one deployed by the US on the basis of national consent outlined above. They fully understand that the political leadership in the US is prepared to reduce American offensive forces to levels approaching those proposed by Russia. They know as well that the US is willing to develop a new relationship, based on recognition of each other's legitimate interests and cooperation on matters of mutual concern. The sooner the issue of an NMD deployment is put

[36] For a discussion of the debate on the role of nuclear weapons in US security policy see, Stephen A. Cambone and Patrick J. Garrity, 'Future of US Nuclear Policy', Survival, Winter 1994-95, p. 73-95.

[37] The concern with respect to North Korea is that neither the agreement to 'freeze' its nuclear programs nor its declaration that it would not test its ballistic missiles while negotiations with the US on improved relations were ongoing is verifiable in its own right or meaningful. See, 'Korea Accord Fails to Stall Missile Plan', Steven Lee Myers and Eric Schmitt, The New York Times, June 18, 2000, p. 1. On Russia and China, see the testimony of the DCI George Tenet, 'The World Wide Threat in 2000: Global Realities of Our National Security', February 2, 2000 before the Senate Select Committee on Intelligence available at www.cia.gov.

behind the two countries, the sooner the US and Russia can get on with the too-long delayed process of reconstructing their relationship.

⇨ *China's Attitudes*. There is little at the moment the US can do to assuage Chinese concerns. The leadership in China's government and the armed forces have occupied a position from which they can move only over time. Until the relationship between the mainland and Taiwan is put on a new footing, the Chinese will continue to protest that all that the US does in the region-- missile defense, alliance activities with Japan or troop deployments-- is aimed at undermining Beijing's position.

United States strategic policy relative to China should be unambiguously clear. The US has no reason to structure a relationship with Beijing similar to that which prevailed between Moscow and Washington during the Cold War. The US has no interest in guaranteeing to China, as it did to the USSR in signing the ABMT, that China can place nuclear weapons on American soil. The US should not offer an 'assured destruction' relationship to China. The balance of forces between the sides and the nature of our relationship does not suggest such an approach. The assured destruction relationship with the USSR was developed in the hostile context of the Cold War. Why the US would choose to base its relationship with China on assured destruction and the hostility it implies is hard to understand.

That said, the intelligence community now projects that by 2015 China will add a 'few tens' of newly designed ICBMs to the roughly twenty ICBMs it now deploys. This modernization and expansion program, begun some time ago, would provide more capability than China has today. In relation to a limited US defense, after China completes this program the balance will be roughly where it is today. If China expands its modernization effort beyond current projections, then they do so out of strategic ambition and not in response to a US deployment. Under such conditions, it would be natural for the US to consider the role of missile defense in countering a new threat. But this is an outcome over which China exerts considerable control.

⇨ *European Allies*. As the debate over NMD has developed, it is becoming clear that the European allies of the US are not overly concerned that a limited NMD deployment will decouple the US from Europe's defense or undermine deterrence. Nevertheless, the US might consider a more explicit commitment of missile defense to our allies, perhaps as part of our obligations under Article V of the NATO treaty. The US might also consider lending support to the development of a European missile defense capability, perhaps based on ships for both boost and mid-course operations. And, the US and allies might engage in contingency planning, to include Russia if it desired, aimed at defining a response to the launch of a missile toward Europe. This would relieve the perception that Europe is dependent on the US for its defense while sharing responsibility across the Atlantic for a decision to retaliate.

Allies do worry about what they call 'destabilization'. It means that they want assurances those diplomatic, arms control and non-proliferation regimes that have grown up in the last twenty years, and the concept of deterrence as the basis of security on which they rest, will not break down as missile defense is deployed. Americans need to understand that our allies are committed to these regimes for two reasons. First, allies believe the regimes provide mechanisms to increase the probability of cooperation, reduce the likelihood of crises, and limit the consequences of conflicts should they occur. Second, these regimes are a key source of leverage for allies in the international system.

In deploying an NMD system, the US should reassure the allies of the continued utility of diplomacy, arms control and non-proliferation regimes. At the same time the US cannot continue to rely so heavily upon them in their current form for its security. Many of these regimes date their origins to the Cold War, and like the ABMT, are badly in need of being rethought. This is most especially true of existing regimes affecting the transfer of technology. If these regimes are to have effect, they need the support of our allies. It is in US interest to engage our allies in an explicit effort to reform those regimes that are still credible, dismantle those that are counterproductive, and formulate if appropriate and feasible new regimes. But in all cases the emphasis must be on joining our allies in effective measures to address real security problems so that international norms based on universal adherence to agreements are not violated in future with near-complete impunity.

Most importantly, the US will need to persuade its allies that an NMD deployment is a national decision based on strategic calculation and not a result merely of partisan politics. If allies continue to believe the US is not committed to its own policies and programs, there is little reason for it to expect their support. If the US makes the NMD decision with purpose and confidence, allies may not be persuaded NMD is a good idea. Nonetheless, they will have far greater confidence that the US will address with vigor and coherence the many consequences they believe will flow from an NMD deployment. Allies will need to be willing to reconceptualize deterrence, to consider whether vulnerability to any threat at all times is a sound basis for developing a secure and stable international system.

⇨ *Offensive force reductions*. Another issue related to an NMD deployment decision is offensive force reductions. The US is prepared to consider reductions to or below the levels agreed with Russia at Helsinki. But offensive reductions employing the START formulae are no longer credible if the US is to sustain a credible, reliable and survivable offensive capability. Subsequent reductions need to be linked to concepts for deterrence that reflect current and future risks and tied to a restructuring and modernization of the force. The US will need to take an unbounded look at both its requirements and the concepts of deterrence they support.

Conclusions

Despite recent diplomatic activity, NMD deployment is still a high priority for the US. The threat from emerging ballistic missile powers is broad, increasingly mature and continuing to evolve. The dynamic nature of the international system coupled with the increasingly easy flow of advanced technologies should leave the US of wary of sharp reversals in policy trends abroad and of the likelihood of strategic surprise. No effective defense against ballistic missiles is possible so long as the US is restricted by the terms of the ABMT. Proceeding without the treaty's constraints is the only way to acquire the limited defenses the US needs and normalizing the relationship with Russia.

As the US moves to deploy a NMD, it is necessary to take its allies into its confidence. The US needs to take measures to assure a NATO-based capability to conduct continental missile defense. While the US works with our European allies it also must keep in mind the political and technical needs of our allies in Asia and in the Middle East with respect to missile defenses. Israel and Japan in particular depend on US steadiness of purpose if those nations are to play a stabilizing role in their respective regions. The US should seek to negotiate cooperative defense efforts with Russia. Steadiness and transparency are needed with respect

to China. There should be no ambiguity in Chinese minds that the US will not acknowledge that a normal relationship depends on an American guarantee that China can threaten the very existence of the US.

Finally, as part of the restructuring of US capabilities and policies to reflect a new era, the US needs to reconsider its retaliatory deterrence requirements and revise as appropriate its offensive force structure.

CHAPTER TWO: CONCEPT AND FEASIBILITY

II.1 Alternative concepts

David Gompert

Introduction

There is not a single concept but at least three that should be understood and analysed; each has a different premise, rationale, architecture, implications and feasibility.

The first concept I would describe as land-based, homeland defence against known low-end threats. The second is global defence against plausible low-end threats. The third is strategic homeland defence. When I say 'low-end' and 'strategic' it is shorthand for scores versus hundreds of incoming missiles.

Purposes

The purpose of the first concept is straightforward: it is intended to preserve the credibility of the United States to intervene on the Korean Peninsula and in the Persian Gulf - the two areas of principal strategic concern today - by denying North Korean, Iran and Iraq a 'relatively' easy and tempting way to weaken US will by threatening US population. It is aimed at preserving the credibility of US action against regional aggression by protecting the US public against these specific countries.

The second concept has a more general premise. Long-range ballistic missiles, as well as short- and medium-range ballistic missiles, with weapons of mass destruction, are likely to be a weapon of choice for any state with a reason to be concerned about intervention by the United States and its allies. In this sense, the concept views the threat more as a feature of the new era, than as merely an observation about the current situation. It further recognises that the WMD/BM threat can be aimed at both the will and the ability of the United States and its allies to project power. Therefore the concern is not only about US homeland but also allied territory, coalition forces, bases, force flows and local friends. This second concept is different from the first concept in two other respects. First, it assumes determined and resourceful adversaries, some of whom may not be currently known or suspected as adversaries. Second, it envisions a single architecture to protect all high-value targets against low-end threats.

The third concept rests on the beliefs that a combination of strategic defence and low levels of strategic offensive forces (a thousand weapons or lower) is a stable, morally-preferred replacement for 'mutual assured destruction' in general, and that it is now possible to move in that direction because the bi-polar world and the prospect for a spiralling build-up of strategic offensive forces in responses to defences are gone. This view implies or accepts that lower strategic offensive forces are particularly important in a world of defences to guard against the combined counterforce-plus-defence first-strike fear. Even though it is not my preferred option, this particular concept is an interesting and respectable argument and option, now that the principal nuclear powers are not adversaries.

Architecture

The first is familiar to everyone. It is essentially the programme waiting for the President's decision this summer, plus perhaps some enhancement of the sensors and a second interceptor site in continental United States.

Concept Two is an integrated, tiered - I would argue three-tiered system - involving boost-phase intercept at one end, land-based at the other end and, in between, what I consider the 'work horse' of the concept: ship-based system that can be deployed flexibly and thus contribute to both theatre and national protection. This triad of interceptor systems would be served by a common earth- and space-based sensor suite, as well as a unified battle-management system. Such an architecture would end the distinction between theatre missile defence and national missile defence, in part because it would protect forces, local friends, US territory, and allied territory, but also because it would treat every ballistic missile launched by a presumed enemy as a target for this one single system.

Architecturally, Concept Three would be a lot like option two, only larger. Concept Three is meant to provide effective strategic homeland defence, which would require tiering. I do not think effective defence is possible with a one-tier, land-based system only. But, in this case, the purpose of the tiering is to provide defensive in depth for homeland defence. So, it would have the same architecture as Concept Two. But it would have many more interceptors and probably space-based kill technologies that have yet to be developed.

Implications for the ABM Treaty

Arms control implications would vary greatly among these options. Limited changes would be required for Concept One, as I think has already been widely reported. Concept Two would require extensive changes to the ABM Treaty, having to do with the space-based, air-based and sea-based sensors and interceptors, as well as the ability to connect them together and to take advantage of any sensor system for any interceptor. These are very significant changes. What would be left would be a new anti-ballistic missile limitation regime that could be designed to guard against break-out The third concept - strategic homeland defence - would mean the end of the ABM Treaty; this concept contradicts fundamentally the purposes of the ABM Treaty, and vice versa.

Feasibility

In a very narrow sense, Concept One is the most feasible because it is the easiest to build at this point. It is the most available, the most easy to deploy programmatically within a matter of a few years. But, if the question of feasibility includes effectiveness, Concept One is extremely fragile. It is essentially a point solution to a point problem, especially the one posed by North Korea. Perhaps the advocates of Concept One want to solve that point problem and hope that the world will change. But, if you believe - as I do - that the problem is more inherent in the new era, Concept One will prove ineffective in the face of increased raid size, dispersed or uncertain geographic location of launch and, most importantly, counter-measures. Counter-measures are a problem for Concept One because of its difficulty with target discrimination, because of the limited sensor suite, and also because of the fact that intercept angles and intercept velocities are not advantageous. Concept One is based upon an

old and, in a way, odd idea, namely, that the best place from which to launch interceptors in order to defend a particular geographic space is that geographic space itself. That might have made sense when defences were intended to protect a missile silo field, but I am not sure it does for defending territory, especially when you consider the relative velocities and the disadvantageous angles that are involved with terminal defence. So I believe Option one only feasible in a very narrow sense and likely to be ineffective.

Concept Two is obviously harder to build. It involves unproven boost-phase and sea-based interceptors, and it involves an enormous integration and engineering challenge. However, technologically speaking, this concept should be feasible. Missile defence is essentially an information problem, and we now have the requisite technologies available; as our ability to integrate them improves, I think we are ready to cross an important threshold in our ability to knock down ballistic missiles. Why do I say it is it is an information problem? It is a matter of detecting a bright plume, tracking it, passing that track from one sensor to the next, distinguishing real targets from decoys, and then delivering one singularity to the same spot in space as another singularity in space at the right time. And that is an information problem - one that can be solved. But it is also a huge engineering and integration problem, and I do not think that has been solved yet.

Why is Concept Two more effective that Concept One? Mainly because it is tiered and can therefore concentrate on and catch leakers. The problem faced by each tier is reduced by the effectiveness of the previous tiers. Concept One provides land-based as the first and last line of defence. In Concept Two, land-based interceptors are the last line of defence after boost-phase and sea-based tiers have eliminated as much of the threat as possible, under a very unified battle-management system. Concept Two is also better against counter-measures because of: (i) the opportunity to exploit better sensors to discriminate targets, (ii) the chance to intercept before fragmentation, (iii) the possibility of advantageous intercept angles and slower relative intercept velocities. The beauty of boost-phase intercept is that the bright plume is easily seen, and kill can occur before there are any countermeasures or any fragmentation.

Concept Three is the least feasible. It has all the problems of Concept Two - technology, engineering - and more. Most important, it faces a severe problem of numbers. A determined offense has an inherent advantage over even a determined defence. If nothing else, that makes Concept Three fiscally infeasible, because it is a lot cheaper to add missiles (or decoys) than it is to add reliable interceptors and to increase the effectiveness of sensors and battle-management systems.

Conclusion

I think we should focus on the low-end, but only on the low-end. Concept Three is an interesting and respectable concept in a world where the leading nuclear powers are friends - or at least not enemies - but it does pose very serious break-out problems, not only because of the possibility of breaking out on defence but also I think even more seriously the possibility of breaking out on the offense. If that happens, there could be a very dangerous situation if relations between the United States and China, or the United States and Russia turn sour - a potentially dangerous situation of large offenses and at least partially effective defences. If we are serious about the low-end, Concept Two makes more sense than Concept One. If we are going to go through all this trouble and expense, if we are going create all these difficulties

and debates within the Alliance, if we are going to disturb the Chinese and the Russians, then let us do it for an effective system.

That is going to take time, but we could make good use of time. We need it to build consensus in the Alliance. If we are going to start somewhere, I do not think we should start with the weakest leg of the triad, i.e., land-based. We should start by concentrating on boost-phase intercept, sea-based or airborne, which has many advantages. First of all, it addresses the theatre problem which is the most serious problem today. Secondly, it does not raise such serious problems with the Russians and the Chinese. After boost-phase and sea-base, if you still need land-based interceptors, you get around to it later. But I am not absolutely convinced that land-based is ever needed. And I am not convinced that land-based is viable as of now.

One last point. China is, to me, the biggest problem of all for any of these options because of its small current offensive force. I do not believe that force is going to grow rapidly, with or without American missile defence. I think we are going to see slow but steady growth in Chinese long-range strategic offensive weapons. With that growth, we need to make a basic decision: what is the nature of the strategic relationship between the United States and China? Are we prepared to see our territory vulnerable to Chinese offensive capabilities, as we have been with Russia. That is the most fateful choice we have to make at this particular point, and also the one that is the most difficult to make politically in the United States.

II.2 The planned US National Missile Defense system - obsolete before deployment

Lisbeth Gronlund

Introduction

Will the National Missile Defense (NMD) system that the United States is proposing to deploy work against the threat it is intended to defend against? According to the US government, the system is designed to defend against attacks that could be launched by emerging missile states, and that these would involve up to tens of long-range ballistic missiles armed with nuclear, chemical, or biological weapons.

The effectiveness of the NMD system would depend in large part on the 'countermeasures' that an attacker could take to counter the defense by confusing or overwhelming it. It is the task of the US Defense Intelligence Agency to define the characteristics of the threat that a US weapons system under development must contend with, and this threat definition is usually based on intelligence data gathered by satellites, humans, and other sources. However, there may be no such intelligence information about the countermeasure programs of emerging missile states.

The July 1998 Report of the Rumsfeld Commission to Assess the Ballistic Missile Threat to the United States called attention to two important issues about threat analysis. First, the report noted that the absence of evidence is not evidence of absence—that is, the failure of the US intelligence community to detect direct evidence of weapons development does not necessarily mean that such development is not taking place. Second, given the possibility of non-observable development activities, a threat analysis must assess what weapons a country is capable of developing, given its technical sophistication.

I was a member of a panel of eleven independent physicists and engineers that applied this methodology to understanding what countermeasures would be available to a country able to develop a long-range ballistic missile to attack the United States. The panel, which included scientists with considerable experience on ballistic missile defense and countermeasures issues, produced a detailed report—Countermeasures: A Technical Evaluation of the Operational Effectiveness of the Planned US National Missile Defense System. (The full text of the report is available on the web at www.ucsusa.org/arms.)

The first publicly available document to discuss countermeasures that might be available to emerging missile states was the September 1999 National Intelligence Estimate on the Ballistic Missile Threat to the United States, which is a consensus document of the US intelligence agencies. This document noted that such states could use 'readily available' technology to develop countermeasures and could do so 'by the time they flight test their missiles.'

Our study took the next step: we considered in detail the types of countermeasures that would be available and then assessed how effective the planned US NMD system would be against such countermeasures.

Our report considers only countermeasures that would be simpler for an attacker to develop and deploy than it would be for them to develop and deploy long-range ballistic missiles with nuclear, chemical or biological weapons in the first place. And our analysis of the effectiveness of the NMD system does not consider just the first phase of the system that could be deployed by 2005—rather, we assume that the NMD system has all of the sensors and interceptors planned for the full 'Capability 3' system that would be deployed by 2010 or later. This is the system the Pentagon says will be effective against missile attacks using "complex" countermeasures.

The Countermeasures report gives an overview of the types of countermeasures that would be available to an emerging missile state, and then goes into considerable detail for three of those countermeasures. Such a detailed analysis is possible because the United States is now so close to potential deployment that it has selected the specific interceptor and sensor technologies that the NMD system would use. We made generous assumptions about the capability of the defense; we assume that the individual components work perfectly and their performance is limited only by the laws of physics. In particular, we assume that the system can 'hit a bullet with a bullet.'

The three countermeasures we analyze in detail are: (1) biological or chemical weapons deployed on submunitions, (2) nuclear weapons deployed with anti-simulation balloon decoys, and (3) nuclear weapons covered with a liquid-nitrogen cooled shroud. We found that each of these three countermeasures would defeat the fully deployed NMD system by either causing it to fail catastrophically or significantly degrading its effectiveness.

Chemical or biological weapons on submunitions

The first countermeasure the report considers in detail is appropriate to an attacker using biological or chemical weapons. Instead of putting the agent into one large warhead on each missile, the attacker could divide it into 100 or more small warheads, or submunitions, that would be released early in flight after boost phase. The attacker would have a strong incentive to use submunitions even in the absence of missile defenses because doing so would permit the attacker to disperse the agent over a wide area. But by using submunitions, the attacker would also overwhelm a limited defense such as the planned NMD, which will have 250 interceptors when it is fully deployed.

The Rumsfeld Report noted that potential attackers could build such submunitions. We show this in detail by considering whether an emerging missile state would encounter any significant technical barriers to using submunitions rather than one large warhead.

Our report also considered in detail two countermeasures that an attacker could use with nuclear weapons.

Nuclear warheads with anti-simulation balloon decoys

The first of these are 'anti-simulation balloon decoys'. In this case the decoys are not made to look exactly like a specific warhead, but the warheads are disguised to make them look like decoys. In this way, the attacker avoids the more difficult problem of making a decoy look exactly like a specific warhead. Anti-simulation is a powerful tool against a defense that uses

exo-atmospheric hit-to-kill interceptors, such as the planned NMD system. Above the atmosphere, there is no air resistance and lightweight objects travel on the same trajectory as heavy objects.

In the case we consider, we assume the attacker puts its nuclear warhead inside a balloon made of aluminized mylar, and released it along with dozens of empty balloons. Each of the balloons could be made a slightly different shape from the others.

We then consider in great detail the various ways that the defense might be able to use its different sensors to tell which balloon contains the warhead -by the radar reflections of the balloons, by observing their motions or shapes, or by measuring their temperature and thermal behavior. We find that an attacker could readily make balloons that had no unique distinguishing physical characteristics that could be observed by the planned sensors. Thus, regardless of how capable and accurate the system sensors are, they would not be able to discriminate the empty balloons from those containing warheads. The defense would need to shoot at all the balloons to prevent the warheads from getting through, and an attacker could deploy enough balloons that the defense simply couldn't shoot at them all.

Nuclear warheads with cooled shrouds

The third countermeasure we analyze in detail is a 'cooled shroud', where the attacker covers each nuclear warhead with a double-walled cone containing liquid nitrogen. The very cold liquid nitrogen would greatly reduce the infrared radiation emitted by the shrouded warhead. Discrimination is not the issue here; the X-band radars could see each shrouded warhead and guide the interceptor close to its intercept point. But the cooled shroud would prevent the kill vehicle from homing on the warhead: the kill vehicle's infrared sensors could not detect the warhead in enough time to maneuver to hit it. Our report also shows that an attack could be launched on nighttime trajectories to prevent the kill vehicle from using visible light sensors for homing.

None of these countermeasures are new ideas. And while any of these three countermeasures would defeat the fully-deployed planned NMD system, it is likely that other types of countermeasures could as well.

The response to our report has been interesting. None of the technical analysis in our report has been publicly disputed. Instead, our critics have made one of two general arguments: (1) that we have underestimated how difficult it would be for an emerging missile state to develop and deploy the countermeasures we describe, or (2) that the system will eventually be able to respond to such countermeasures with counter-countermeasures that could defeat them.

Some who argue that countermeasures would be too difficult for an emerging missile state point to the difficulty Britain had in developing its Chevaline countermeasure system. This is a false analogy. Chevaline was designed to counter a Soviet defense that defended only a small area and used nuclear-tipped interceptors operating both within and above the atmosphere. (In fact, our anti-simulation decoys and cooled-shroud countermeasures would not be effective against such defenses.) Chevaline had a far more demanding task than defeating the exo-atmospheric hit-to-kill interceptors of the planned US NMD.

Some -including Lt. General Kadish, Director of the Ballistic Missile Defense Organization (BMDO)- argue that emerging missile states would be unable to test their countermeasures enough to have confidence in them, and that the resulting uncertainty can deter an attack. However, the countermeasures we considered are well suited for testing in ground facilities or from aircraft and would not require flight testing on a missile.

Moreover, as the Rumsfeld Commission noted in their July 1998 report, emerging missile states such as North Korea neither require nor seek high standards of reliability in their missile programs. In fact, US threat assessments are based on the premise that emerging missile states can present a credible threat without adhering to high standards of testing and reliability. Thus, the United States declared the North Korean Nodong missile operational after a single test flight. If the missile programs of emerging missile states had to meet the standards some want to impose on countermeasures, there would be no missile threat.

In its intercept tests thus far, the targets have included a mock warhead and one large balloon decoy, with a physical appearance and infrared signature very different from that of the mock warhead. Thus, the Pentagon assumes an attacker could deploy a large balloon decoy, yet also assumes that this adversary could not take the obvious and relatively easy step of putting the warhead itself inside a balloon and releasing many empty balloons along with it.

Other critics of our report do not dispute that such countermeasures would be available to emerging missile states. Instead they argue that the system must walk before it can run, and that it will eventually be able to address such countermeasures.

But our report assessed the full Capability-3 system, which the Pentagon already claims will work against ‘complex’ countermeasures, and showed that it could be defeated by even simple countermeasures.

Some argue that countermeasures are not the end of the game and that the US will develop counter-countermeasures. But effective counter-countermeasures may not exist for this system. In fact, the June 13 report of the NMD Independent Review Team (known as the “Welch Panel” after its chair, retired General Larry Welch) noted that while the current design is adequate to meet the ‘defined C-1 threat’ (which does not include realistic countermeasures of the type we analyze), new discrimination capabilities would be needed to meet ‘potential countermeasure challenges.’

The United States should determine if there are effective responses to such countermeasures before deciding to deploy and, if there are, they should be an integral part of the defense from the beginning. As the September 1999 National Intelligence Estimate noted, an emerging missile state could develop countermeasures by the time it flight tests its missile. The simple countermeasures we consider would render the planned defense obsolete before it is even deployed.

To assess the difficulty of developing and deploying countermeasures, the US should establish a countermeasures ‘Red Team’ that is not under the control of the BMDO to build countermeasures using technology available to emerging missile states. And then the planned NMD system should be tested against realistic countermeasures, something which has not happened yet, and which is not likely to occur for many years, if ever. For example, none of the 19 intercept tests planned before the first phase of the NMD system would be deployed

will include warheads that are disguised, a minimum step any attacker using decoys should be expected to take.

As the American Physical Society, the professional association of 42,000 physicists, recently stated: "The United States should not make a deployment decision relative to the planned National Missile Defense (NMD) system unless that system is shown—through analysis and through intercept tests—to be effective against the types of offensive countermeasures that an attacker could reasonably be expected to deploy with its long-range missiles." (The full statement is available on the web at www.aps.org.)

Confidence

The issue of 'effectiveness' (i.e., how well would the system work?) is different from, but related to, the issue of 'confidence' (i.e., with what certainty would US military planners and politicians know how effective the system would be?)

An easy way to understand the difference between these two concepts is to consider a coin that was weighted so the odds of heads and tails was not necessarily 50%. What are the odds of getting heads? The odds are not known a priori. The only way to determine the odds is through testing -in this case, through repeated coin flips. The degree of confidence the coin flipper has in the odds will increase with the number of flips they do. For example, if the person flipped the coin once and it landed on 'tails', the person could not conclude with any confidence that the odds of getting heads was zero. It is only by flipping the coin many times that the person can have any confidence in what the odds are of getting heads.

The same thing is true for the NMD system – the probability of intercepting an incoming warhead (or the effectiveness of the system) can only be determined through testing. And in order to have high confidence in what the effectiveness is, many tests are needed. Unlike the coin example, the outcome of an intercept attempt depends on may factors, so even more testing would be needed in this case to assess the defense effectiveness under a range of conditions. The fact that the attacker controls some of these conditions -such as the time of day of the attack and the countermeasures used – complicates the testing even more. Because testing is both expensive and time-consuming, the United States will not conduct enough tests to be able to really assess the system effectiveness. The bottom line is that the United States is unlikely to know – with any significant degree of confidence – how effective its NMD system would be if it needed to respond to a real attack.

Not knowing how effective its NMD system was might not be a problem for the United States if it planned to use the system only as a 'last measure' if deterrence failed and an emerging missile state attacked using long-range missiles. However, many NMD supporters, including Secretary of Defense William Cohen, argue that the principle reason the United States needs a NMD system is to 'preserve US freedom of action' in the world to permit the United States to intervene with its conventional forces without fear of reprisal on US cities.

Secretary Cohen and others argue, for example, that North Korea might threaten to attack a US city with long-range missiles to deter the United States from intervening on behalf of South Korea in a potential future conflict. They further argue that if the United States had deployed its NMD system, that such a threat could be ignored because the NMD system would be able to shoot the North Korean missiles down. But in reality, even if the NMD

system were highly effective, US policymakers would not know, with high confidence, how effective the system would be before it was used.

So if US policymakers would be deterring from intervening without an NMD system, they should be deterred with an NMD system of unknown effectiveness. The Pentagon apparently understands that it will need to have high confidence in the system effectiveness: the classified requirements for the system are reportedly that the United States be 95% confident that the system would be 95% effective. But achieving this level of confidence and effectiveness with what will necessarily be a limited test program is impossible. Not only will countermeasures available to any country that could deploy a long-range missile very likely render the planned NMD system ineffective, they will also undercut the confidence the United States would be able to gain from its test program.

II.3 Concept et faisabilité de NMD: un point de vue français

Bruno Tertrais

Je ne chercherai pas à prendre parti pour l'un ou l'autre des points de vue défendus par les deux intervenants américains, mais plutôt à analyser la cohérence interne du projet actuel d'un point de vue extérieur.

1. Le programme NMD défini par l'administration Clinton est cohérent avec une évaluation pessimiste de la menace balistique.

Le fait d'accorder une importance particulière à la menace balistique – de considérer le tir d'un missile balistique sur le territoire américain comme insupportable – est un choix politique qui n'appartient qu'au gouvernement américain, et sur lequel je me garderai bien de me prononcer.

En tout état de cause, ce n'est pas un choix absurde. En effet, c'est une menace vis-à-vis de laquelle les opinions publiques sont particulièrement sensibles. C'est également la seule menace contre laquelle il n'y ait actuellement aucun programme de défense en cours aux Etats-Unis.

Or plusieurs pays ont entrepris ou envisagent des programmes de missiles balistiques de portée très supérieure à 1.000 kilomètres. Ces programmes ne peuvent s'expliquer entièrement par une volonté de suprématie régionale. Il est vrai que le missile balistique à longue portée est attractif à plus d'un titre : comme instrument symbolique de pouvoir, comme monnaie d'échange, comme moyen d'accès à l'espace… et comme instrument de chantage en temps de crise. La possibilité qu'un acteur régional dispose de missiles de portée intercontinentale en 2010-2015 peut être considérée comme non négligeable. (Je relève toutefois que l'analyse américaine tend à être pessimiste. En outre, elle ne prend en compte que les capacités d'un petit nombre d'Etats, et n'est pas exempte de contradictions : si l'on ne prend en compte que les capacités, pourquoi ne pas ajouter l'Inde à la liste des pays non alliés des Etats-Unis pouvant atteindre, d'ici 15 ans, le territoire américain ?)

En outre, je ne crois pas à l'argument selon lequel la NMD est inutile parce qu'elle peut être « contournée » par le terrorisme NBC. D'abord, ce n'est pas parce qu'un risque existe qu'il ne faut pas se protéger contre un autre risque (or les programmes balistiques ne vont pas être arrêtés du fait du déploiement de la NMD). Ensuite, ce ne sont pas des options interchangeables. Pour l'Etat organisateur, le terrorisme NBC n'est pas exempt de risques - ne serait-ce qu'en termes d'organisation et de contrôle - et ne s'improvise pas en temps de crise. (Ici, au demeurant, les critiques sont alternatives et non cumulatives : on ne peut pas dire à la fois que la menace n'existe pas et que la NMD serait contournée par d'autres modes d'attaque.)

2. Il semble effectivement dimensionné sur la menace « proliférante », celle des « States formerly known as rogue ».

Il convient de relever la différence d'ampleur qui sépare le projet de l'Administration Clinton (NMD) de celui de l'Administration Bush (GPALS). Celui-ci, basé sur un millier d'intercepteurs au sol, avait l'ambition d'intercepter environ 200 têtes. Il est vrai que la menace perçue comme prioritaire, à l'époque, était celle d'un lancement accidentel ou non autorisé à partir du territoire de l'ex-Union soviétique.

Personne ne peut sérieusement croire que la NMD, dans sa conception actuelle, soit de nature à menacer la dissuasion russe. Si la Russie disposait de 1.000 têtes opérationnelles (avec des ALAP sophistiquées), dont peut-être 1/3 non balistiques, elle n'aurait aucun problème à « submerger » la NMD, le rapport de forces entre l'attaque et la défense balistiques s'établissant alors au moins à dix contre un.

Au demeurant, l'argumentation russe n'est pas exempte de contradictions : Soit la Russie a les moyens de « remonter en puissance » face aux déploiements américains, et dans ce cas il serait logique pour elle de conserver le plafond agréé à Helsinki en 1997 (2000 à 2500 têtes). Soit elle estime qu'elle n'a pas ces moyens, et dans ce cas pourquoi agiter la menace d'un retrait de START-II ?

En outre, si le lien entre défenses ABM et désarmement nucléaire était aussi fort qu'elle le prétend, pourquoi ne proposerait-elle pas de démanteler son propre système ABM (qui, d'après certains experts, pourrait avoir une zone de couverture dépassant la seule ville de Moscou) ?

En revanche, si l'on se situait dans une hypothèse extrême, qui verrait d'une part la dissuasion russe réduite à un petit nombre de centaines de têtes, et d'autre part le déploiement d'un système anti-missiles de nature et d'ampleur très différente du projet actuel, il y aurait en effet un risque de neutralisation de la composante balistique de la dissuasion russe.

Je relève, enfin, que le programme NMD est très fortement lié à la menace balistique nord-coréenne, la première phase étant, d'après l'Administration, exclusivement « dédiée » à cette menace. Le programme aurait-il le même soutien si cette menace venait à disparaître avant que la NMD soit opérationnelle ?

3. Il est entaché d'incertitudes technologiques significatives qui n'affectent que partiellement sa crédibilité politique.

Le choix technologique fait par l'actuelle Administration n'est pas dénué de risques et d'incertitudes. Il repose sur trois paramètres, qui sont autant de contraintes : interception exo-atmosphérique, destruction par impact direct, intercepteurs fixes basés à terre.

Le pari est donc ambitieux. Il sera difficile à la BMDO de garantir au Président des Etats-Unis une probabilité de 100% d'interception de plusieurs dizaines de têtes, surtout si l'on est pessimiste quant à la faisabilité de contre-mesures simples.

Toutefois, à mon sens, l'essentiel est ailleurs, et l'intérêt du programme n'est pas « critiquement dépendant » de son taux réel d'efficacité si l'on admet :

- qu'il ne s'agit pas tant de fournir une protection absolue que de compléter la dissuasion par menace de représailles par une dissuasion par interdiction (« deterrence by denial »)

- que la valeur d'affichage politique du système (envers la population, envers les pays à risque) est sans doute plus importante que son taux marginal d'efficacité contre la dernière tête assaillante.

4. Son coût limité est supportable dans un budget en augmentation.

Le budget américain de la défense a été abondé de 112 milliards de dollars pour les années fiscales 2001 à 2005. Le coût du programme NMD serait compris entre 30 et 60 milliards de dollars au total, ce qui représenterait environ 1% du budget de la défense 2000-2012. Il s'agit d'un coût largement acceptable au regard de l'importance politique du système.

5. De tous les systèmes ABM concevables, il est sans doute « le moins incompatible » avec le traité ABM (the least « ABM-unfriendly »).

Le programme semble avoir été conçu de manière à minimiser son impact sur les dispositions pratiques du traité ABM, à la fois du point de vue du nombre d'intercepteurs, et du point de vue du nombre de sites.

Sur le plan technique, d'autres options impliquant des remises en cause plus profondes du traité ABM existent : systèmes mobiles (à terre ou sur mer), déploiements dans l'espace…

6. Il repose sur l'hypothèse d'une prolifération limitée des aides à la pénétration.

La logique du projet comprend la possibilité pour certains Etats proliférants de disposer de leurres et d'aides à la pénétration. (Ici encore, cela donnerait a posteriori raison aux Etats-Unis quant à l'existence d'une menace potentielle.) Il est douteux que ceux-ci parviennent à un niveau technologique considérable de ce point de vue (sauf aide extérieure - mais la Chine et la Russie auraient-elles intérêt à le faire ?).

En l'espèce, le calendrier du programme est cohérent avec celui de l'évaluation de la menace. Mais ceci le rend d'autant plus ambitieux…

7. Il est cohérent avec les conceptions américaines traditionnelles de la dissuasion.

Dans la culture stratégique américaine, la dissuasion n'a jamais été limitée à la dissuasion nucléaire. La thèse selon laquelle une véritable rupture stratégique est en cours aux Etats-Unis est donc peu crédible. En outre, le fait que la Russie continue de disposer d'un système ABM protégeant la région de Moscou n'est pas perçu comme un refus de la dissuasion.

En phase 2, la NMD ne pourrait sans doute intercepter qu'une cinquantaine de têtes. D'un point de vue français, on voit mal qu'une attaque supérieure à un tel nombre ne relèverait pas de la dissuasion nucléaire (en supposant même que pour le Président des Etats-Unis le

« seuil nucléaire » ne se situerait pas en dessous de 50 têtes délivrées sur le territoire américain).

8. Il suscite des interrogations sur la relation de dissuasion que les Etats-Unis entendent entretenir avec la Chine.

Peut-on dire que la NMD menace la dissuasion chinoise ? Seulement à deux conditions :
si l'on suppose que la Chine n'a pas, de longue date, décidé d'accroître, de moderniser et de diversifier son potentiel nucléaire intercontinental, et
si l'on suppose que l'engagement de non-emploi en premier pris par la Chine est entièrement sincère et immuable – en effet, dans un tel cas, la force intercontinentale sol-sol chinoise pourrait, dans certaines conditions, être vulnérable à une frappe anti-forces américaine qui la réduirait au point d'être inopérante face à la NMD.

Peu d'experts de la Chine seraient prêts à soutenir que ces conditions sont remplies. Toutefois, le débat américain sur la relation américano-chinoise paraît ouvert. En effet, peu nombreux sont les Américains qui soutiennent ouvertement, aujourd'hui, la nécessité de construire une relation de dissuasion stable avec la Chine. On peut rappeler, à cet égard, que le secrétaire à la défense Robert MacNamara justifiait en dernière analyse le besoin d'un système ABM pour pouvoir contrer une future menace chinoise.

9. Il dispose d'un potentiel d'évolution limité.

Le choix fait par l'Administration n'autorise ni une grande souplesse ni une grande capacité d'évolution. Les sites d'intercepteurs fixes nécessitent d'importants travaux d'infrastructures. Mais les limites de l'évolutivité du système tiennent surtout à celles de ses capacités de discrimination, qui sont soumises à la loi des rendements décroissants. Autrement dit, il existe un moment où il est tellement coûteux d'assurer l'interception d'un nombre très important d'objets que l'investissement nécessaire suscite de vraies questions. C'est d'ailleurs ce qui invalidait d'emblée l'hypothèse sous-jacente à la Guerre des Etoiles de M. Reagan, l'idée d'un « bouclier étanche » contre une frappe soviétique massive.

On peut donc imaginer, au-delà de la phase 2 (ou «C-3 ») de la NMD, une « phase 3 » (ou « C-4 »). Mais sans doute pas plus. La NMD telle qu'elle est conçue par l'actuelle Administration ne peut devenir un bouclier « à la Star Wars ».

10. Il ouvre un débat malvenu pour l'Europe.

Le projet NMD, doublé du développement des TMD, ouvre un débat pour l'Europe. Que les acteurs concernés le veuillent ou non, la pression politique et médiatique créée par les projets américains est telle que l'Europe est forcée de nourrir sa réflexion sur la problématique d'une défense anti-missiles du territoire européen. (C'est déjà le cas, de manière diffuse, au Royaume-Uni.)

Or ce débat est malvenu, pour toute une série de raisons qui distinguent l'Europe des Etats-Unis. Des raisons politiques, d'abord :

- L'absence de consensus en Europe sur l'urgence de la menace.

- La fragilité, en revanche, du consensus nucléaire en Europe. Le débat sur une «NMD européenne » pourrait ranimer des débats douloureux (et pas seulement en Allemagne).
- Le contexte de l'Europe de la défense. La pression en faveur de défenses anti-missiles du territoire pourrait susciter un effet d'éviction sur les budgets de défense en Europe à l'heure où la priorité est à un effort sur les capacités conventionnelles pour la projection de forces.

Des raisons qui tiennent à la géographie de l'Europe, ensuite :

- L'absence «d'homogénéité de la vulnérabilité » sur le continent européen. Un missile intercontinental en provenance d'Asie peut menacer tous les pays d'Europe. Mais il n'en est pas de même pour les missiles balistiques qui pourraient être déployés au Moyen-Orient ou en Afrique du nord.
- La non-pertinence de la distinction entre TMD et NMD en Europe (comme au temps de la guerre froide la distinction entre armes stratégiques soviétiques et armes de théâtre soviétiques). Le débat sur les TMD pour la protection des forces peut très rapidement, du fait même de la géographie européenne, dériver sur la question de la protection des territoires.
- Les conséquences pour le traité ABM, enfin. Sur le plan technique, plusieurs options existent pour une protection du territoire européen. Contre les missiles à courte et moyenne portée, on peut envisager soit des solutions nationales, soit des solutions en coopération. Contre les missiles à plus longue portée, la question est plus complexe : l'option la plus logique – sur le plan strictement technique – consisterait en un « raccordement » à la NMD qui reposerait sur la mise en place d'un « troisième site », situé sur le continent (sans doute en Centre-Europe). Or cela signifierait un amendement spécifique au dispositif ABM, qui n'autorise pas de transfert de technologies pour la défense face aux missiles balistiques de plus de 3.500 kilomètres de portée.

En conclusion : si vous n'avez pas aimé le débat sur la NMD américaine, vous détesterez le débat sur la NMD européenne.

CHAPTER THREE: NMD AND ARMS CONTROL

III.1 The missile defense divide

Joseph Cirincione

Introduction

There may be as many different opinions in Washington on national missile defense as there are experts. The debate over the wisdom of deploying a national missile defense system has been determined in large part, however, by the struggle between two main schools of thought: those that favor maintaining the current global treaty regime and those who seek to replace it with a new conservative defense paradigm.

President Clinton has tried to bridge the gap by advocating deployment of a missile defense system that is compliant with an amended Anti-Ballistic Missile Treaty. However, when the U.S. administration failed to overcome the deep misgiving of the NATO members, they lost any chance of winning Russian support for sweeping treaty amendments. The effort appears to have failed, at least for this year.

The debate over missile defense is certain to continue. It can best be understood in terms of this larger clash of world views.

Defenders of the regime

The establishment view seeks to preserve the existing framework of interlocking treaties and agreements that has, with some noticeable failures, prevented the spread of weapons of mass destruction from a few to many nations and has helped prevent wars involving these weapons among the nations that still possess them. The treaty regime has been painstakingly assembled oven the past fifty years through the efforts of many nations, but most often with the leadership of the United States under both Republican and Democratic presidents.

This view is similar if not identical to the views of European leaders and publics. Most leaders of the NATO nations have summarized the current situation in words similar to those of President Jacques Chirac:

"Worrying events have occurred in the last two years with renewed tests of nuclear and ballistic weapons, the fact that three nuclear-weapon States failed to ratify the CTBT [Comprehensive Test Ban Treaty], and that the fundamental provisions of the ABM [Anti-Ballistic Missile] Treaty were challenged yet again. The 21st century should not only seek to safeguard the valuable achievements generated over the pas fifty years by multilateral treaties, but also enable the international community to regain the momentum it appears to have lost today." ("L'Action de La France: Maîtrise des armements, désarmement et non-prolifération, La Documentation Française, Paris, 2000)

The basic strategy for preventing further proliferation and for thwarting missile attacks on the United States was summed up by then-Secretary of Defense William Perry in 1996. The

United States, he said, has three lines of defense against proliferation. The first and strongest is to prevent and reduce the threat through the non-proliferation regime. But some nations will cheat on the treaties or remain outside the regime. Therefore the second line of defense is a strong military to deter any attack and to seek out and destroy mass destruction weapons before they can be used. If this line fails, a third line of defense is provided by active defenses, including ballistic missile defense systems.

Within this camp, there are differences over how serious are the threats from new ballistic missile programs and how effective and reliable missile defenses can be. In general, however, if forced to choose between deploying a limited national missile defense system and preserving the treaty regime, they would choose the regime.

The Conservative assault on the regime

For proponents of the new defense paradigm, this is precisely the problem. Hundreds of articles and speeches by conservatives have used the South Asian tests and the Korean and Iranian missile launches as proof that future threats are inherently unpredictable, our intelligence estimates are consistently unreliable, the proliferation of weapons of mass destruction fundamentally unstoppable and, thus, the only truly effective response is reliance on American defense technology. This requires substantial defense budget increases and the deployment of new weapons systems, including new types of nuclear weapons and, most prominently, missile defense systems. Conservatives have skillfully deployed expert commissions and congressional investigations to endorse this view.

The reports of the Commission on the Ballistic Missile Threat to the United States in 1998 (the Rumsfeld Commission) and the Committee on U.S. National Security and the People's Republic of China in 1999 (the Cox Committee) were particularly influential in shaping media and political elite opinion. The Administration's response has been to cede ground, embracing missile defense and budget increases while husbanding the political and personal capital usually devoted to the first line of defense. With the most conservative elements of the Republican Party in control of congressional committees, treaty ratifications and diplomatic appointments have been delayed for years. The impact is global. A regime in need of repair and revitalization remains in a state of suspended anticipation.

It is difficult for many in Europe to fathom this rather cavalier disregard for existing treaties and threat reduction arrangements. But the now dominant side in this debate forcefully rejects the very idea of negotiated arms reductions as a Cold War relic, unsuited for the current period. Treaties lull the country into a false sense of security, it is said, as America keeps to them while other nations cheat. Worse still are multilateral arrangements. These weaken America, like "Gulliver in the land of Lilliputians, stretched out, unable to move, because he has been tied down by a whole host of threads," as Senator Jeff Sessions (R.-Al.) warned his colleagues during the debate over the Comprehensive Test Ban.[38] The Senate defeat of the test ban crystallized the new attitude popular among conservatives: mistrust treaties, increase defenses, assert American authority.

Many conservative experts believe that they can pick and chose among the treaties. In reference to President Chirac's statement cited above, they would see only the first item as

[38] "Out Maneuvered, Out Gunned, and Out of View," Stephen Schwartz, *The Bulletin of the Atomic Scientists*, January/February 2000, p. 31

one of concern and rate the others as progress (some, in fact, view India's nuclear status as a welcome counter-weight to China). START treaties are no longer necessary, in this view. The United States, they say, does not negotiate with the British and the French on force levels, why should we with the Russians? The nuclear test ban and ABM treaty should be jettisoned because they restrain US force options. The Non-Proliferation Treaty, on the other hand, can restrain others and should be kept as long as no one takes the Article IV commitment to eventual nuclear disarmament seriously. Better still are export restraint agreements such as the Missile Technology Control Regime and the Australia Group, which are agreements among the weapon-states to keep technology out of the hands of states of concern.

The dangers ahead

This arms control à la carte approach echos to the embryonic U.S. strategy of the 1950s, where a few nations thought they could stop the spread of weapons of mass destruction by forming supplier groups to contain key technologies, while developing nuclear, biological, chemical and missile arsenals for themselves. It was precisely the failure of this piece-meal method that brought about the current non-proliferation regime.

The regime only works as an integrated whole. Without the test ban treaty and serous reduction in U.S and Russian arsenals, the Non-Proliferation Treaty will lose credibility, suffering a death by disinterest if not outright defection. Proliferation of missile defenses could weaken the Missile Technology Control Regime, encourage the proliferation of missiles and defense counter-measures. For those without nuclear production capabilities, chemical and biological weapons will hold new appeal. As legal, diplomatic and political deterrents weaken, it becomes easier for a nation to shatter the barriers, triggering a global crisis.

This is not an abstract debate. If the United States disassembles diplomatic restraints, shatters carefully crafted threat reduction arrangements and moves from builder to destroyer of the non-proliferation regime, there will be little to prevent new nations from concluding that their national security requires nuclear arms. Nor will it be just a matter of diplomatic emergency meetings. Nuclear insecurities and regional tensions could freeze foreign investments, strangling economic growth both regionally and globally.

The two years after the U.S. presidential election will be critical to determining which side in this debate will dominate U.S. policy. The fate of the regime is at stake.

A short-hand chronology of the key developments, 1992-1999

1992 President George Bush promotes Global Protection Against Limited Strikes (GPALS) system of space-, sea-, and land-based missile defense systems. President negotiates Chemical Weapons Treaty and START II treaty. President Bill Clinton elected.

1993 President Clinton assumes office, basic policy framework created but fails to move key treaties to early ratification (START II and CWC)

1994 Conflict with North Korea over violations of the NPT is resolved through diplomacy, but serious concerns remain. North Korea becomes key "rogue state" Republicans, led

by Newt Gingrich, gain control of the House of Representatives and large majority in Senate.

1995 Using the chairmanships of key committees, Republicans push national missile defense as key issue, oppose Agreed Framework with North Korea, CWC and other arms control agreements. NPT extended indefinitely.

1996 Presidential politics distort US policy on arms control issues. CWC ratification blocked as presidential candidate Senator Robert Dole withdraws support. Dole and House Speaker Newt Gingrich introduce the "Defend America Act," mandating deployment of a national missile defense system. Try, but fail, to make missile defense key issue in presidential campaign. In response, President Clinton creates "3+3 program" to research NMD for 3 years and then be in position to deploy within 3 years of a decision to do so.[39]

1997 Congress passes legislation creating commission to review national intelligence estimate of ballistic missile threat to United States after first effort (a panel headed by former CIA director Robert Gates) concludes administration estimates are accurate and free from political pressure. New panel headed by Donald Rumsfeld is created.

1998 Key year. South Asia nuclear tests, Rumsfeld Commission reports, Cox Commission investigation of alleged Chinese nuclear espionage and medium-range ballistic missile tests by North Korea and Iran create heightened sense of a nuclear and missile threat. Political attacks on President Clinton reach a crescendo. The House of Representative impeaches the President.

1999 Senate defeats CTBT. Technical problems turn "3 + 3" into "4 + 5" putting the Deployment Readiness Review decision in the middle of another presidential campaign year. New National Intelligence Estimate in October adopts Rumsfeld lowered standards for predicting threat emergence. Perception of success of first NMD intercept test in October leads to Secretary of Defense Cohen call for decision to deploy system.[40]

[39] For a complete history, see Joseph Cirincione, "How the Right Lost the Missile Defense Debate," *Foreign Policy*, Spring 1997.

[40] For a critique of the national intelligence estimate and an independent assessment of the declining ballistic missile threat, see, Joseph Cirincione, "Assessing the Ballistic Missile Threat," Testimony to Committee on Government Affairs, United States Senate, February 2000, http://www.ceip.org/programs/npp/bmthreat.htm).

III.2 Ballistic Missile Defense and arms control – positioning Europe as a credible actor in the "BMD game"

Bernd W. Kubbig

Introduction

I will deal with this topic on a policy and on a concept-related level. The NMD (National Missile Defense) question together with the generally neglected problem of regional missile defence (Theater Missile Defense, TMD)[41] affects the nucleus of the traditional understanding of arms control. New times require new concepts. Therefore, a modernised arms control approach is necessary that integrates the achievements of the old notion developed and applied during the East-West Conflict. Sketching elements of the Modernised, Mutually Minimising Missile Threat Model ('Triple M–TM') is not an academic exercise. What is at stake in defining the relationship between both components of Ballistic Missile Defense and arms control is testing the validity and the comparative advantage of two ideas that can guide politics and policies: Whether, in the final analysis, politico-diplomatic or military means are the cardinal instruments in enhancing security and in mutually minimising the (yet to be defined) threats.

Developing an adequate concept on the basis of transparent premises, criteria and goals is a major way for Europe ('EU/NATO-Europe') finally to start an overdue discussion. Firstly, I will deal with possible, or even probable, arms control-related issues and consequences of NMD and TMD (both components cannot, and should not, be separated), in three different contexts. Secondly, I will sketch out some elements of the Mutually Minimising Missile Threat Model, as a 'Diplomacy First!' alternative as a way to become serious and visible players in the global 'BMD game'.

Arms control issues and consequences of American NMD and TMD policy in three different contexts.

The first context: relationship between the United States and Russia

The arms control problems take place within the context of opposing views that will remain unsettled beyond the year 2000 – despite some cautious Russian signs at the June 4 and 5 Putin/Clinton summit for a compromise in the post-Clinton-era. These issues, which are currently under discussion worldwide, focus on the fate of the ABM Treaty and, therefore, go to the heart of arms control. The substance of the Treaty and its underlying philosophy of mutual vulnerability as the 'cornerstone of strategic stability', are under heavy attack, whilst for most NMD proponents in the United States this Treaty is a relic of the Cold War.[42] There are basically two factions among the proponents who draw different conclusions from the treaty document.[43] One group wants to abrogate the bilateral agreement unilaterally while the

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[41] For an understanding about terminology: NMD +TMD = BMD.

[42] Many NMD proponents though forget that they denounced the ABM Treaty as a relic already during the East-West Conflict.

[43] For more a nuanced categorisation, see Bernd W. Kubbig, Aufrüstung vor Rüstungskontrolle. Amerikanische Raketenabwehrpolitik während der Clinton-Administration, (HSFK-Report No. 1), Frankfurt am Main, 1996

other prefers, for a limited time at least, to seek a joint way of adapting the Treaty to new circumstances, thereby reaching a compromise with the Russians. For NMD opponents the ABM Treaty is regardless (or because of) post-Cold War circumstances the jewel of all arms control agreements.

In the final analysis, the major cleavage between proponents and opponents of BMD regards the prioritisaton of means to minimise the threat: Opponents see politico-diplomatic means as the 'prima ratio', followed thereafter by existing nuclear and conventional weapons ('secunda/ultima ratio') with the qualification that there is, a) considerable potential for (nuclear) force reduction; and b) the need to adapt drastically the nuclear strategy and targeting policy to the new circumstances (there is considerable overlap on this point with 'moderate' BMD proponents); for many opponents existing conventional and nuclear forces are sufficient to meet the objective of enhancing security ('ultima ratio') while others would prefer the deployment of TMD to protect soldiers (nuclear and conventional forces as 'secunda ratio'). Proponents do not reject prevention and deterrence, but increasingly place the emphasis on protection through various forms of BMD. Protection has the potential to dominate other aspects, especially the politico-diplomatic means of defence. In principal, therefore, BMD proponents reject the 'Policy/Diplomacy First!' approach, whilst embracing a 'BMD weapons First!' concept or, at best, a 'Policy/Diplomacy, Too!' approach.

I side with the 'Policy/Diplomacy First!' group. Nuclear deterrence, based on atomic weapons and accompanied by a corresponding targeting policy is not only the dominant, but also the cardinal characteristic of the military relationship between Washington and Moscow. Like it or not – both countries, along with the Western Alliance as a whole, still exist in strategic and operational terms in the old World of MAD (Mutual Assured Destruction).

As long as MAD is a fact of life, the ABM Treaty fulfils its important function as a 'cornerstone of strategic stability'. However, this function should not (and need not) be taken as a mere justification of nuclear deterrence. 'Strategic stability' which can still be measured in quantitative and qualitative terms remains a meaningful category in the MAD context. There is room to weaken (and also to improve) the conditions of deterrence. This is underlined by the official 'Talking Points' as presented by John Holum, Head of the US Delegation to the Bilateral ABM Treaty Talks, on January 19/20, 2000 to his Russian counterparts.[44] According to this document, the US side obviously encouraged Moscow to adopt two highly problematic measures in order to guarantee its second strike capability, one of them being highly questionable from the traditional notion of an arms race stability point of view. This indirectly-tendered measure proposes "under the terms of any possible future arms reduction agreements" reliance upon "large, diversified, viable arsenals of strategic offensive weapons consisting of various types of ICBMs, submarine-launched ballistic missiles and heavy bombers. Specifically, Russia's proposal for START-III would make it possible to have 1,500-2,000 warheads and even according to highly conservative hypotheses, Russia and the

and along these lines: Mirko Jacubowski., Öffentliche Meinung, Gesellschaftliche Gruppen und Raketenabwehr in den USA, http://www.hsfk.de/fg1/proj/abm/bulletin/pdfs/jacubow1.pdf [26. 6. 2000].

[44] For a more detailed discussion see Bernd W. Kubbig, Ein Raketenabwehr-Kompromiß auf dem Putin/Clinton-Gipfel? Unstimmigkeiten und Handlungsoptionen im Umfeld des Spitzentreffens am 4./5. Juni 2000 in Moskau, http://www.hsfk.de/fg1/proj/abm/bulletin/pdfs/kubbig3.pdf [26.6.2000]. (This Internet Program, devoted entirely to Ballistic Missile Defense issues contains further information and can be reached at httpt.//www.hsfk.de/fg1/proj/abm.

United States could deploy more than 1,000 ICBMs and submarine-launched ballistic missiles with nuclear warheads over the next decade and thereafter".[45]
Under these conditions NMD deployment would block the very process of reduction that the NMD proponents cite as a major rationale for their position. On the contrary, it could lead to a further build-up. Preserving the ABM Treaty (or allowing minor modifications that are acceptable to the Russians), however, would consolidate 'strategic stability'. Moreover, keeping nuclear arsenals at a level which was not even justifiable during the period of East-West antagonism (needless to say in the post-Cold War world) is not compatible with the disarmament obligations of the nuclear powers under Article VI of the Nuclear Non-Proliferation Treaty (NPT).[46] In their joint declaration of May 2000, the five official nuclear powers have repeated their wish to implement Article VI of the NPT. Against the backdrop of the afore-mentioned measure in Holum's 'Talking Points' this declaration, at least as far as the United States is concerned, can be interpreted as a misleading gesture for global public opinion. The 'real' negotiating position of the United States, as presented by Undersecretary Holum, does not strengthen the NPT regime.

The second measure in John Holum's 'Talking Points' is extremely risky from a crisis stability point of view (another term from traditional arms control theory which still makes sense today). The US document suggests that Russia continues to keep its nuclear arsenal on constant alert[47] and to adopt a highly problematic launch-on-warning strategy.[48] However, such a surprise attack is extremely unlikely, a point conceded by Holum himself. From the point of view of an American official (and military planner) this position is self-contradictory, as the military strategy and targeting policy (see above) is still based on the capability of the other side, not on its intentions.

One further (broadly-discussed and hotly-debated) arms 'control' implication regards the Russian announcement to withdraw from the START II Treaty (as required by the START II Bill of Ratification law passed by the Duma in April 2000) or from the whole arms control regime in response to unilateral abrogation of the ABM Treaty by the United States. As Alexei Arbatov, Deputy Chairman of the Duma's Defence Committee recently observed: "Putin made a very strong commitment, which is on the record, that if the United States unilaterally withdrew [from] the ABM Treaty, Russia will withdraw from START II, and will go in for new MIRVed ICBMs. He also said... that Russia will withdraw from all regimes of arms control, including conventional arms control."[49]

Bluff? Bargaining chip? Credible Option? Putin's remarks, as quoted by Arbatov, leave room for compromise in the case of a bilaterally-negotiated result because contributing to the destruction of the arms control regime is risky for the Russians as well. It is possible that the newly-elected Russian President is prepared to negotiate a compromise with the next US

[45] John Holum, ABM Treaty 'Talking Points', Bulletin of the Atomic Scientists, 2000, http://www.bullatomsci.org/ issues/2000/mj00/treaty_doc.html.)

[46] Article VI of the NPT Treaty: "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control."

[47] "Russia now keeps its strategic arsenal on constant alert and apparently will do so even at START-III levels. Russian forces under START-III could make an annihilating counterattack even under conditions of a surprise disarming first strike by the USA in combination with a limited NMD system." (John Holum [(op. cit.)].

[48] "(...) Russia's response to an assault would obviously be to send about a thousand warheads, together with two or three times more decoys, accompanied by other advanced defence penetration aids." (Ibid.)

[49] Alexei Arbatov on US-Russian Arms Reduction, Carnegie Endowment for International Peace, Issue Brief, Jg. 3, Nr. 16, 2000.

administration (and with the next US Senate which especially after the April 17, 2000 letter by 25 Republican Senators to President Clinton has established itself as a second American negotiating partner beside the next US administration, be it led by a Republican or Democratic President).[50] On the Russian scene, Putin is only one player. A bilaterally-reached agreement is politically viable only if it is stable, which, in turn, depends on the depth and breadth of the consensus in Russia. It has to satisfy the demands of major actors, such as the military and defence industry. A fragile consensus in Russia implies a high political breakout potential, if not today or tomorrow, then perhaps the day after tomorrow.

The way to such a compromise, which at this point is not at all sure, will be difficult, costly, and probably long-drawn-out. Such bilaterally-reached modifications would change the ABM Treaty from its current form as an unparalleled, restrictive arms control agreement to an arms management Treaty in the SALT and START tradition. This fundamental change is likely to make another element of the 'old' notion of arms control all the more relevant, i.e. the predictability of NMD as a precondition for creating arms race stability, and, thus, building confidence. Admittedly, from an arms control perspective there is also the danger that a profoundly changed ABM Treaty simply becomes a farce.

A compromise, if it can be achieved, is likely to reduce or even eliminate many of the concerns that currently dominate the 'strategic agenda'. However, at the same time a bilateral agreement will probably shift the armament issue in two ways. Firstly, it will underscore both Chinese fears and armament efforts. Secondly, it will place regional missile defence, and the danger of regional arms races between 'defensive' and offensive weapons, more into the spotlight (see below).

The arms control implications of NMD cannot only be dealt with on the strategic level, but have to be analysed in the broader policy context of the asymmetric structure that characterises the US–Russian relationship. On the power-related level, on the one side, there is the "sole superpower" (Samuel Huntington) United States, booming by virtually all military, economic and 'soft power' standards. On the other side, Russia is a decaying nuclear former superpower. This relationship of unequals leads to different motivations, interests and objectives for both NMD deployment and the preservation of the ABM Treaty. They also result in different, maybe partly manageable, maybe partly irreconcilable, world order perspectives. In my view, the United States acts towards Russia as a status quo superpower and, thus, as the clear winner of the East-West Conflict. Its objective, therefore, is to fortify the asymmetrical relationship in all areas (including BMD) with the loser of the Cold War. The United States bases this policy on a technology (and on an infrastructure) that if it works in an efficient way will be superior to that of Russian potential, in fact, would be second to none.

Russia is instrumentalising arms control and acts from the nostalgic perspective of a former superpower. Its policy is shaped by the status-driven desire to deal with the United States from a position of power-related symmetry and strategic parity, by negating the unique position of the United States. The major driving force behind the Russian interest in a strict ABM Treaty and in affordable lower levels of nuclear warheads means at the same time the preservation of its second nuclear strike capability. The cardinal problem with the current

[50] The bottom line of the Senators' letter is: "We must advise you that in our judgement any agreement along the lines you have proposed to Russia would have little hope of gaining Senate consent to ratification." The complete letter is published in: The Center for Security Policy, Publications of the Center for Security Policy, No. 00-F 28, S. 2 (http://www.security-policy.org/papers/2000/00-F28.html)

asymmetry between formerly equal military powers will likely shape both the above-mentioned compromise (which, if it occurs, will probably reflect and cement the power disparity) and, therefore, support NMD. At the same time, it is also highly likely that the asymmetrical power structure will affect the very nature of bilateral cooperation. In my view, it will sharply limit the possibilities for a substantive, joint approach in the area of NMD/TMD.

It was no coincidence that President Clinton's offer of early June to extend the American umbrella to all 'civilised' countries did not specifically include Russia (nor was the President any more more concrete at the summit in Moscow). At the same time, Putin's counter-offer to build an NMD with the United States (and/or with the Europeans) may not only be a tactical ploy and a test balloon, but may be driven by the serious desire to re-establish the 'Golden Age' of strategic parity. In addition, there may be a further motive: Putin's desire to link Russia to both the high technology infrastructure of the West (because of expected spinoffs from BMD) and to the Western/European security architecture. At this point it is hard to see how the Russian and the American positions can be bridged and translated into a truly cooperative approach. Equally, there are no serious signs of American interest in a Theater Missile Defense (TMD) programme against 'sub-strategic' missiles ('sub-strategic' as defined in the 'Demarcation Agreements' signed by both Moscow and Washington on September 26, 1997).[51]

Such a cooperative perspective is the cornerstone of an attempt by moderate BMD proponents to reconceptualise the traditional arms control approach. Colleagues at the Stimson Center have proposed a conceptual combination of the gradual NMD deployment with a drastic reduction of nuclear warheads as a way to a defence-dominated world.[52] There are many problems with this approach in terms of feasibility and desirability. To mention (out of many objections to this kind of cooperative approach) but two hegemons do not like to share, especially not the goods which they consider to be at the cutting edge of technology. This is even more the case if one adds to the power-related aspect what is probably a decisive factor: the strategic preference of the 'sole superpower' to act in crucial areas of its foreign and security policy distinctly unilaterally (as opposed to a bi- and multilateral approach).

This does not include some dimensions of cooperation in the TMD area, but in general (and in the final analysis), cooperation among two unequal powers will not only be limited, but is likely to be implemented under conditions set by the United States. This is bad news for the advocates of a comprehensive and combined defence/offence cooperation. It is good news for those who want to modernise the traditional arms control concept on the basis of predominantly politico-diplomatic means.

The second context: relationship between the United States and China

I will be brief on China. In my view, Beijing is the real rationale behind NMD. Different from the Washington-Moscow dyad, the relationship between both countries is not the one between a superpower and a power in sharp decline. Rather, the NMD/TMD issue has to be

[51] For a more detailed discussion see Bernd W. Kubbig/Harald Müller/Annette Schaper, Die strategische Rüstungskontrolle zwischen den USA und Rußland: Erfolge – Probleme – Perspektiven, HSFK-Report 11, Frankfurt am Main, 1996, pp. 49-52.

[52] Henry L. Stimson Center (ed.), An Evolving US Nuclear Posture, Second Report of the Steering Committee Project on Eliminating Weapons of Mass Destruction, Report No. 19, Washington, D.C, December 1985,

seen from an American perspective as an effort to seek a modus vivendi with the emerging superpower, in the long-term globally, in Asia in the short-term. The Ballistic Missile Defense policy of the United States is one central element of its new containment strategy towards China.

Although for the time being mere paper-tigers (one has to stress this point repeatedly), national and regional defence systems could form, in effect, a pair of tongs around China, and open political options for the United States in regional crises, especially those between China and Taiwan. The two variants of Ballistic Missile Defense seem designed as a counterbalance to the integrative component of the overall US strategy towards China as represented by efforts of parts of the US elite to allow and encourage Chinese participation in international institutions such as the WTO.

It is the combination of national and regional BMD components that makes an arms race between the United States and China highly likely. From today's perspective, an arms build-up will not stop there. China's nuclear response to a determined and efficient BMD policy is likely to trigger a chain reaction in India, Pakistan, and other countries a well. A sober cost-benefit-analysis has to weigh this frightening perspective against the possibility of increased political US options in China/Taiwan crises. One issue already clear today is that the outlook for arms control is poor. Beijing is already in a position to respond credibly to a US BMD build-up, in this respect it is in a different league to Moscow. The signs are already there, the most visible being perhaps the suspension of the cut-off talks in Geneva, because Beijing seems to think that it needs more weapons-usable material to build more nuclear warheads.

However, it is not only the quantitative dimension of an arms race that is at stake, it is the qualitative as well. This includes the prospects of MIRVed missiles and the end of Beijing's current minimum deterrence strategy and progress towards war-fighting options. Beijing's nuclear build-up is certainly not driven by one factor. But the NMD/TMD element could at least accelerate current plans, provide an additional justification for them and make it more difficult to transform China's traditional role as a rule-breaker to that of constructive rule-maker/taker. While it is clear that China has to recognise that its problematic export policy is part of the proliferation problem and plays into the hands of NMD proponents, a BMD policy that is not used as a bargaining chip is likely to close promising arms control options, i.e. as a test of whether Beijing's strong advocacy of the ABM Treaty in its currently restrictive form is mere bluff, or a credible first step to adapting the bilateral agreement of 1972 by trilateralising it. While this may sound utopian, the opposite extreme could be both realistic and dangerous, namely that China increases its build-up even more and even faster, if the United States and Russia implemented their cooperative endeavours toward a 'Trans'-National Missile System.

The third context: special relationship between the United States and Europe

In the relationship between the New and the Old Continent, the arms control issue has at least four dimensions: global; a transatlantic dimension with both security-related and technology-related aspects; intra-European (national); and finally regional.

The global dimension is the most obvious i.e. 'EU/NATO-Europe' is well aware of the fact that the threats of worldwide arms races will deeply affect its security and its foreign policy. Therefore, in a rare statement of unanimity, Europe is acting as an entity with regards to

NMD. In their spring meeting in Florence, all Foreign Ministers, recognising that they cannot prevent the US from establishing a National Missile Defense System, established conditions for their 'consent'. Arms control is pivotal in the sense that Ministers warned of the negative implications of arms races and of the break-down of the NPT regime. Most, if not all EU member states would probably be happy if NMD imploded or at least was protracted due to the major technical short-comings that have dogged the programme. The second preference would be a consensus on the ABM Treaty between Washington and Moscow.

The transatlantic dimension comprises all vital aspects of the conceptual and political tension between arms control, on the one hand, and (extended) deterrence and alliance cohesion, on the other. In spite of the politico-diplomatic leeway that the Europeans give to both parties to the ABM Treaty in hammering out a compromise, the governments on this side of the Atlantic have made it clear that a unilateral break of the ABM Treaty is a casus belli for NATO and could lead to a severe crisis within the Western Alliance.

Another aspect would include the security and technology issue. This will become important if the next US Administration offers (more specifically than President Clinton in early June) to extend the US umbrella and to invite the European allies to participate in the NMD programme and raises the following questions:

- Will it be acceptable to say 'No' for arms control reasons to such an offer, whilst at the same time risking tensions with the US hegemon who might argue that his soldiers in Europe need adequate protection?
- Will the United States make such an offer more attractive by sharing technology with their closest partners, an offer that could be described as serious provided that the United States breaks with past and current practices and is prepared to fundamentally change its traditional buy American export control system? (Changing the rules that led to the 'transatlantic tragedy', i.e. the Medium Extended Air Defense System [MEADS] could be a first yardstick for a serious offer based on somewhat more equitable terms.)
- What transatlantic model might govern such an offer, the 'partners in leadership' vision of an almost egalitarian alliance or the traditional hegemonic way of basing anew the dominant US role on a military technology, thus a) optimising the chances for US influence through NATO; and b) counterbalancing the economic power on the Old Continent, the European moves for enlarging the EU and moves towards a 'European caucus' within NATO?

The intra-European (national) dimension consists at least of a fundamental and an immediate aspect. The first category includes the future of arms control with respect to the nuclear arsenals of Britain and France. Will they increase their nuclear weapons as a reaction to a US-Russian compromise and a Chinese build-up? Or, will Paris and London, recognising the increasing devaluation of their weapons, be more eager to include them in official disarmament negotiations, thus demonstrating that they have begun to change their military and status-related identity? Of immediate concern is the question that regards the requisite national consent of both Denmark and Great Britain to the modification of the radars in Thule (Greenland) and in Fylingdales (Yorkshire). This issue shows that the National Defense System is not truly 'national' and, from an arms control point of view, this issue could be seen as a litmus test of how serious the Europeans regard the ABM Treaty. Indeed, it presents an opportunity to prove that they are not only bystanders in the 'ABM Treaty game' between Washington and Moscow. Rather, by 'Europeanising' the required national consent, they should consider the radar question as a ploy to ask the US to rethink their dubious plans.

The regional dimension regards the development of politico-diplomatic and arms control-driven initiatives by the Europeans as a response both to the American 'umbrella' offer (in terms of NMD and TMD) and to the evolving threat from problematic states such as Iran, Iraq, Syria and Libya (see next section). This dimension also includes the prospect of a defensive-offensive arms race between Europe and those Middle East/Persian Gulf countries.

Designing a serious role for European actors in the 'BMD Game': the Modernised, Mutually Minimising Missile Threat Model ('Triple M–TM')

In this section I will briefly outline my 'Triple M-TM'-concept in the hope of triggering a debate on a constructive role for Europe, i.e. a role that goes beyond that of an onlooker forced to wait and see if the Americans and Russians reach a mutually-acceptable compromise. Europe should quit its traditionally passive role and become an active builder ('Mitgestalter') of its own security policy. Indeed, it is not even enough just to warn about the possible negative consequences of global and regional arms races. What is more, Europe will be in an unconvincing position if it supports the preservation of the ABM Treaty, while at the same time quietly allowing the United States to implement its seemingly National Missile Defense System.

Therefore, the other Europeans should ask Denmark and Great Britain to use their consent for the modernisation of radar stations on their soil as an arms control and security-driven bargaining chip. In other words, as an instrument to translate European concern into practice by blocking the whole military endeavour, or at least to get a say in a 'National' enterprise that has clear transatlantic components. Accordingly, the Europeans should have a say in the design and further evolution of the NMD architecture. For instance, they should insist upon a firebreak that makes it clear that NMD is designed only to meet the threat from a handful of rockets. Moreover, Denmark and Great Britain, with European backing, should have a say in further NMD design, i.e. by insisting that the system's capacities will be reduced if the perceived threat recedes or diminishes, which would certainly be the case if, say, North Korea 'imploded' and/or gave up its nuclear test programmes, or if Iran and Iraq could be convinced to restrict their (potential) programmes in a verifiable way.

Such a transatlantic quid pro quo would be a good start for a new, more equitable design for a more cooperative Alliance. Indeed, given what is at stake, Europe is obliged to be assertive. However, to put the transatlantic relationship in the security area on a less hegemonic footing requires more on the part of the Europeans.[53] The Europeans have to show that they have ideas of their own and, moreoever, have the clout to initiate and implement them on their own and/or in tandem with the Americans. Such a concept will make them visible, give them credibility as well as a voice in Washington and in Moscow. In order to fulfil these goals, a Modernised, Mutually Minimising Missile Threat Model ('Triple M–TM') would have to meet its clearly defined objectives and criteria, and be based on transparent premises.

Objectives

The major goal of the 'Triple M-TM' is to enhance security by mutually minimising missile threats, defined as:

[53] To be clear on this point: NATO works only as a hegemonic, i.e. asymmetric construction. By design, the US has to play a greater role, while it is realistic to assume that Europe can only afford a smaller one.

- technical deficiencies of existing nuclear arsenals (i.e. unreliable early warning systems which can lead to a hair-trigger situation especially in times of tensions and crises or to an unauthorised and/or accidental missile launch);
- a highly problematic strategic disposition because of a constant hair-trigger situation due to high-alert status and/or launch-on-warning policy;
- insufficient fissile materials and warhead controls (stemming from deficient security and accounting systems, lack of resources, unemployment of weapons specialists);
- the capabilities and intentions of countries with an existing or evolving Weapons of Mass Destruction posture;
- the capabilities and intentions of sub-state actors (e.g. terrorist groups);
- the consequences of deploying BMD systems, i.e. possible ignition of global and regional arms races and regional instabilities.

Criteria

Any successful European-initiated and implemented concept has to be both assertive and alliance compatible. The American plans already strain the transatlantic partnership. NMD cannot be considered as a friendly act towards its allies France and Great Britain because an efficient NMD, together with potential Russian countermeasures, will make French and British nuclear weapons potential "impotent and obsolete" (Ronald Reagan). European arms control-driven efforts as an intra-alliance counterweight might lead to additional stress within the transatlantic relationship. Equally, this should not break the Alliance, nor should European assertiveness signal to the Russians that they can drive a wedge between the transatlantic partners. A credible politico-diplomatic initiative is a litmus test for both sides of how serious the Europe-as-the-second-pillar rhetoric really is and what it can mean in practice.

The concept has to be affordable because a policy of unsupported checks is doomed to fail. Earlier cost calculations for a European umbrella made by industry representatives amounted to a double digit billion sum. This makes designs of a European NMD independent from the United States unrealistic from the outset.

The European initiative has to be feasible in political terms. Europe is not a global player, but it should act more forcefully and convincingly as a regional actor. Doing so would mean an extension of its responsibility which in the New Strategic Concept was limited to the Euro-American sphere. To include North Africa, the Near Middle East and the Gulf region within the realm of an explicit politico-diplomatic initiative will probably have an important effect. Indeed, it would give a necessary signal to liberal and moderate conservative decision-makers in the United States, such as Senator Lugar who have been waiting for a serious European counterproliferation endeavour.

A European initiative has to be based on mutual intra-Alliance respect between different political cultures as probably the major factor for different threat assessments and the way of responding to them. At stake is the different way of designing one's security strategies from the perspective of vulnerability versus invulnerability. The Europeans have to accept the fear of another Pearl Harbor which in part guides NMD in the United States. The US, in turn, has to accept that the Europeans have more than fifty years of experience with vulnerability as a modus vivendi, as well as a policy-guiding and security-designing principle. At the concrete level of threat assessments the importance of Pearl Harbor is self-evident. The major focus

and the corresponding result of the Rumsfeld Commission, on the 'warning time' issue, as well as the somewhat hysterical reactions to the report cannot be explained without the presence and/or the instrumentalisation of an 'out of the blue attack' experienced at Pearl Harbor in December 1941.[54]

Reflecting a different 'intelligence culture', its report on WMD-proliferation does not mention the 'warning-time issue' at all.[55] In contrast to the American National Intelligence Estimates (NIEs), the specific political experiences manifest themselves in a detailed description of how the problematic countries acquired the WMD-capable components from Western states, especially from Germany.

Premises

Threat-related assumptions

In spite of the oft-cited 'New Threat Paradigm' which assumes that the current and future dangers are diffuse and virtually uncontrollable, this concept starts from a different point when it comes to threats from ballistic missiles. Firstly, as follows from the list of threats, Russian missiles (and warheads) are included and, therefore, have to be dealt with. Secondly, based primarily on the most recent US NIE of September 1999,[56] as well as on the October 1999 Report by the German Intelligence Service on WMD-Proliferation,[57] this concept assumes that:

- there is (depending on the country one looks from) an emerging potential threat to Europe from Iran that could threaten Central Europe, Germany included;
- Iraq offers only a potential threat (provided that Iraq is checked by adequate controls and implemented by credible means), and obviously to a lesser extent, from Syria and Libya;
- in spite of increased WMD-related cooperation among the problematic countries, the menace is focused (the official intelligence reports name about a handful of 'states of concern'), and the threat can be specified and qualified as 'real', ('highly') 'unlikely' or 'possible';
- it is important to differentiate between the capability and intention of those countries with ongoing WMD-activities (thus, the mistake of the Cold War which led to worst-case

[54] The bipartisan Rumsfeld Commission which issued its Report on July 15, 1998, six weeks before the North Korean missile test, worked under the mandate of the Republican-dominated Congress. One of its major findings was: "The warning times the US can expect of new, threatening ballistic missile deployments are being reduced. Under some plausible scenarios – including re-basing or transfer of operational missiles, sea- and air-launched options, shortened development programs that might include testing in a third country, or some combination of these – *the US might well have little or no warning before operational deployment.*" (Commission to Assess the Ballistic Missile Threat to the United States, Executive Summary, Washington, D.C., July 15, 1998, pp. 5f.; emphasis added). For an excellent critique see Joseph Cirincione, Assessing the Ballistic Missile Threat, Testimony, Subcommittee on International Security, Proliferation and Federal Services, Committee on Governmental Affairs, February 9, 2000. (Typoscript)

[55] Bundesnachrichtendienst (BND), Proliferation von Massenvernichtungsmitteln und Trägerraketen, October 1999, p. 23.

[56] US Central Intelligence Agency, Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015, USIS, EUR 514, 09/10/99. Robert D. Walpole, The Ballistic Missile Threat to the United States, Statement for the Record to the Senate Subcommittee on International Security, Proliferation, and Federal Services, February 9, 2000 (Typoscript)

[57] Bundesnachrichtendienst, Proliferation (op. cit.).

analyses as a major rationale for constant arms build-up measures which were presented as mere reactions need not be repeated);
- regional factors behind the WMD-activities must be taken into account;
- problematic programmes do not evolve in the sense of gaining a permanent technological momentum ('Eigendynamik') which occurs independently of changing political circumstances, be they domestic or international. Thus, such programmes can be influenced from outside not only in the dubious sense that Western nations and firms have helped those countries to acquire the weapons potential about which the exporters now complain. Rather, they can also be slowed, reduced or maybe even eliminated; and
- WMD-activities are not linear in that they cannot face setbacks which lead to ups and downs.

Deterrence-Related Assumptions

There are no non-deterrable state actors, provided that a policy of nuclear or large scale conventional deterrence is communicated to all states considered as problematic. As Secretary of Defense William Cohen has unmistakably stated on April 26, 2000:

> "We have a retaliatory capability that if anyone should ever be foolhardy enough to launch a missile attack of a limited or expanded nature against the United States, they would be destroyed in the process. That ordinarily should be a sufficient deterrent for the North Koreans, Iran, Iraq or Libya or any other country that would seek to acquire this capability."[58]

It is hard to see which state (even the most shrewd leadership, except if it is suicidal) would dare to attack the United States and its allies by Weapons of Mass Destruction. In his statement of April 26, 2000, Secretary Cohen went on and addressed the added value of NMD which in his view might increase US determination in crisis situations and prevent the United States from being blackmailed:

> "But what we never want to be subject to is what I would say would be a nuclear blackmail situation, where a Saddam Hussein occupies Kuwait, possibly Saudi Arabia, or some other type of aggressive action. And then you say, 'Well, we're going to put half a million troops in Kuwait, in Saudi Arabia, to drive Saddam out.' And he says, 'Wait a minute. If you seek to put troops in this region, you run the risk of me launching an attack upon New York, Washington or some of our major cities.' That can have at least a change – might force a change in our calculations as to whether or not we're prepared to wage a conventional campaign against such a dictator. And so it could change, in fact, the way in which we conduct conventional operations. We do not want to be in that position. We want to be able to say to a Saddam or to an Iran or to a Libya or wherever, whomsoever, that 'You are not going to put us in that position, that we are going to carry out our international responsibilities, protect our national security interests; and your possession of five or ten or twenty, or whatever the number is, missiles is not going to deter us.' That I think, is the principal benefit of having this capability, not against Russia, not against a superpower, but against those nations who might otherwise try to impede us from carrying out the protection of our national security interests."[59]

[58] The Secretary was responding to a question from Senator Dorgan. (unofficial typoscript).
[59] Ibid.

To cite a repetition of the 'Saddam/Kuwait'-scenario is not at all convincing. There is ample evidence that the signals the US gave to Saddam prior to his invasion into Kuwait were not as unmistakable as those mentioned by Secretary Cohen above. Moreover, one has to ask which political and military decision-maker in the United States will, today and for the time being, rely on the doubtful efficiency of an unproven BMD technology. Even if it became more reliable in the distant future, decision makers are likely to put their trust on the deterrent effect of nuclear and conventional means (to do otherwise would open US policy and the fate of its soldiers to unacceptably dangerous illusions of security, because 'defensive' weapons are not likely to be reliable for some time). The deterrent effect of existing weapons has been considered sufficient until today, as the following dialogue between Senator Carl Levin and Robert Walpole, National Intelligence Officer for Strategic and Nuclear Programs, National Intelligence Council, on February 9, 2000 indicates:

> "Senator Levin: It's been a long time that our troops have been at risk from North Korean Missiles.
> Mr. Walpole: Yes.
> Senator Levin: Have they – and our means of defence against those missiles for a long period of time was deterrence, threat of retaliation against them if they would use it? Before we had a Patriot, was that not the only defence we had against an incoming missile would be deterrence and retaliation?
> Mr. Walpole: Well, we didn't have a defence, but deterrence you could argue would have been at play, yes."[60]

Policy-Related Assumptions

The insufficiently-recognised masterpiece of US foreign policy in the Clinton era, i.e. its 'carrots and sticks' policy towards North Korea, is the most promising and encouraging model for 'Triple M-TM'. This brilliantly orchestrated trilateral policy, which deviated from the US trend towards unilateralism, shows the comparative advantages of a 'Diplomacy First!' approach. Both the United States, on the one side, and the Stone Age regime in Pyongyang, on the other, went through a remarkable process of learning. Nobody (including the partners themselves) would have considered this possible prior to this period of intense interaction.

The United States, the initial negotiating position of whom stemmed from the assumption of dealing with an irrational actor, had the opposite experience. Washington encountered a tough, business-like benefit-maximiser who was willing to trade considerable political concessions, especially the delay, if not cancellation of its second ballistic missile test,[61] for hard currency. North Korea, in turn, encountered a 'sole superpower' that was also prepared to compromise. This triggered a political process in the region the positive dynamics of which, especially between Pyongyang and Seoul, could lead to new political horizons which previously seemed unthinkable. (Thus, in official US statements, North Korea has moved from being a 'rogue' country to a 'state of concern'.)

To be sure, it is not yet clear whether the US will achieve a verifiable termination of North Korea's entire missile (test) programme. A National Missile Defense System, however, seems not only to be unnecessary for the achievement of these unprecedented results, but even

[60] Unofficial typoscript.

[61] See Sebastian Harnisch, Erst verhandeln, dann rüsten? Die nordkoreanische Bedrohung in der amerikanischen Raketenabwehrdebatte, http://www.hsfk.de/fg1/proj/abm/bulletin/pdfs/harnis1.pdf [28.6.2000].

counterproductive. Firstly, an 'NMD-equipped' United States which considers itself to be invulnerable would have had no incentives to start the negotiations with Pyongyang. Conversely, to be vulnerable increases the willingness to cooperate and reach compromises. Secondly, it is probably not coincidental that William Perry, President Clinton's Adviser for North Korea, did not mention NMD when he testified on October 13, 1999 before the House International Relations Committee on his successful mission to North Korea. This was the very day when Undersecretary of Defense for Policy Walter Slocombe presented to the House Armed Services Committee the questionable rationale behind the administration's NMD deployment policy:

> "(....) we continue to base our NMD efforts on the assessment, reflected in the NIE, that North Korea probably will test the TD-2 (Taepo Dong) this year."[62]

Not only the Republican-dominated Congress, but the Democratic administration faces a dilemma with the forthcoming deployment decision face a dilemma, because the successful policy towards North Korea makes an NMD superfluous. Conversely, a continued determination to deploy NMD could force the Administration to give up what has been an extremely productive policy approach.

Elements

'Triple M-TM' is a modernised arms control/threat minimising approach which must be context-dependent. The first being the nuclear context which, from an American perspective, concerns the relationship between the United States, on the one hand, and Russia and China on the other. If Europe wants to become a player within this nuclear power triangle, the conceptualisation of 'Triple M-TM' enables the Old Continent to develop arms-control criteria for monitoring and judging (American) BMD-related policies. Moreover, Europe cannot stay out of the BMD arena, because President Putin has directly called upon the Europeans to embark on a cooperative undertaking that could include the Americans as well. Moreover, if it came to a US-Russian compromise on ABM Treaty modifications then the question of sub-strategic defence systems against short- and medium-range missiles will become even more prominent. The second context regards European policy towards 'states of concern' in North Africa (Libya), the Near/Middle East (Syria) and the Gulf region (Iran, Iraq).

'Triple M-TM' in the US-Russian context

A modernised arms control approach implies, by definition, that it builds on the traditional concept by integrating those elements which are still valid in new international circumstances. As indicated above, within the context of the conceptually and operationally still-relevant MAD, core elements include the major goal and means of traditional arms control, i.e. the primary objective being the prevention of nuclear war by strategic stability (with parity as a variant) defined as assured by: a second strike capability; renunciation of a first strike capability/no-use of nuclear arsenals for political purposes; predictability of the arms race

[62] Walter B. Slocombe, Testimony, House Armed Services Committee, Hearing on National Missile Defense, October 13, 1999, p. 2. (Typoscript)

(arms race stability); arms limitations/freeze/deep arms reductions/disarmament; crisis stability.[63]

Cost and damage limitation, further objectives of the traditional arms control triad, still remain relevant, although the notion of damage has to be reshaped (which I will not do here). Nevertheless, the history of arms control cannot be written as a linear extrapolation as if the end of the East-West Conflict did not occur. The dissolution of the Soviet Union is a matter of fact, but so is the existence of Russia with its (hollow) claim as a superpower and of China as a serious regional actor and emerging superpower on the global scale. In the case of the US and Russia, a modernised concept must be developed that takes these factors into account.

A distinct break with past, successful arms control instruments should entail drastic reductions in the size of current US and Russian nuclear arsenals. There is still considerable room to reduce to a reliably verifiable number of, say, 500 to 300 nuclear warheads without any need for an 'insurance policy' provided by NMD (leaving aside the fact that any continental missile defence system is based on largely unconvincing WMD-related threat assessments, as well as on unproven technology).

In addition to the level of goals and means one has to consider a third element, the conditions necessary for successful arms control/deep arms reductions. Under today's circumstances it would be entirely appropriate to employ at least one restrictive factor (energetically contested by NMD supporters) from the traditional concept, namely freezing/slowing down the innovation of missile defence technology. As the controversy about the US 'Talking Points' shows succinctly, any NMD system has to be seen in a 'real' world context. Capabilities, intentions, and perceptions matter and in each regard, the rationales that are behind NMD are not convincing.

To be clear what seemed to be unlikely immediately after the end of the East-West Conflict, is reality now, i.e. the security dilemma is back on a large scale! The critical arms control-driven test for assessing the planned NMD deployment is whether it improves, reinforces or leaves the security dilemma about the same. Worldwide reactions thus far demonstrate to an overwhelming degree that US plans are perceived of as reinforcing the security dilemma. Firstly, the proposed architecture and the planned interceptors fail to live up to the literal meaning of the word 'defensive', in that in that they are able, because of their (up-graded) range, to hit targets beyond the US border and are therefore inherently or explicitly offensive weapons. More importantly, even if they were 'defensive' in a strict sense, they have to be seen firstly as part of an overall offensive (both nuclear and conventional) posture. Secondly, they have to be considered within the context of a military strategy that seeks in the ultimate analysis global US dominance based on the exploitation of the most 'advanced' technology. In the words of the United States Space Command 'Vision for 2020' which is presented under the motto: 'SPACE ... the Warfighters' Edge':

> "US Space Command – dominating the space dimension of military operations to protect US interests and investment. Integrating Space Forces into warfighting capabilities across the full spectrum conflict."[64]

[63] See Bernd W. Kubbig, (Re-)Defining and Refining the Criteria for Nuclear Arms Control: Theory and Praxis, in: Bulletin of Peace Proposals, Vol. 16, No. 3, 1985, pp. 199-223, esp. p. 207.

[64] United States Space Command "Vision for 2020", p. 3 (http://www.spacecom.af.mil/usspace). – General Howell M. Estes III is cited with the following "vision": "The increasing reliance of US military forces upon space power combined with the explosive proliferation of global space capabilities makes a space vision essential. As stewards for military space, we must be prepared to exploit the advantages of the space medium.

> It is this very objective that is the enemy of a modernised arms control concept in all its dimensions. Today, an obviously unrestrained 'sole superpower' is the major obstacle to arms control because its crucial actors again use notions such as 'superiority', terms, now associated with the information age, that should not have survived the end of the Cold War.[65]

A modernised arms control approach implies by definition new elements. Given the broad array of threats, traditional elements are not enough to meet either the deficiencies of existing nuclear arsenals and the highly problematic strategic disposition or the insufficient fissile materiel and warhead controls. In fact, the measures to deal with some of these menaces have become themselves a modern and conceptually enriching part of traditional arms control (catchwords: the cooperative 'Nunn-Lugar-Initiative'; a US-Russian early-warning centre as agreed upon at the Clinton/Putin Moscow summit in early June 2000). Nevertheless, a modernised arms control approach has to be broader and include measures against threats that have not been addressed or even solved in a cooperative, productive and durable way, especially the constant hair-trigger nature of a situation caused by continual high-alert status and/or launch-on-warning. As indicated above, from today's point of view the deployment of an NMD would not improve but worsen the perspectives for a retreat from alert status.

'Triple M-TM' is a mutual arms control/threat minimising approach. It is designed as a cooperative effort, be it bi-, tri- or multilateral. Unilateralism, on the other hand, because it seeks short-term advantages is the enemy of this concept. I have indicated several times that the real challenge of conceptualising arms control in the US-Russian context is to cope with cooperation in the context of asymmetry. This reality is far different from the notion of a cooperative and symmetrical ('fair/reciprocal technology sharing') approach. The United States would have to adopt an entirely different philosophy and break with the whole tradition of its strict export control system, which is aimed at controlling rather than sharing.

But cooperation in military affairs is, according to the approach presented herein, not a value in itself. It has to prove that it is indispensable and that the goals cannot be reached by a 'Diplomacy First!' approach.[66] This applies also to the Russian context. 'Mutuality' raises Europe's broader role in the East West relationship. The function of the Old Continent should indeed be based on cooperation, and Europe should work as a hinge and intra-Alliance counterweight to the current policy of the US which seems to have written off Russia a as serious partner. However, Europe should also qualify the contents of the cooperation and set

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This Vision serves as a bridge in the evolution of military space into the 21st century and is the standard by which United States Space Command and its Components will measure progress into the future." (Ibid.)

[65] See Kubbig, (Re-)Defining, (op. cit.), esp. p. 207.

[66] In this crucial respect *"Triple M-TM"* is different from a number of conceptually promising studies which were mostly published in the early 90s have not been taken into consideration in recent years. These studies focus on the notions of cooperation and of "security communities" and, thus, provide a productive starting point for expanding my own concept by including Non-Governmental Organisations. Such an extended version could focus on the establishment and role of transnational communities which would not be built around new ("defensive") weapons systems, but instead around the "Policy/Diplomacy First!" concept. See in this context Ashton B. Carter/William J. Perry/John D. Steinbruner, A New Concept of Cooperative Security, The Brookings Institution, Washington, D.C., 1992; Center for Strategic and International Studies/Council on Foreign and Defense Policy Moscow (eds.), Harmonising the Evolution of US and Russian Defense Policies, Washington, D.C., and Moscow, 1993; Fred Charles Iklé, The case for a Russian-US security community, in: James E. Goodby/Benoit Morel (eds.), The Limited partnership: Building a Russian-US Security Community, Oxford, 1993, pp. 9-22; Harald Müller, Von der Feindschaft zur Sicherheitsgemeinschaft – Eine neue Konzeption der Rüstungskontrolle, in: Berthold Meyer (ed.), Eine Welt oder Chaos?, Frankfurt am Main, 1996, pp. 399-426.

the right priorities. What Moscow needs foremost, is economic help and the reassurance that it is linked to the Western security architecture. The Europeans should also ensure that this security system is not dominated by NATO, but that the civilian institutions, OSCE and the EU, have an increasing role to play.[67]

'Triple M-TM' seeks to enhance security by minimising the threats. This characteristic addresses the efficiency of the approach by defending against the above-mentioned array of Russia-related menaces without leading to a new arms races. Therefore, it is assumed here that a 'Diplomacy First!' concept offers a comparative advantage to a 'NMD-First!' approach. However, it is not only Russia's unsafe weapons and missiles that are a threat. Moscow itself feels threatened by the WMD-activities of other states which raises the question for Europe as to whether it should cooperate with Russia in developing and deploying Theatre Missile Defences against tactical missiles. Once again, in accordance with the overall 'Policy First!' approach the cooperation in non-military sectors should be given priority and a chance to prove its efficiency towards countries such as Iran. There are also additional reasons for not embarking on joint projects in the Theatre Missile Defense area:

Moscow has not yet presented a comprehensive and cohesive threat analysis that guides its policy in this field; Pushing for European-Russian cooperation in the TMD area would contradict Moscow's principal emphasis on political solutions of the WMD-proliferation problem, as its position towards North Korea documents. President Putin's visit to Pyongyang is aimed at emphasising this approach as an alternative to the American stress on NMD; Initiating joint TMD projects would reveal irreconcilable conflicts of interest between the Europeans and the Russians. Moscow helps, for example, Iran in WMD-related matters which is seen by Europeans as a threat; and Embarking on European-Russian TMD projects could strengthen Russia's defence industry which, in turn, could increase the economic incentives to export their missiles to countries which are seen as a menace to Western Europe. The controversy on the deployment of Russian anti-tactical ballistic missiles in Cyprus being a case in point.

'Triple M-TM' in the context of 'States of Concern': the case of Iran

A *modernised* European (or common transatlantic) 'Diplomacy First!' approach towards a problematic country, such as Iran, could build on a fundamental achievement of East-West-relations during the Cold War, namely that an institutionalised arms control/reduction process in bi- or multilateral settings is vital to clarify or even solve the security concerns of the countries involved. This concept can and should be translated in an assimilated version into the European-Iranian context. Such an approach would give Teheran the chance to present its motives, while the Europeans (as far as they are bothered) could express their concerns about Iranian WMD-activities.

The establishment of such a 'dialogue infrastructure', therefore, requires on the part of the 'EU/NATO Europeans' an understanding among themselves about the need for such a process as a first step. Therefore, a joint European threat assessment will be the *second step*.

[67] See Putin in: Die Welt, June 11, 2000: "Wir beobachten mit höchster Aufmerksamkeit, wie sich die Europäische Union, die OSZE, die Nato, der Europarat, die regionalen Organisationen entwickeln. Insbesondere die Versuche, die Nato ins Zentrum des sich formierenden europäischen Sicherheitssystems zu stellen, beunruhigen uns. Dadurch wird die Rolle der OSZE objektiv geschwächt, die für die ausbalancierte Garantie der Interessen ausnahmslos aller europäischen Staaten von entscheidendem Gewicht ist."

Its outcomes will be the basis for the entire process (it is noteworthy that these results should not be considered as static, but rather as dynamic as they have to be seen in light of Iranian weapons development). Given the different political cultures within Europe and the different zones of security on this side of the Atlantic (catchword: Turkey is already within the reach of the Shahab III-missile), one can expect difficulties among European players. Nevertheless, it should be possible to agree on common denominators that guide future policy. Such a common understanding is also important with respect to the United States, as it communicates a 'power of interpretation' ('Definitionsmacht') on the part of the Europeans, a form of 'soft power', which signals a partial decoupling from the US on substance and, therefore, should not be underestimated. This is because the threat assessment determines the extent to which the identity of the Alliance needs to be based on 'out of area' dangers or whether its coherence is value-founded.[68] If the European assessment concludes that there is no immediate or, at worst, only a low threat or that the menace is likely to be manageable, then this presents the Europeans with a greater opportunity to balance the intra-Alliance structure more equitably.

As far as Iran is concerned, the establishment of a 'dialogue infrastructure' presupposes Teheran's willingness to break with its past negative attitude to a 'critical dialogue'. The prerequisite to become part of this process shows both the weakness and the strength of this 'Policy First!' concept because if the other side blocks, there will be no dialogue. However, as recent developments in Iran have shown, even seemingly static societies are evolving and produce albeit fragile results which could translate into an interest to establish an infrastructure with the Europeans. Therefore, as a *third step*, the 'EU/NATO-Europeans' should seize this window of opportunity and simply start the process. It need not be built from scratch because countries like France and Germany have already started the dialogue.

Paris and Berlin could be the nucleus and the driving powers of such a common European initiative. Foreign Minister Fischer's first visit to Teheran already contains important elements of a *'Triple M- TM'*, especially the components of the bargaining chip, the linkage and the embeddedness of the arms control/threat minimising approach within a broader European/Iranian (Gulf region) framework. These are elements from traditional arms control and negotiating theory which could be brought to life again.

In keeping with the Russian/nuclear deterrence context, *'Triple M-TM'* is a mutual arms control/threat minimising approach in the Iranian/WMD-related context as well. Its explicit approach, and crucial comparative advantage to a weapons-based concept, is that it is by definition inclusive on a direct and non-selective scale. It is designed to communicate and cooperate directly with the target 'states of concern', before they embark on strategies of selective cooperation (i.e. with Russia in the area of missile defence) in order to protect themselves against other countries. Such a strategy, that excludes problematic countries, is premature and as potentially counterproductive. Premature, because the 'Diplomacy First!' imperative explores, by definition, the possibilities of political solutions; counterproductive, because a premature European (/Russian) deployment of territorial and/or TMD systems is likely to trigger new and unaffordable, regional arms races that could easily get out of control.

[68] See Joschka Fischer in: Der Spiegel, May 15, 2000, p. 39.: "Ich denke, ein Bündnis ohne Außendruck aufrechtzuerhalten, ohne gemeinsame Gefahr, die es abzuwehren gilt, ist wesentlich komplexer und schwieriger. Und das gilt nicht nur für militärische oder politische Belange, das gilt insgesamt für die Beziehungen."

'Triple M-TM' is a mutual arms control/threat minimising approach. In implementing the initiated dialogue infrastructure as the *fourth step*, the afore-mentioned elements of the traditional arms control approach become vital in order to enhance security. If the 'EU/NATO-Europeans' conclude that there is a threat then it would make sense to seek a verifiable limitation of the Shahab-missile programme in a way that meets their security concerns. As part of a broader package, the Iranians could be offered economic assistance ('linkage') which in turn could be an element of a broader European policy towards the Gulf region ('embeddedness'). The Iranians will probably 'learn' during an institutionalised dialogue (pace the North Koreans with the United States) that the Europeans might eventually turn to a weapons-based response to Teheran's unrestrained WMD-activities ('bargaining chip'). (The Europeans, in turn, will probably be confronted with their past by learning how their dubious export policy, especially towards Iraq, contributed to the Iranian build-up which has now backfired for the exporting countries).

As with the case of Russia, a cooperative approach with a problematic country such as Iran is not only likely to minimise (or reduce) the technical roots of the threats, albeit an outstanding achievement in itself. *'Triple M-TM'* has the chance to target and incrementally change the domestic (and regional conditions) as well that have led to the dynamics of Teheran's WMD-activities by strengthening the reform-oriented factions within Iranian society. Whilst it would be unwise to expect too much from an arms-related approach (as experiences with arms control during the Cold War have repeatedly shown), a spill-over from this policy area to other sectors should not be excluded. Equally, in view of the ongoing struggle between backward and forward looking groups in Iran the proposed dialogue could play into the hands of the reformist camp, while the deployment of BMD systems (whatever variant) will just do the opposite. As an optimist one may regard the positive influence from outside as a first step on a long journey to more democracy.

Conclusions: Europeans, give the 'Diplomacy First!' concept a try!

A *Modernised, Mutually Minimising Missile Threat Model* based on differentiated premises, fulfilling the listed criteria, and aimed at tackling a broad array of threats promises to be conceptually superior to a 'Weapons First And Diplomacy, Too!' approach. If taken seriously, it brings Europe onto the BMD scene and makes it a visible and credible actor. This is a necessary prerequisite for the Old Continent to become identified with an innovative concept that builds on its traditional and well-proven strengths which in the WMD-sector could become part of its oft-proclaimed defence and security identity. For Europe to design, initiate and implement such a policy means it will have to do its homework, before its starts to look outwards. In specific terms this would mean:

- Preventing the US from becoming an arrogant, and thus unwise, victor of the Cold War by humiliating Moscow, forcing China into an arms race, and by excluding the problematic countries such as Iran from a 'Policy First'! strategy – or, in other words, to challenge the United States conceptually and to remind Washington of the need to return to its tradition of being a good, i.e. self-restrained, multilateral-minded, compromise-oriented and treaty-respecting hegemon. It may sound awkward, but Europe needs these reassurances and confidence-building measures from the Americans;
- Encourage Russia to adapt to new circumstances, i.e. by giving up on its nostalgic superpower desires, developing its economic strength and giving preference to a politico-economic coupling to the Western security framework, instead of embarking on

unaffordable, dangerous, and premature pan- and trans-European Ballistic Missile Defense dreams;
- Send a clear message to China with the aim of changing its status as a part of the non-proliferation problem to that of part of solution; and
- Encourage ‘states of concern’, such as Iran, to participate in a critical arms control dialogue.

CHAPTER FOUR: NMD AND DETERRENCE

IV.1 A US view on NMD and deterrence

Robert Grant

Introduction

The likelihood that one or more regional proliferators will threaten the United States during the coming decade with long-range ballistic missile strikes has been the object of heated debate, as has the ability of the proposed NMD system to counter that threat. Even if there were a consensus that the threat will indeed emerge, and that the technological basis exists to deploy an effective NMD system, the question of whether the system is actually needed would still arise.

Many critics of NMD deployment argue that a policy of deterrence through the threat of retaliation provides a more than adequate response against any regional proliferator in possession of ballistic missiles able to strike US territory. These critics assert that regional proliferators would not dare strike the United States because they would be reduced to 'smoking holes in the ground within hours', to cite but one variant of this line of reasoning. There is a need to take a critical look at these kinds of statements. Certainly the wide breadth of support in the United States for some form of NMD system would suggest that there is a significant level of discomfort with a policy based solely on deterrence through the threat of retaliation in dealing with regional proliferators capable of attacking US territory with missile-delivered nuclear, biological, and chemical (NBC) weapons.

The first part of this paper will examine the why this significant level of discomfort exists. The second part will look at the impact of NMD deployment on US nuclear policy. Would the deployment of an NMD system mean that missile defence is replacing "the long-standing policy of nuclear deterrence", as Zbigniew Brzezinski recently charged?

Deterring regional proliferators – the 'smoking hole' approach

A ballistic missile strike from a regional proliferator that hits the United States and kills even a few thousand people would constitute a catastrophic event for the country and its political leaders. However, what would the US response be? Would the President of the United States take the cold, calculated decision to destroy an entire city, much less an entire country, in response to this attack? Would the President opt to bring such massively disproportionate force to bear? Political, moral and legal considerations would probably all weigh heavily against the President's taking the decision to execute such a hugely disproportionate retaliatory response. Nor would the threat to do so necessarily have much credibility in the eyes of regional proliferators. The dilemmas surrounding the decision on the nature of US retaliation would be even more acute if the attacking missiles had carried chemical or biological weapons (CBW). Nuclear retaliation after a CBW attack would entail the first use of nuclear weapons since World War II, and by the same country that used them then. While a regional proliferator may not view the threat of a massively disproportionate US nuclear

retaliatory strike as very credible, the prospect of more measured, albeit still very severe, punitive action may not always have the desired deterrent effect.

This discussion points out only some of the significant uncertainties and dilemmas associated with deterrence through the threat of retaliation that the 'smoking hole' argument does not capture. The decision over what retaliatory action to take that would confront a US president in the aftermath of a missile attack against national soil would become considerably less agonizing if an NMD system successfully intercepted any incoming missiles. Punitive action would still be desirable in order to reinforce deterrence against future attacks, but retaliatory options would be wider and consideration of them far more comfortable than in the case of a missile's successfully striking the United States.

Would a regional aggressor threaten the US with ballistic missile attack?

The uncertainties and dilemmas noted above would not matter if one takes the view that there are no plausible circumstances in which a regional proliferator would threaten the United States with ballistic missile attack. The leading purpose of manipulating such a threat would likely be to deter a US regional intervention. The ability to threaten US territory with ballistic missile delivered NBC weapons would weigh heavily in US national decision-making on whether to intervene in a regional conflict. The national interests at stake in the regional conflict may be the object of domestic political controversy, and vary considerably depending on the specific case. If Washington takes the decision to intervene, the NBC and missile threat would also greatly influence the setting of political objectives for the intervention, and how those objectives evolve during the course of the intervention. The ability to launch long-range missile strikes could also thwart US efforts to form an intervening coalition by threatening prospective coalition partners. This approach may be as effective as directly deterring the United States itself, since the absence of coalition partners could make an intervention politically untenable for Washington.

During the course of a conflict, a regional proliferator might also manipulate the threat to strike US territory in order to constrain Washington's response following the use of CBW against US forces deployed in the theatre of operations. Finally, a regional proliferator could threaten to strike the United States in order to bring about war termination on terms which enable regime survival in the face of a hopeless military position against the US-led intervention.

Thus, simple possession of a long-range ballistic missile capability can have a substantial political and military impact. Some NMD sceptics in Europe have asserted that regional aggressors do not need ballistic missiles to deter US intervention because the ability to inflict some casualties on US forces is sufficient. This argument is highly misleading. In cases where casualties, or the fear of casualties, resulted in the termination of a US ground intervention or actually deterred such an intervention (Lebanon, Somalia, Kosovo), there was only a limited perception in the US of any national interests at stake that would justify the risks to the military. With respect to the Somali humanitarian crisis, there was no perception whatsoever of any national interests involved in the intervention. On the other hand, in the case of the 1990/91 intervention in the Persian Gulf there was a much stronger perception of national interests at stake, and a resulting political willingness to risk a substantial level of casualties to US forces.

Yet, despite the perception that the Iraqi invasion of Kuwait presented a major challenge to US national interests, the Congress only narrowly voted to approve the use of military force to expel Iraqi forces. In a case such as the Persian Gulf in 1990/91, the additional factor of a long-range missile capability able to threaten US territory could potentially play a decisive role in US decision-making. An effective NMD system can undercut this political impact of ballistic missile threats against national territory, and help avoid self-deterrence from intervening in regional conflicts that challenge major national interests.

NMD and US deterrence policy

With respect to the impact of NMD deployment on US deterrence policy, one has to look at three separate cases: regional proliferators, Russia, and lastly China. There is a potential for NMD deployment to have a different effect on US deterrence policy in each of those three cases.

Regional proliferators

The problem of deterring regional proliferators raises the question of deterring them from doing what? During the Cold War, NATO countries had a vital, shared interest in deterring any aggression against Western Europe on the part of an identified superpower adversary. In practical terms, it is very difficult to formulate a single approach that would systematically deter regional powers, NBC armed or not, from initiating aggression that threatens national security interests. Unlike during the Cold War, there may be no clear, pre-existing national consensus regarding the regional interests that need to be protected through deterrence threats. Challenges to regional interests are very unlikely to be always identifiable or identified prior to a crisis, as was the case for Iraq's invasion of Kuwait in 1990. In the absence of clear, prior commitments, the United States will struggle to 'catch up' with an unfolding crisis, and deterrent threats issued at such times are likely to lack effectiveness.

There are very sound reasons, however, to attempt to formulate deterrence policies against a regional adversary's threatened or actual use of NBC weapons. The risk that regional powers may use NBC weapons against US security interests is very plausibly increasing, these weapons are uniquely able to undermine the ability of US forces to deploy and operate in the field as well as the political will to intervene in regional conflict, and significant international norms exist against their use. If the United States does come into conflict with NBC armed regional adversaries, successfully deterring the use of these weapons will be a critical objective.

In order to deter regional proliferators from using NBC weapons, the United States is clearly resorting to a mix of offensive and defensive systems, including missile defences. Because deterrence through the threat of retaliation alone may not always work, US policy to deter regional proliferators from using NBC weapons is based on an integrated approach combining deterrence through denial of benefits and deterrence through the threat of retaliation, including potential nuclear retaliation. The US move towards NMD deployment is not a cause but rather a consequence of this policy choice. This integrated approach combining deterrence by denial and deterrence by threat of retaliation is broadly accepted today within NATO for preventing NBC weapons use against deployed forces, and for protecting those forces if deterrence should fail. Taking this same approach to deter threats against national territory

does not appear to represent a huge conceptual leap, although it is more technically and politically complex to operationalise.

It is highly unlikely for the foreseeable future that the United States will replace deterrence through the threat of retaliation with a policy of deterrence through denial of benefits. The goal is to add another tool to the tool-box rather than substituting one instrument for another. There is no absolute guarantee that even the most effective NMD system will intercept every single attacking missile, not to mention other potential means of delivering NBC weapons. There has been a growing concern over the future threat from biological weapons, and a perceived needs to maintain a role for nuclear weapons in deterring an adversary's BW as well as nuclear use. A regional aggressor could never be exactly sure what level of destruction stemming from its use of NBC weapons would trigger a nuclear response on the part of the United States or other nuclear powers.

The interest in deterrence through conventional means alone that existed to some extent early in the first Clinton Administration is not there anymore. Clinton Administration officials, in stating US policy, repeatedly assert that "the ability to deliver an overwhelming rapid and devastating military response with the full range of our military capabilities will remain a cornerstone of our strategy for deterring rogue nations' ballistic missile and WMD proliferation threats".

Russia

For the foreseeable future, the US is likely to remain within a framework of deterrence through the threat of retaliation as far as the US-Russian strategic relationship is concerned. The NMD system that the Clinton Administration envisages could only deal with a limited, accidental or unauthorised launch from Russia. The Administration's talking points regarding revision of the ABM Treaty, which were placed on the website of The Bulletin of the Atomic Scientists, made a considerable effort to convince Russia that the proposed NMD system would not undercut Russia's nuclear retaliatory capability.

Although Governor George W. Bush has expressed his intent to pursue a broader, more capable NMD system than the one espoused by the Clinton Administration, its objectives would not include countering a large-scale Russian ballistic missile attack. It would also be difficult for a new Bush Administration to revive the discussions that took place with Russia in 1992 regarding a cooperative transition towards a US-Russian strategic relationship based on a mix of offensive and defensive systems. Both Russia and US-Russian relations have changed considerably since Boris Yeltsin gave his January 1992 speech to the UN calling for bilateral cooperation on a 'Global Protection System'.

China

With regard to China, there is a major question mark as to whether the United States will accept a strategic relationship based on deterrence through the threat of retaliation, or whether Washington will attempt to move towards deterrence based on a mix of offensive and defensive systems, as in the case of regional proliferators. The US national security community has not yet begun to confront this issue. If Governor Bush is elected president, the pursuit of a more capable NMD system would have greater potential to support a shift in

deterrence policy towards China to one based on an offensive/defensive mix. Nonetheless, there are clearly major technical uncertainties over whether an NMD system could be made effective enough to defeat a future Chinese ballistic missile force.

In any of these three cases (regional proliferators, Russia, and China), the United States is still a long way from any prospective shift in deterrence policy to one of 'defence dominance', and from Brzezinski's charge that missile defence is replacing nuclear deterrence.

IV.2 Missile defences and deterrence

Thérèse Delpech

During the first ABM debate, back in the 60s, the following exchange took place between Herman Kahn and Bernard Brodie: Kahn declared that an ABM system would save 50 million lives and Brodie replied: "Herman, in order to save 50 million lives, you have got to have a war". With the bipolar confrontation now over, the stakes are no longer the same, but the passions involved continue to show a similar intensity and polarisation. Yet, the picture is far from clear for a number of issues traditionally linked to BMD, if they are contemplated in a cold manner. Such is the case for the relationship between deterrence and defence, a subject close to French politicians and analysts.

Two different statements were made recently on the subject, one by Gov. George Bush, another by President Clinton and President Putin. On May 23, Gov. George Bush declared that the nation's security no longer required "a nuclear balance of terror ". He called for new thinking for a new post-Cold War era, and for new reductions in American nuclear weapons coupled with a robust antimissile defence. American commentators recognised that it was possible to move past the Cold War logic of mutually assured destruction (MAD), but warned that this speech could not solve the problems with the Russians, because of the 'robust ' missile defence Governor Bush was proposing. In Europe, the speech was reminiscent of both the nuclear unilateral reductions proposed by President Bush in October 1991 and President Reagan's rhetoric concerning the post nuclear age and his call for an alternative to deterrence systems.

On June, 4, basically orthodox approach to deterrence emerged in the Joint Clinton-Putin Statement on Strategic Stability. For example, point 2 states "they agree that capability for deterrence has been and remains a key aspect of stability and predictability in the international security environment". However, the two Presidents may have had different interpretations of the text in mind. President Clinton was preparing an agreement concerning the amendment of the ABM Treaty, while President Putin was reaffirming once again his determination to keep the 1972 Treaty as "a cornerstone of strategic stability". As a result, the Summit was hardly a breakthrough. The current Administration's efforts to change the ABM Treaty may be aimed at strengthening it. Indeed, as US Deputy Secretary of State Strobe Talbott said before the Summit: "Our intention is to keep the ABM Treaty very much part of the foundation of international arms control. We don't want to see the ABM Treaty violated, we don't want to see it weakened, we want to see it strengthened". However, the Russians remain unconvinced.

So are many Europeans, who believe the American dream of a National Missile Defense that would protect American territory from being hit by ballistic missiles from states, formerly known as 'rogue' , is unrealistic and, moreover, may be dangerous for the Alliance by conveying a 'Fortress America' image to the world. This big idea adds also (rightly or wrongly) to European fears about both US unilateralism or/and different zones of security. Among the Europeans, the country most concerned that deterrence might be seriously undermined (and even progressively destroyed) as a core concept for international security is probably France.

Equally, as suggested earlier, it is far from clear that missile defence would kill deterrence. For example, it could be argued that:

- It could supplement deterrence, as it did for the Russians during the Cold War (what exactly was the purpose of the defence of Moscow remains a tricky question however, taking into account the overwhelming capability to defeat it). This is also the philosophy of the ABM Treaty, which limits defences but permits them as a complement to nuclear deterrence (as protection for either the capital or an ICBM site). The US has argued repeatedly that it will continue to deter attacks by the prospect of overwhelming retaliation. Limited defences would only complement this policy.
- This supplement to deterrence might seem particularly tempting when new actors, with unknown doctrines (if any) are appearing on the international scene, including potentially 'undeterrable actors'. The very existence of such actors, unable to grasp the risks they are facing when confronting nuclear weapon states (NWS) is debatable, but what is not is the reckless decisions taken by Iraq in 1990 (gathering against it the largest coalition since the Korean War, which involved four nuclear powers) and 1991 (particularly when Baghdad decided to attack Israel) and by Serbia in 1999, when Milosevic confronted NATO, the world's most important military alliance. As it is well known to experts, deterrence is less efficient with non status quo powers. In addition, the fear raised by those countries allegedly difficult to deter tends only to increase with new developments in the field of ballistic missile proliferation.
- In the absence of any threat of use, defences undermine no deterrent. This is particularly relevant in the Sino-Japanese case. Why would BMD in Japan undermine the Chinese deterrent if China does not threaten Japan? More than technology is at stake in this debate. The main issue is power in Asia in the twenty-first century, the China-Japan rivalry in this context and Japan's alliance with the US. Will the US remain a major Asian power in the twenty-first century? The US-China nuclear relationship is also still unclear. Do the two parties want Mutual Assured Destruction as the basis of their future strategic relations? Given that an extensive modernisation of Chinese forces has been already underway for many years, the main questions as far as BMD is concerned, are twofold: first, does the US unwittingly provide a level of justification to China's modernisation through NMD? Second, how much are previous Chinese plans likely to be upgraded because of US planned (or presumed) defences? The answer matters not only to the US but also to Russia and Japan.
- Deterrence, which remains untested, is under greater pressure in a multipolar nuclear world than in a bipolar one. More players, more uncertainties, more risks of crises. If the number of nuclear weapon states grows, as India and Pakistan might suggest, how to ensure a viable and efficient deterrence? The management of proliferation would probably then go along with efforts to contain it and defences may be part of this strategy. They appear first and foremost useful as a response to unchecked ballistic missile proliferation. States that have contributed to missile proliferation are therefore in a questionable position to argue against missile defence.
- Pre-emptive military strikes against proliferators will remain a theoretical – not a practical – option because the legitimacy of such actions will always be open to question. The absence of defences could then leave the West, along with Russia, with only the option of very costly responses in the event deterrence fails, which could in turn destroy nuclear deterrence for good. If credible nuclear deterrence is to be maintained at a strategic level (i.e. against major powers and scenarios), defence against lesser threats might make sense.
- In the course of the disarmament process, as the world 'builds down' to fewer nuclear weapons, defences would become more necessary. Some arms control experts have argued that missile defences are best pursued in concert with progressive reductions of nuclear weapons, an approach that was hinted at by Governor George Bush in his May speech.

- Such an argument will be particularly attractive to governments and societies increasingly anxious to spare human lives in times of crisis or conflict. It appears more and more difficult to admit to having only nuclear options for situations other than the survival of the state itself (see the 1996 Advisory Opinion of the International Court of Justice).
- Finally, missile defences could play a useful role in countering coercion and strengthening alliance cohesion by providing additional reassurance to allies if interventions are to be carried out abroad. Such is the case for a number of TMD systems, particularly in regions of tension. Equally, freedom of action on the world stage should also be backed by legitimacy and defences should not be perceived as untrammelled freedom (Prime Minister Blair enunciated five conditions for military interventions on 22 April 1999: "Are we sure of our case? Have we exhausted all diplomatic options? Are there military operations we can sensibly undertake? Are we prepared for the long term? Do we have national interests involved?")

Equally, it is possible to present a range of persuasive counter-arguments:

- That defences decrease deterrence, that deploying shields makes the role of deterrence questionable, and, even, that defences negate deterrence as a 'Cold War Concept', i.e. a concept no longer fashionable, and only good for grandfathers. As early as 1983, President Reagan called the scientific community to turn its talents to the cause of world peace and to provide a means for rendering nuclear weapons 'impotent and obsolete'. The idea is still around even if the current NMD plans combine the two concepts (deterrence and defense) much more than the Strategic Defense Initiative (SDI), because of their more modest ambitions.
- During the Cold War, it was the US that argued against missile defences because they could provoke a first strike by the side that did not have ABM systems in times of crisis or war. The Russians did not accept this view, as the famous exchange in Glassboro between Mc Namara and Kossyguine in 1967 clearly shows. Surprise attacks could still be tempting in regions of tension and intense rivalry, for instance the Middle East and East Asia.
- If missile defences further increase the risk of imbalance between the US and Russia, deterrence, i.e. Mutually Assured Destruction (MAD), could be weakened unless nuclear forces are sharply reduced on both sides. But is MAD ever going to be any serious basis for international security in the XXIst century? Most probably not.
- The conditions for deterrence might well be more surely undermined by other factors than defences today, such as a) the difficulty of grasping the consequences of a multipolar nuclear world; and b) the relative mediocrity of many politicians in the post Cold War world. The first could lead to almost unmanageable situations for deterrence whilst the second risks leading to a lack of credibility for deterrence and consequently miscalculation on the part of potential adversaries. The Iraqi claim they never believed in nuclear use on the part of the United States during the Gulf War.
- Deterrence could well remain the best instrument to deal with proliferators, but so much stronger and effective non-proliferation regimes must be put in place than those available today which, in turn, will require unfailing co-operation among the major powers. The current trend does not support this argument.
- Proliferating States will find it increasingly easier in the coming years to develop non-missile means of delivery. Defences could therefore become weak, providing a false sense of security, whilst deterrence could, at the same time, disappear from the strategic culture of leaders and politicians.

- The efficiency of defence against biological weapons, which could become the major threat of the XXIst century is, and will most probably remain, low. This possible circumvention of defences by a category of weapons which could be increasingly available in the next decades has to be taken into consideration as well.
- The potentially most dangerous effect of national defences would probably be to lower the threshold of caution that Heads of States and governments adopted during Cold War confrontations thanks to nuclear deterrence and the fear of retaliation. The increasingly destructive nature of weapons in many regions of the world should promote more caution, not less.

Conclusion

As with the debate over decoupling, there is no such thing as a unique line of thought concerning the relationship between deterrence and defence. Dogmatism is dangerous. Indeed, debate and dissent remains the precondition for political health and pre-supposes several core questions. Among them are the following : Is the new world becoming a 'defence-dominated world' after having been defined hitherto as 'deterrence-dominated'? Is extended deterrence sustainable in the future without missile defenses? How the major actors will practice deterrence in the XXIst century? Will deterrence become "residual" in post modern strategies? Under which circumstances it will still seem necessary to issue deterrent threats?

The problem for NMD opponents is that missile defence is popular in a way that deterrence can never be, i.e. it is too sophisticated and counter-intuitive to pretend that one is better protected by the absence of protection. To understand deterrence is not easy, and when understood, deterrence might appear frightening, particularly to those gifted with imagination.

However, it is unclear that a world with NMD (which appears to be so popular on the other side of the Atlantic) would gain in security. What is clear is that European defence budgets would suffer in the current circumstances if they were forced to follow suit. The Americans have spent 120 billion dollars over the past 40 years on an antimissile system that still does not work. They will no doubt throw even more money at defence contractors, but no country except the US can afford an open-ended missile defence programme. Europe certainly cannot afford this luxury when many conventional force requirements are so pressing. The best solution from a European viewpoint would be first to wait until it is known whether the system that will be deployed will actually work. Recent tests do certainly not answer this question in a satisfactory manner.

That said, it would also be useful to provide the Americans with some indigenous European thought on the strategic implications. After all, many of the proliferators are closer to the Europe than America. Finally, the debate must move onto a higher level of strategic thinking because it is all too often presented as a struggle between Good and Evil and it is far more complex than that.

IV.3 NMD and deterrence

Lawrence Freedman

Ballistic Missile Defence has been one of the most influential systems in the development of concepts of deterrence. Unlike all other weapons developments that have contributed to deterrence, however, in this case the input has come largely through a series of hypotheses. Both the US and USSR had active BMD programmes but they never amounted to most, although the Russians managed some protection for the Moscow area from the mid-1960s.

The lack of serious deployment, to the point where it would make a difference to real strategic calculations, is often put down to the influence (benign or malign according to point of view) of notions of 'mutual assured destruction' or MAD. These are often held to have provided the underpinning to the ABM Treaty, which limited the deployment of nationwide BMDs. It was certainly contemplation of BMD by Robert McNamara's Pentagon in the 1960s that led to the dogmatic presentation of the propositions for which his critics judged MAD to be an appropriate acronym. Here they saw the divergence of deterrence theory from common sense. These were summed up as: 'offence good, defence bad: killing cities good, killing weapons bad.'

However the reason why the US did not push forward with its own BMD, or for that matter with 'passive' civil defence against nuclear attack, and why the USSR came to embrace MAD having rejected it, was simply that offensive systems appeared likely to overwhelm any defence. BMD was killed not by bad theory or arms control, but by cheap penetration aids and multiple warheads.

The point about deterrence was simple enough: if successful BMD could provide a risk insurance for a first strike. For this they needed to be coupled with a sophisticated offensive capability. But another reason why MAD gained in plausibility was that no offensive capability could be designed that could take out the totality of the enemy offence, especially as offensive systems were kept safely in submarines. As by itself, BMD could never provide a first strike capability there was always a hankering after defence dominance, in which the nuclear danger is reduced because both sides can protect their societies against attack. Again the problem was always the ease with which the offence could overwhelm the defence, so that for this system to be stable, exceptional and reliable restrictions would be needed on offensive forces, and the defence would still have to be able to cope with any breakout.

These issues were examined to exhaustion during the first great ABM (anti-ballistic missile) debate of 1965-72 and then during the even greater star wars debate of 1983-88, prompted by President Reagan's sudden embrace of a strategic defence initiative (SDI). In terms of deterrence theory there was an important shift in the rationales developed. Under LBJ and Nixon the official case for ABMs was geared to reinforcing deterrence by protecting Minuteman ICBM silos from a surprise first strike. It had limited credibility in this role, largely because of the expectation that it would be expanded to cover all society. Limited rationales that still involve vast expenditures are rarely satisfactory. It is of note that the original US ABM deployment (Sentinel in 1967) initially had a rationale geared to China, and accidental launches.

With SDI no attempt was made to provide a deterrence rationale. Indeed the rationale was strictly anti-deterrence. The emphasis was on defence dominance and the reasons why it was better to protect than avenge. It was this that led Prime Minister Thatcher to speed across the Atlantic to extract a commitment from the US President that he still cared for deterrence. It was not the anti-deterrence rationale that undermined SDI nor the challenge it posed to the ABM Treaty, but its lack of conviction on the technical side. There were a number of aspects to this which are still relevant to the NMD debate.

- Assumptions about the enemy are critical to the design of a BMD system. The enemy has to pose a sufficient threat to warrant the effort but not so substantial as to overwhelm the proposed system, or clever enough to circumvent it. Potential opponents can take advantage of the long lead times. When an anti-China system was proposed in 1967, the Johnson Administration had to demonstrate that not only was it likely that China would have some ICBMs by the early 1970s, but that the few that would be build would be 'significant.' He had also had to show that after another ten years of continuing build-up the American system would still be able to cope. Given MIRV technology, and the ability to choose the place and time of attack, each additional increment of offensive capability is much cheaper than the increments of extra defensive capability.
- BMD may deter ballistic missile use, but not necessarily bomber use or more insidious means of delivering weapons. The consequences of a single nuclear detonation are such that the system has to have no obvious flaws.
- This undermines concepts of 'value for money.' As no system is perfect and as resources are not unlimited, it will be difficult to establish the claims of a particular technology –not only against who doubt the need for any system but those who believe that they have a better system. Internecine warfare among BMD enthusiasts may well undermine all claims.
- With a non-deterrence anti-offensive weapon rationale then the obvious question is why not just abolish all offensive weapons. A disarmament solution makes more sense than a hardware solution.
- The more opponents of BMD allege that it will disturb the strategic balance the more proponents get interested. In 1987 Gorbachev realised that he was the best advocate of SDI, for so long as he demanded that it should be abandoned, proponents could say 'if it is so worthless why are the Russians so scared?' As soon as he indicated indifference to SDI the initiative was doomed.

NMD is obviously quite different from the Sentinel/Safeguard systems of 1965-72 and SDI in that it has a much more modest objective. This objective has to be understood in terms of the changing strategic context.

The West has a much reduced stake in nuclear deterrence. It became dependent upon a nuclear strategy during the Cold War on the basis that this was the only way that the Warsaw Pact, with a substantial conventional superiority, could be deterred. Now that the Warsaw Pact has evaporated, and the conventional balance has shifted decisively in its favour, NATO no longer needs a nuclear strategy. As the Kosovo war showed, its aircraft can hit with impunity almost any targets they choose (admittedly also some they don't choose) without being caught by enemy air defences. There is a residual case for deterring other nuclear powers, and possibly countries tempted to try chemical and biological warfare, but there is no need to plan to be the first to use nuclear weapons. There are a variety of forms of deterrence that can be applied, often dependent only upon the West's exceptional conventional firepower

if they have to be implemented. (For example, the threat in 1991 v Iraq was to go for the regime (ie Baghdad) if chemical weapons were used.)

Unfortunately, for the very same reason, potential opponents of the West have become more interested in unconventional weapons. They know that they cannot defeat the Americans, British and French in a regular battle but suspect that they can be persuaded to steer clear of any conflict that looks like it might go nuclear. This view has become particularly strong in Russia. There the chaotic state of the armed forces, coupled with the growing conviction amongst senior military officers that the US has been taking political advantage of its current strength, has led Moscow to put more rather than less reliance upon a nuclear strategy. It is this, they believe, that will stop the Americans doing to Russia what it did to Serbia.

Iraqi, Iranian and North Korean attempts to get weapons of mass destruction can be seen as attempts to stop Washington interfering when they throw their weight about in their neighbourhood. China has been rattling missiles in its grumbling crisis with Taiwan, one in which the United States could easily get caught. North Korea knows that its presumed nuclear capacity and missiles is one of its only bargaining cards in its fight for survival.

NMD is therefore naturally viewed as challenging the growing dependence of weaker states on nuclear deterrence as a counter to the overwhelming conventional strength of the West. It does not particularly sustain Western deterrent strategies.

Indeed NATO proposals have little to do with deterrence, in that they suppose conditions in which the sort of rational decisions upon which deterrence strategies are founded have become irrelevant. There are numerous reasons why rogue states with only a few missiles to spare should be deterred from mounting any sort of attack against the United States, so there is only a need for NMD if it is assumed that the responsible officials in these countries are crazy – Hitler in his bunker sort of scenarios. The favourite rogue is Korea – a hopelessly poor country, worth far less than the cost of the defence shield, with a regime that is likely to have collapsed before any shield is completed. The thought that this barrier might be constructed could possibly be a disincentive to a long-range missile programme, but that is not the only way to deliver a nuclear weapon to the United States.

The other possibility is that of an accidental launch by Russia. There is a real worry that the weapons are poorly maintained by underpaid personnel with obsolete and unreliable command and control systems. One can postulate that this problem would become worse in a crises (and that itself provides an element deterrence for Moscow, as the prospect of a loss of central control has to be factored into the West's calculations).

In practice NMD is likely to be an irrelevance if it happens at all. By and large most states with a possible interest in developing weapons of mass destruction and means of delivery are prompted by regional concerns rather than some heroic desire to take on the United States directly, especially given its own formidable means of nuclear retaliation. That is why the Americans have been working closely with Israel and Japan on theatre defences. Israel has been putting substantial resources into defensive technology after its Gulf War experience with Scuds while Japan can see itself getting caught up in any turmoil in the Korean peninsula or Chinese assertiveness over Taiwan or the Spratleys.

At some point a country may be very grateful for an investment in missile defences if it stops just one stray or accidental missile, or convinces a prospective attacker that a missile strike

carried too high a risk of failure. Nonetheless they risk creating a false sense of security, easily punctured by a clever opponent. The interest in these systems is a symptom of a worrying trend – the revival of nuclear threats as a short cut to political gain – but they offer no solution.

CONCLUSION

Burkard Schmitt

Discussion showed that debate, even over a "virtual" system, can have very real political consequences: the final decision on NMD has not yet been taken. However, it is already putting transatlantic relations under strain. On the other hand, it became clear that the NMD is at least as controversial among Americans as it is between Americans and Europeans. Whereas European participants were all sceptical about NMD, American participants disagreed among themselves over the utility of the system.

Almost all aspects of NMD create controversy. Indeed, there is consensus neither on its necessity nor its feasibility nor its impact on arms control and the strategic equilibrium. There are only two exceptions. There was consensus that NMD would pose a problem to the Chinese ability to retaliate which, in turn, could lead to Chinese reactions with destabilising effects for security in Asia. The second point of agreement was NMD's lack of effectiveness against even limited threats. There is in fact little doubt that countries with the technology to develop ICBMs would also have the political will and the technological know-how to develop countermeasures capable of overcoming a C-1 NMD. In this case, deployment of a limited NMD would provoke a new race between defence and offence, pushing the US towards an upgraded NMD capability. This, in turn, could lead to a system sophisticated enough to destabilise the strategic balance between the official nuclear powers.

It became clear that, from a European point of view, strategic decoupling would not be the most important risk resulting from an NMD deployment. Even during the Cold War, there had always been different exposures to risk and zones of risk within the Alliance. Threats from rogue states could become real in the case of Western intervention in a regional crisis; because such interventions will always inevitably be led by the US at least for the foreseeable future, the threat to Europe would remain limited. On the other hand, participants agreed that decoupling, even if it is only imaginary, can be a very important psychological problem for the coherence of the Alliance.

Discussions also showed that Europe could play a more important role in this field – even though its immediate influence on American decisions concerning NMD should not be overestimated. Several participants pointed out, for example, that Europe, unanimous in its scepticism about the American assessment of the missile threat, should develop its own estimation of NBC menaces. Others stressed that Europe should use its economic power and its experience in "soft security" to influence countries of concern. Political and diplomatic initiatives in this field could strengthen the NPT regime and eventually help to make NMD deployment superfluous.

CONCLUSION

Burkard Schmitt

Les échanges de vue ont montré que le débat sur un système « virtuel » peut avoir des conséquences politiques très réelles : la décision finale concernant la NMD, qui n'a pas encore été prise, crée néanmoins des tensions entre les deux rives de l'Atlantique. Par ailleurs, il est apparu clairement que la NMD est un sujet aussi polémique entre les Américains qu'entre les Américains et les Européens : alors que le scepticisme était général parmi les participants européens, les Américains avaient, entre eux, des avis très différents.

Presque tous les aspects de la NMD créent des divergences, qu'il s'agisse de sa nécessité, de sa faisabilité ou de ses conséquences pour l'arms control et l'équilibre stratégique. A deux exceptions près, dont la Chine. Un consensus s'est manifesté sur le fait que la NMD mettrait en cause la capacité de représailles de la Chine, ce qui pourrait entraîner de la part de ce pays des réactions ayant un effet très déstabilisateur sur la sécurité en Asie. Le deuxième point de convergence fut le manque d'efficacité de la NMD contre des menaces mêmes limitées. Il est en fait pratiquement certain que les pays ayant la technologie pour développer des ICBM auraient également la volonté politique et le savoir-faire technologique pour mettre en œuvre des contre-mesures permettant de surmonter une NMD C-1. Dans ce cas, le déploiement d'une NMD limitée provoquerait une nouvelle course entre les systèmes défensifs et offensifs, ce qui inciterait les Américains à perfectionner leur NMD. Cette dernière pourrait alors devenir, à terme, suffisamment sophistiquée pour déstabiliser l'équilibre stratégique entre les puissances nucléaires officielles.

Il est clair que, du point de vue européen, le découplage stratégique ne serait pas le risque le plus important lié à un déploiement de la NMD. Même pendant la guerre froide, il y a toujours eu, au sein de l'Alliance, des zones de risques différentes. Les menaces des « Etats voyous » pourraient se concrétiser si l'Occident intervenait dans une crise régionale ; toutefois, étant donné que ces interventions seront toujours conduites par les Etats-Unis dans un avenir prévisible, la menace contre l'Europe demeurerait réduite. Les participants ont toutefois reconnu que le découplage, même s'il n'est qu'imaginaire, peut être un sérieux obstacle psychologique à la cohérence de l'Alliance.

Les discussions ont également montré que l'Europe pourrait jouer un rôle accru dans ce domaine – même si son influence immédiate sur la décision américaine de déployer la NMD ne doit pas être surestimée. Plusieurs participants ont souligné, par exemple, que les Européens – très sceptiques sur l'analyse américaine de la menace nucléaire – doivent procéder à sa propre évaluation des risques. D'autres ont considéré que l'Europe devrait utiliser sa puissance économique et son expérience en matière de « sécurité non strictement militaire » pour influencer les pays préoccupants. Des initiatives politiques et diplomatiques dans ce domaine pourraient renforcer le régime du TNP et contribuer à rendre un déploiement NMD superflu.

PROGRAMME

NATIONAL MISSILE DEFENCE AND THE FUTURE OF NUCLEAR POLICY

Paris, Friday, 9 June 2000

Programme

Thursday 8 June

20.00 *Dinner*

Friday 9 June

9.00 – 9.15 ***Welcoming remarks and Introduction***

9.15 – 10.45 **Session I :** ***Threat Perceptions***
- Stephen Cambone
- Ian Kenyon

10.45 – 11.00 *Coffee break*

11.00 – 12.30 **Session II :** ***NMD/TMD – Concept & Feasibility***
- David Gompert
- Lisbeth Gronlund
- Bruno Tertrais

12.30 – 14.00 *Lunch at the WEU restaurant*

14.00 – 15.30 **Session III :** ***NMD & Arms Control***
- Joseph Cirincione
- Bernd Kubbig

15.30 – 15.45 *Coffee break*

15.45 – 17.15 **Session IV :** ***NMD and Deterrence***
- Robert Grant
- Thérèse Delpech
- Lawrence Freedman

17.15 – 17.30 ***Conclusions***

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ABBREVIATIONS / SIGLES

ABM	Anti-Ballistic Missile Treaty
BMD	Ballistic Missile Defense
BMDO	Ballistic Missile Defense Organization
BND	Bundesnachrichtendienst
BTWC	Bacteriological and Toxin Weapons Convention
BM	Ballistic Missile
BW	Biological Weapons
CBW	Chemical and Biological Weapons
DPRK	Democratic People's Republic of Korea
EU	European Union
GPALS	Global Protection Against Limited Strikes
ICBM	Intercontinental Ballistic Missile
MAD	Mutual Assured Destruction
MD	Missile Defense
MEADS	Medium Extended Air Defense System
MIRV	Multiple Independently Targetable Re-entry Vehicle
NATO	North Atlantic Treaty Organisation
NBC	Nuclear, Biological and Chemical
NIE	National Intelligence Estimate
NMD	National Missile Defence
NPT	Nuclear Non-Proliferation Treaty
NWS	Nuclear Weapon States
OSCE	Organisation for Security and Cooperation in Europe
SALT	Strategic Arms Limitation Talks
SDI	Strategic Defense Initiative
START	Strategic Arms Reduction Treaty
TMD	Theatre Missile Defence
Triple M-TM	Mutually Minimising Missile Threat Model
UN	United Nations
WMD	Weapons of Mass Destruction
WTO	World Trade Organisation